

SJIF Impact Factor(2024) : 8.402

ISI I.F.Value : 1.188

ISSN (Online): 2455-3662

DOI : 10.36713/epra2013



*EPRA International Journal of*

# **MULTIDISCIPLINARY RESEARCH**

*Monthly, Peer Reviewed (Refereed) & Indexed International Journal*

Volume - 10 Issue - 7 July 2024

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ISSN (Online) : 2455 - 3662  
SJIF Impact Factor(2024) :8.402  
ISI I.F. Value : 1.188  
DOI : 10.36713/epra2013



EPRA International Journal of  
**Multidisciplinary  
Research**

Monthly Peer Reviewed & Indexed  
International Online Journal

Volume: 10 Issue: 7 July 2024

Indexed By:



 Published By :EPRA Publishing

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# EPRA International Journal of Multidisciplinary Research (IJMR)

Peer Reviewed Journal|| Journal DOI URL: <https://doi.org/10.36713/epra2013>

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# CONSUMER BEHAVIOUR AND FACTORS INFLUENCING CONSUMER BEHAVIOUR: A CONCEPTUAL STUDY

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## ABSTRACT

This conceptual study explores the integral role of consumers in an economy, highlighting their influence on producers through purchasing, usage, and disposal behaviours. Consumer behaviour encompasses a broad spectrum of activities, from decision-making processes to post-consumption actions. The paper delineates the distinctions and interrelations between consumer behaviour and consumption behaviour. It identifies five primary factors influencing consumer buying behaviour: personal, economic, psychological, social, and cultural. Each factor comprises various elements, such as income, occupation, perception, family, and cultural values, which collectively shape consumer decisions. This research provides a comprehensive framework for understanding the influences on consumer behaviour, emphasizing its complexity and significance in economic activities.

## INTRODUCTION

Consumers and producers are two integral parts of an economy. They are interrelated and interdependent on each other. However, consumers play a more vital role than producers in an economy. All activities of consumers, such as purchasing goods and services, using them, and disposing of them, are considered consumer behaviour. Essentially, most of the activities of producers are determined by consumer behaviour. According to Solomon, "Consumer Behavior is the study of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires" According to Hoyer and MacInnis, "consumer behaviour involves understanding why, when, where, how, how much, how often, and for how long consumers will buy, use, or dispose of an offering." Finally, it can be said that consumer behaviour is the study of all actions related to the purchase, use, and disposal of goods by consumers at a given time and with given resources.

The consumer plays three distinct roles as purchase activity, consumption activities and disposable activities:

- **Purchase activities:** this activity is related to purchase a goods and services by a consumer. This activity shows how a consumer takes the decision to purchase goods

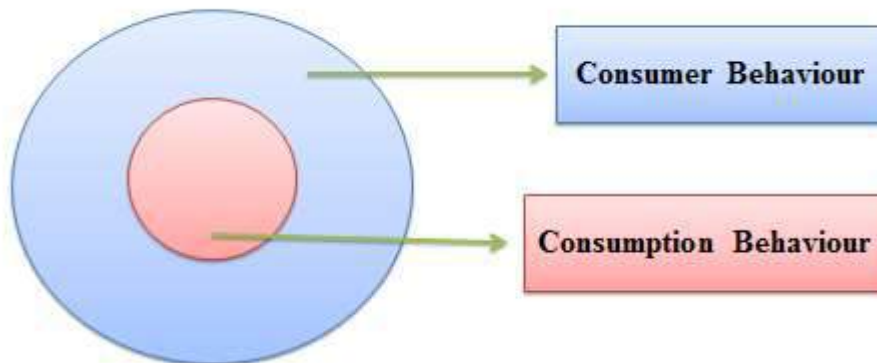
at given resources in market where different brands are available different prices.

- **Consumption activities:** This activity focuses the use of goods and services. This activity depends on the durability, prices, and quantity of that goods and services.
- **Disposable activities:** This activity is related to post-consumption behaviour of consumers, specifically focusing on the waste of goods and the secondary market for goods. For example, it includes the used car market and second-hand market.

## Relationship between Consumer Behaviour and Consumption Behaviour

Often, both these terms consumer behaviour and consumption behaviour are used interchangeably, but there are basic differences between them. Consumer behaviour is a broader concept, while consumption behaviour is a narrower concept. In fact, consumption behaviour is an integral part of consumer behaviour. Consumer behaviour relates to the purchase behaviour, use behaviour, and disposal behaviour of a consumer, whereas consumption behaviour relates only to the use behaviour of the consumer. This relationship can be understood with the help of the figure depicted below:

Figure- 1: Relationship between consumer behaviour and consumption behaviour

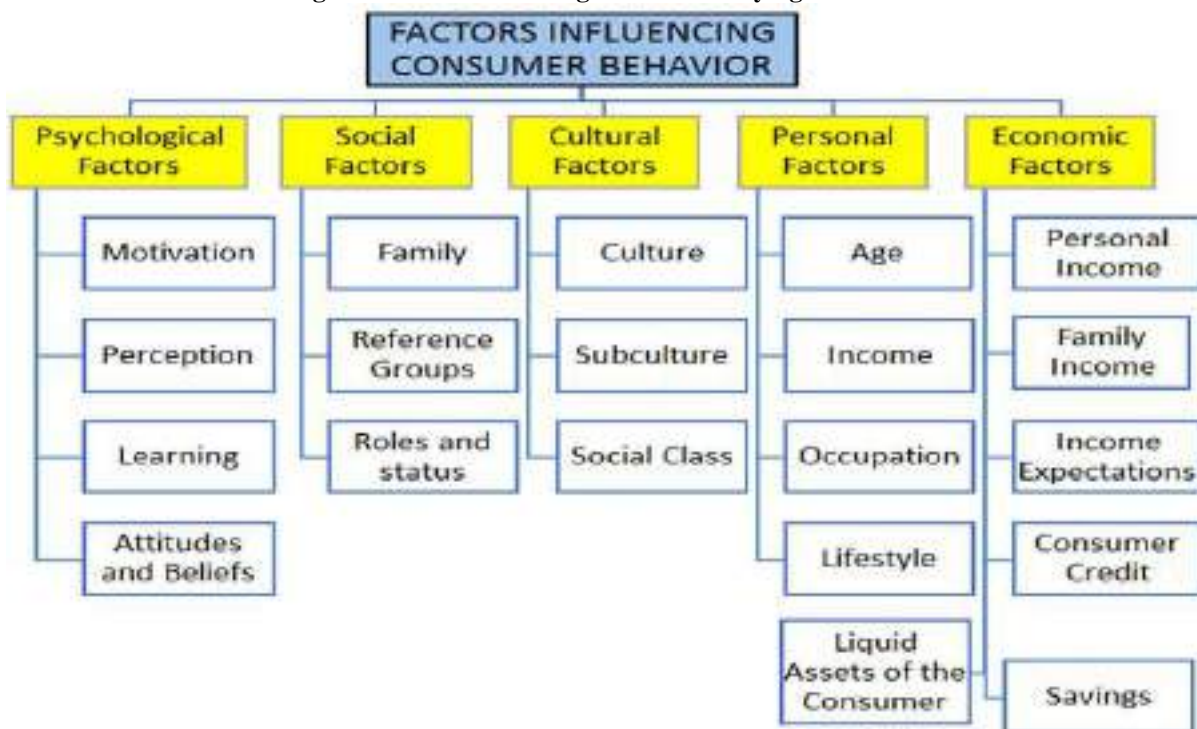


**Factor Affecting Consumer Buying Behaviour**

A consumer is a rational human being (Lal & Lal). Consumers make decisions to purchase and use products according to their preferences, tastes, as well as the prices, quality, and quantity of goods. There are many factors that influence consumer

behaviour. Broadly, there are five main factors that influence consumer behaviour, and each of these factors has several components.

Figure-2: Factor Affecting Consumer Buying Behaviour



Source: [https://www.researchgate.net/figure/Factors-influencing-consumer-behavior\\_fig1\\_348868919](https://www.researchgate.net/figure/Factors-influencing-consumer-behavior_fig1_348868919)

**1. Personal Factor**

Personal factors are very important in influencing consumer behaviour. These factors include several components such as age, income, occupation, lifestyle, and personality.

- **Income:** Out of all the prevailing factors influencing consumer behaviour, income is the most powerful. Income is a prerequisite determinant of consumer behaviour.
- **Occupation:** A person's occupation is directly related to their consumption patterns. Every consumer wants to purchase items like dresses, shoes, and ties according to

the requirements of their profession. Different occupations have distinct cultures, and these differences create varying consumption patterns based on occupation..

- **Age:** The age of a consumer is a crucial factor in their buying behaviour. For example, a teenager may require western and trendy clothing, while older individuals might not feel the need to follow current fashion trends. Therefore, their demand and consumption patterns differ significantly.



- **Life style:** Lifestyle reflects the pattern of living life. Every consumer has a different lifestyle. Due to these differences, consumers also vary in their purchase and consumption patterns.

## 2. Economic Factor

Economic factor is an external factor. It one the very important factors of influencing consumer behaviour. It includes personal income, family income, income expectation, liquid assets and savings which are followings:

- **Personal income:** Personal income is the income earned by an individual. An individual with higher income tends to have more purchasing activity, while an individual with lower income tends to have less purchasing activity. Consequently, the consumption patterns of individuals with lower personal income and those with higher personal income will differ. Therefore, personal income plays a vital role in influencing consumption behaviour.
- **Family income:** Like personal income, family income is also a fundamental economic factor influencing consumer behaviour. Family income is the sum of all individual personal incomes of family members. Similar to personal income, family income also influences consumer behaviour, varying across different family income groups.
- **Income expectation:** Income expectations also play an important role in influencing consumer behaviour. When consumers anticipate that their income will increase in the near future, their expenditure is likely to increase as well.
- **Liquid assets:** Liquid assets refer to those assets that can be quickly converted into goods or services. More liquid assets provide consumers with greater freedom to spend, while less liquid assets limit their expenditure.
- **Savings:** Savings are also an important economic factor influencing consumer behaviour. When consumers aim to increase their savings, they typically reduce their consumption, and vice versa.

## 3. Psychological Factors

Psychological factors influencing consumer behaviour reflect the inner state of mind of the consumer. These factors include perception, motivation, learning and attitude.

- **Perception:** It involves choosing, arranging, and interpreting information from both our internal and external surroundings to create a meaningful understanding. Each consumer perceives the same product uniquely based on their own individual perceptions.
- **Motivation:** A motive is an internal drive that compels a person to take action, such as fulfilling a need, achieving a goal, or solving a problem.
- **Learning:** Learning is a transformative process that results in lasting changes in an individual's behaviour. Typically, individuals acquire knowledge through previous experiences, shaping their attitudes and responses towards products or services.
- **Attitude:** Attitude refers to an individual's inclination to react positively or negatively toward a product, service, event, or individuals. It encapsulates their thoughts and feelings about an object. Consumers form favourable or

unfavourable attitudes toward products or services influenced by marketing efforts, situational factors, personal experiences, or advertising, which in turn shape their intentions regarding those products or services.

## 4. Social Factors

Every consumer is a human being. Every human being is a social being who lives in a society. Social factors include family, reference groups, and roles and status. Individuals are influenced by these factors and also influence these factors regarding their purchasing and consumption activities.

- **Family:** Family is a crucial social factor that influences consumer behaviour. Generally, two types of families are found in society: nuclear families and joint families. Nuclear families typically have more freedom to purchase, consume, and dispose of goods compared to joint families.
- **Reference group:** A reference group refers to any individual or group that influences a consumer's decision-making process when purchasing goods and services. Reference groups provide feedback on goods and services purchased in the past and also offer their opinions to consumers, impacting their purchasing decisions.
- **Role and status:** Role and status indicate an individual's power within society. Every consumer purchases goods and services according to their role and status. This type of consumption expenditure is made to maintain their role and status in society.

## 5. Cultural Factors

Every consumer is an element of society, and each society has its own values and beliefs. Cultural factors have three main components: culture, subculture, and social class.

- **Culture:** Cultural factors strongly influence consumer buying behaviour. These factors encompass the fundamental values, needs, wants, preferences, perceptions, and behaviours that consumers observe and learn from their close family members and other significant individuals in their lives. Personal factor:
- **Sub-culture:** Within a cultural, there are many subcultures are exists. Each subculture sharing a common set of beliefs and values. These subcultures include individuals from various religions, castes, geographies, and nationalities. Differences among these subcultures lead to distinct variations in consumption behaviour.
- **Social class:** Social class also determines consumer behaviour. Social class is a classification of individuals, families, and society based on factors such as power, education, and status. These social classes are generally divided into three categories: upper class, middle class, and lower class. Each of these social classes exhibits distinct consumption patterns.

## CONCLUSION

Consumer behaviour is a complex interplay of personal, economic, psychological, social, and cultural factors. Understanding these factors helps businesses predict consumer actions and tailor their strategies. This study underscores the



importance of analysing these influences to effectively cater to consumer needs and preferences.

## REFERENCES

1. Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1995). *Consumer Behavior (8th ed.)*. Dryden Press.
2. Hoyer, W. D., & MacInnis, D. J. (2007). *Consumer behavior (4th ed.)*. Houghton Mifflin Company, p. 5.
3. Jisana, T. K. (2014). *Consumer Behaviour Models: An Overview*. Sai Om Journal of Commerce & Management, 1(5), 34.
4. Loudon, D. L., & Della Bitta, A. J. (1993). *Consumer Behavior: Concepts and Applications (4th ed.)*. McGraw-Hill.
5. Qazzafi, S. (2020). *Factor Affecting Consumer Buying Behavior: A Conceptual Study*. International Journal for Scientific Research & Development, 8(2), 1205-1208. Retrieved from [www.ijssrd.com](https://www.ijssrd.com)
6. Ramya, N., & Mohamed Ali, S. A. (2016). *Factors affecting consumer buying behavior*, International Journal of Applied Research, 2(10), 76-80.
7. Rani, S., & Sharma, N. (2014). *Consumer Behavior towards Usage of Smartphone (In Rohtak City)*. International Journal of Enhanced Research in Management & Computer Applications, 9-14.
8. Singh, A., & Singh, V. (2014). *Factors Affecting Buying Behaviour of Rural Consumers*. International Journal of Management and Social Sciences Research (IJMSSR), 3(8), 8-12. Retrieved from [www.irjournals.org](http://www.irjournals.org).
9. Solomon, M. R. (2005). *Consumer behavior: Buying, having, and being (6th ed.)*. Pearson Education Pvt. Ltd., Indian Branch, New Delhi, p. 27.
10. Wayne D., Hoyer J., MacInnis & Rik P., (2012) *Consumer Behavior*. Cengage.
11. Lal, S. N., & Lal, S. K. (2022). *Microeconomics: Principles of Economics (in Hindi)*. Shubham Publishers. [https://www.researchgate.net/figure/Factors-influencing-consumer-behavior\\_fig1\\_348868919](https://www.researchgate.net/figure/Factors-influencing-consumer-behavior_fig1_348868919)





# EMOTIONAL IMPACT OF BANKING FRAUD ON CUSTOMERS: UNDERSTANDING REACTIONS AND IMPLICATIONS FOR THE BANKING SECTOR

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## ABSTRACT

Customer trust is essential for the proper operation of the banking industry, which is the foundation of any economy. However, the growing trend of banking frauds is a major worry, threatening not only the integrity of the financial system but also the emotional wellness of customers. The purpose of this research is to gain an understanding of the emotional effect of bank fraud on customers and its consequences for the banking industry.

Data was obtained from customers of public and private sector banks in four cities in Gujarat, India, using a questionnaire-based survey. The findings reveal that when fraud-related news is published, customers suffer an emotional trauma. They feel deceived and misled.

The study emphasises the need of banks successfully addressing consumer emotions in order to retain positive connections during these challenging times. Understanding emotional responses may assist banks in developing suitable tactics for reputation recovery and crisis management, maintaining long-term customer loyalty and trust. As the number of banking fraud instances increases, this research becomes more important in assisting banks in navigating the emotional impact on consumers and mitigating the negative impacts on the nation's economic system's stability and confidence.

**KEYWORDS:** Banking frauds, Emotional setback, Customer trust, Customer retention.

## INTRODUCTION

Banks are at the very core of any economy. Much of the population in the country has a high level of faith in the banking system, and as a result, they regard banks as the most secure place to park their funds.

Banking Company is one which transacts the business of banking which means the accepting for the purpose of lending or investment of deposits money from the public repayable on demand or otherwise and withdrawable by cheque, draft, order or otherwise. – **Indian Banking Companies Act.**

The banking system of every economy is regarded as its engine of development. The existence of a strong banking system in the economy is a pre-requisite for the proper operation of all sectors of the economy. Banks are one of the primary financial intermediaries that promote capital mobilization by shifting funds from savers to investors, thereby playing an important role in the nation's economic growth. An economy cannot exist without a system of banking.

Financial fraud is an important cause of concern for the whole economy. The rising trend of financial frauds stifles the expanding economy and creates impediments to further growth. An economy cannot have complete control over them, but efforts may be carried out to decrease the threat and clear the route to progress.

**RBI**, defines fraud as “A deliberate act of omission or commission by any person, carried out in the course of a banking transaction or in the books of accounts maintained manually or under computer system in banks, resulting into wrongful gain to any person for a temporary period or otherwise, with or without any monetary loss to the bank”

A sort of financial fraud, bank fraud is distinct from bank robbery. It is characterised as the use of unlawful means to acquire assets owned by a bank. Alternatively, utilising a bank to acquire someone's, an organization's, or the public's assets

The global banking business has become an appealing target for fraudsters, and the ultimate repercussions are to be borne by the customers of banks, who are eventually the common man of our country. This nail of deceit strikes hard on the back of the common man, rendering them vulnerable to distress. People tend to lose faith in the entire economic system as a result of such events occurring all around them.

As per [staista.com](https://www.staista.com), In financial year 2023, the Reserve Bank of India (RBI) reported a total of more than 13 thousand bank fraud cases across India. This was an increase compared to the previous year and turned around the trend of the last decade. However, the total value of bank frauds decreased from 1.38 trillion Indian rupees to 302 billion Indian rupees. India: number of bank fraud cases 2023 | Statista

According to the RBI Annual Report 2022-23, an assessment of bank group-wise fraud cases over the last three years indicates





that while private sector banks reported a maximum number of frauds, public sector banks continued to contribute the maximum to the fraud amount during 2022-23. (moneycontrol.com)

On the occurrence of such instances, the integrity of the financial system is put into doubt, as are the customer's emotions. Customers not only feel misled when such instances occur with them, but they also feel betrayed when similar incidents occur with any of their fellow customers.

These instances can erode the confidence of customers in the bank's safety protocols, their own financial wellbeing, and the banking system's general credibility. They tend to inculcate feelings of anger, disbelief as well as betrayal. Emotional responses might cause clients to reconsider their banking relationship, influencing their loyalty, trust, and engagement. Emotional reactions may intensify the bad impact of the fraud incidence, causing reputational harm as well as significant financial ramifications for the bank.

Being aware about how such revelation affects customers emotionally is critical for banks to properly handle the consequences, restore trust, and sustain robust customer relations. To minimize the customer anxieties and establish a sense of security, banks must prioritize interaction with customers, participation, and active measures.

The purpose of this study article is to investigate and assess the emotional impact of fraud news on bank customers, providing an understanding regarding the varied emotional reactions and their consequences for the banking sector. Banks may establish successful methods for reputation recovery by understanding the emotional environment.

## LITERATURE REVIEW

1. **Vyas and Shah (2023)** in their research work, 'The trend Analysis of Bank Frauds in India' have performed an analysis of banking frauds happened in 2017 and 2021 in India. The study found that the banking frauds in the country have depicted a rising trend. The researcher has used secondary data to perform a trend analysis of frauds in private and public sector banks. The researcher has concluded that to improve this worst situation, banks must enhance credit underwriting, loan monitoring, and loan final use. Since the Indian banking industry is vital to the economy, the government should adopt strict regulations to combat fraud. Bank blockages can lead to bank collapses and ultimately the collapse of the entire economic system.
2. **Kaivalya and Swadia (2021)** in their research work, 'Study of banking frauds scenario in India' have opined that there are many reforms which have happened in the banking industry, but these reforms along with bringing some pros have invited certain challenges, one of which is banking frauds. The study has found that the bank faces major deceits in the area of its advances. The study has highlighted various measures as taken by RBI to combat this situation and has also suggested to prepare an advance framework to detect and prevent financial menaces in the banking sector.

3. **Thangam and Bhavin (2019)** in their research work 'Banking Frauds in India; A case analysis' conducted a case study analysis on banking frauds convicted by CBI from 2015 to 2017. The researchers have found that the banking industry is the second highest in terms of getting affected by frauds. Fraudsters are using advanced technologies to get their motives fulfilled. The study has highlighted the various types of frauds occurring in the banking sector. The researcher has suggested coordinated efforts by the regulators as well as strict punitive measures for the employees involved in such activities.
4. **Pandey, Jaiswal and Ishrat (2021)** have performed a systematic literature review on 'Fraud cases in the Banking sector'. The researchers have attempted to highlight cyber crime victimisation and cyber security issues popping up with the advent of technology in the banking sector. The researcher is suggestive of rigorous employee training in order to prevent online banking frauds. Overburdened employee is also one of the reasons of banking fraud as identified by the researcher. The study has highlighted the various kinds of fraud happening in the banking sector and the probable measures in order to mitigate the risk of monetary loss.

## RESEARCH METHODOLOGY

### Area of study

The study is based on customers of banks of the state of Gujarat specifically, the cities of Ahmedabad, Gandhinagar, Vadodara, and Rajkot.

The cities are selected based on a TOI report dated 12-03-2023, which depicted the rankings of the cities of Gujarat in terms of number of frauds registered. Ahmedabad tops the ranking, while Surat and Vadodara followed to occupy second and third position. Gandhinagar is in close proximity to Ahmedabad.

The researcher concluded that there was an immediate need to investigate how banking frauds affect customers in these four cities emotionally.

### Objectives of the study

The main objective of the study is to examine the impact of fraud on customer emotions in the banking industry. The objective focuses on understanding how customers' emotions are affected specifically when fraud-related news is revealed. By investigating this impact, the study aims to contribute to the understanding of customer reactions and emotional responses in such situations.

### Relevance of the study

The study is important for banks since it attempts to give helpful insights for keeping positive relationships with customers in instances such as fraud news. Banks may gather essential knowledge about how such instances affect their customers' views, trust, and general satisfaction. This knowledge may help banks design suitable strategies and proactive actions to address customer issues, give support, and preserve great client relationships during difficult times. The study's results can help banks improve their communication tactics, crisis management techniques, and user-centric efforts, allowing them to better navigate and reduce the adverse effects of fraud occurrences on



customer experiences. With bank fraud instances increasing across the country, this research is becoming increasingly important.

### Research Design

The research has employed Questionnaire method as it is a method in order to get authentic opinions from the respondents considering their confidentiality part as well. As the study is focused on perceptions, questionnaire method is deemed essential to reach proper conclusions.

### Population of the study

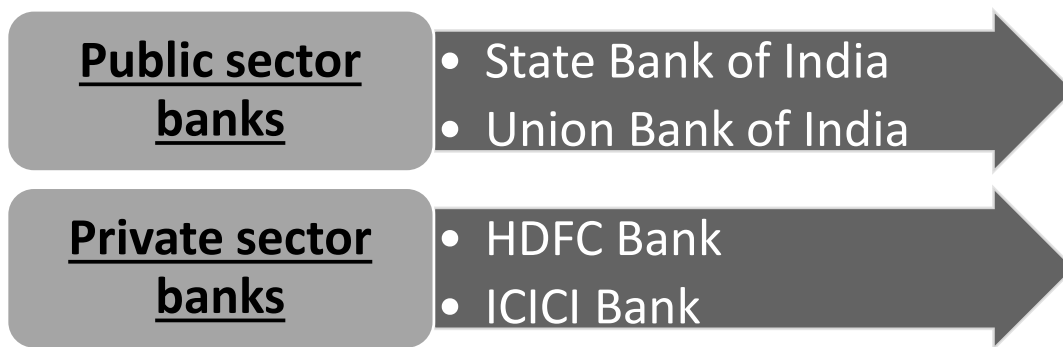
The study aims to judge the emotional impact on bank customers because of frauds in the banking sector. Hence, the

population of the study is customers of public and private sector banks of India.

### Sample of the study

The sample of the study comprises of customers of 2 public sector and 2 private sector banks of four cities of the state of Gujarat. The cities, as mentioned above are Ahmedabad, Gandhinagar, Vadodara, and Surat.

The selection of banks is based on Number of branches of these banks in Gujarat, the data for which is gathered through CMIE software. Therefore, the list of the selected banks is as under.



While the selection of cities is based on their rankings of number of fraud cases registered in 2022-23.

### DATA COLLECTION

Secondary data was used to make a scenario of the background of the study and then a Likert scale questionnaire method was used to gather relevant information from the respondents. The questionnaire consisted of certain demographic details proceeding to certain emotional impacts, which was known through literature review. The respondents were then asked to rate those emotions in their sense of occurrence on the event of a banking fraud. The researcher had circulated the questionnaire among various customers of a bank and received 103 responses out of which 100 questionnaires were complete and on which analysis could be performed.

### DATA ANALYSIS

The retrieved copies of the questionnaire were coded, and the data were analysed using simple percentages to achieve the study's objectives.

### RESULTS & DISCUSSION

According to the data, a substantial percentage of participants 45 and 49 percent agree whereas 37 and 33 percent strongly agree that they are concerned about their financial operations and the protection of their personal information. 80 percent of the respondents agree that they are convinced that such incidents call into question the financial system's capacity to protect their wealth. The findings demonstrate unambiguously that these instances instil anxiety and mistrust in the respondents. Surprisingly, when questioned about the prospect of switching banks, the replies were somewhat neutral. However, the researcher discovered via numerous discussions

that this response might be ascribed to widespread fraud and financial misconduct that is not restricted to a particular bank but is rampant throughout the whole economy so switching banks will not bring much change.

These responses suggest that such instances cast suspicion not only on individual banks but also on the whole economic system. As a result, they have a negative influence on ordinary residents' well-being, security, and faith towards their country as agreed by 81% respondents.

### CONCLUSION

The banking industry is essential for every economy, and individuals put their confidence in banks as a safe location to save funds. The growing tendency of financial fraud, on the other hand, has become a serious problem, posing considerable obstacles to economic growth and stability. Banking fraud not only jeopardises the financial system's integrity, but it also has a deep emotional impact on bank clients, who are ultimately the country's ordinary man.

Banking fraud may have far-reaching emotional implications, weakening client trust in safety standards, financial well-being, and the legitimacy of the banking system as a whole. Customers may feel rage, bewilderment, and betrayal, perhaps causing reputational loss and financial implications for institutions.

Understanding and responding to these emotional reactions is critical for banks in order to properly handle the aftermath of fraud occurrences, reestablish trust, and maintain solid client relations. Banks must prioritise client communication, active engagement, and proactive efforts to reduce consumer anxiety and provide a sense of security.



The study's objectives have provided valuable insights on client behaviours and emotional responses to fraud news, allowing banks to design appropriate strategies and actions during difficult times. Banks may navigate and reduce the negative effects of fraud occurrences on customer experiences by enhancing communication methods, handling emergencies, and focusing on customer-centric activities.

As the number of cases of financial fraud increases, this research becomes increasingly important for banks to better understand the emotional impact on their customers and implement strategies to maintain their confidence and loyalty. Addressing the emotional aspect of fraud occurrences can assist not just individual banks, but also the entire stability and confidence in the nation's economic system.

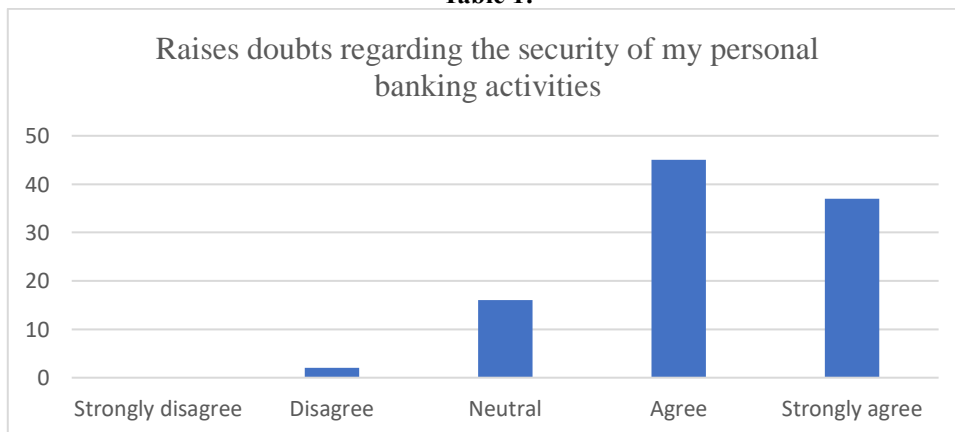
### REFERENCES

1. Anthala, Hari Ram. "Research Paper on Case Laws of Fraud, Forgery and Corruption in Banks and Financial Institutions in India." *IOSR Journal of Economics and Finance*, vol. 3, no. 6, 2014, pp. 53-57, [iosrjournals.org/iosr-jef/papers/vol3-issue6/F0365357.pdf](https://doi.org/10.9790/5933-0365357), <https://doi.org/10.9790/5933-0365357>. Accessed 10 Sept. 2023.
2. Harihara Sudhan, R. Iyer, and Pavithra Varadharajalu. "A Study on Customer Perception and Awareness in the Usage of Internet Banking." *Social Science Research Network*, 10 Sept. 2012, [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2187245](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187245). Accessed 17 May 2023.
3. Ishrat, Mohammad, et al. A LITERATURE REVIEW on FRAUD CASES in BANKING SECTOR. 2021.
4. Iton, Enobong. "Fraud in Nigerian Banking Industry a Study of Customers' Perception within Three Commercial Banks in Uyo Metropolis." *Social Science Research Network*, 30 July 2017, [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3010902](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3010902). Accessed 5 Dec. 2023.
5. Jani, Minouti, and Bhavik Swadia. *STUDY on BANKING FRAUDS SCENERIO in INDIA an EMPIRICAL STUDY of SOCIAL IMPACT of LEVERAGING FINANCIAL STRATEGIES for INDIAN CORPORATES View Project STUDY of AWARENESS and PERCEPTION of MICRO IRRIGATION SYSTEM and GOVERNMENT SCHEMES among the FARMERS in GUJARAT STATE View Project*. Apr. 2021.
6. John, Paul, and Ashish Chauhan. "70% of Online Financial Frauds in Gujarat Are UPI-Related." *The Times of India*, 12 Mar. 2023, [timesofindia.indiatimes.com/city/ahmedabad/70-of-online-financial-frauds-in-gujarat-are-upi-related/articleshow/98573718.cms](https://timesofindia.indiatimes.com/city/ahmedabad/70-of-online-financial-frauds-in-gujarat-are-upi-related/articleshow/98573718.cms). Accessed 10 July 2023.
7. Kannan, M. "Digital Users Perception on Digital Banking Frauds -A Study with Special Reference to Selected Digital Banking Services." *International Journal of Science and Research (IJSR) ResearchGate Impact Factor*, 2018, [www.ijsr.net/archive/v8i5/ART20197549.pdf](https://www.ijsr.net/archive/v8i5/ART20197549.pdf), <https://doi.org/10.21275/ART20197549>. Accessed 4 July 2023.
8. Kanojia, Sangeeta, and Research Scholar. "Issue 8 *Www.jetir.org* (ISSN-2349-5162)." *JETIR2108301 Journal of Emerging Technologies and Innovative Research*, vol. 8, no. 8, 2021, [www.jetir.org/papers/JETIR2108301.pdf](https://www.jetir.org/papers/JETIR2108301.pdf).
9. Mahila, Vasanthi, and Thangam. "Banking Frauds in India; a Case Analysis." *Journal of Emerging Technologies and Innovative Research*, vol. 6, no. Volume 6 Issue 1, 2019, [www.jetir.org/papers/JETIR1901A05.pdf](https://www.jetir.org/papers/JETIR1901A05.pdf). Accessed 12 June 2023.
10. Singh, Charan, et al. "Frauds in the Indian Banking Industry." *Papers.ssrn.com*, 2 Mar. 2016, [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2741013](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2741013).
11. Vyas, Ashutosh, and Dr Neha Shah. *The Trend Analysis of Bank Frauds in India*. Mar. 2023.
12. Wang, Yen-Yao & Shanmugam, Mohana & Bugshan, Hatem & Hajli, Nick. (2015). *Understanding customer perceptions of internet banking: the case of the UK*. *Journal of Enterprise Information Management*. 28. 622-636. 10.1108/JEIM-08-2014-0081.

### APPENDIX

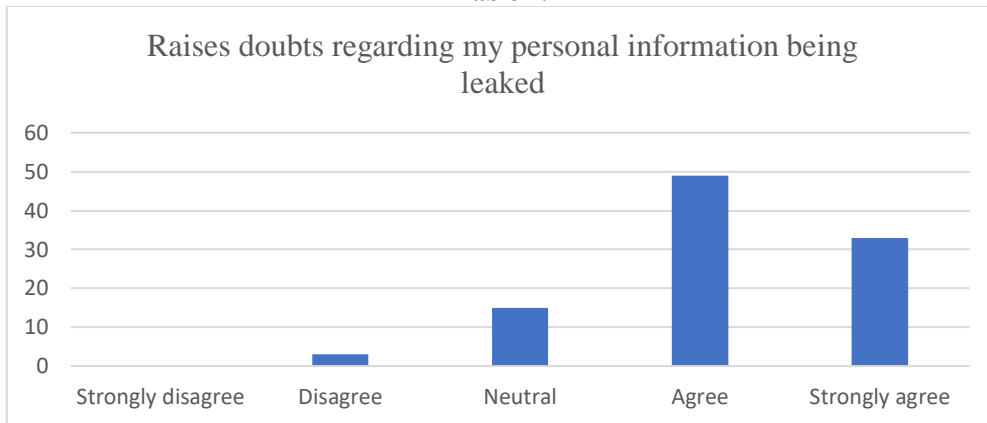
#### List of tables

Table 1:

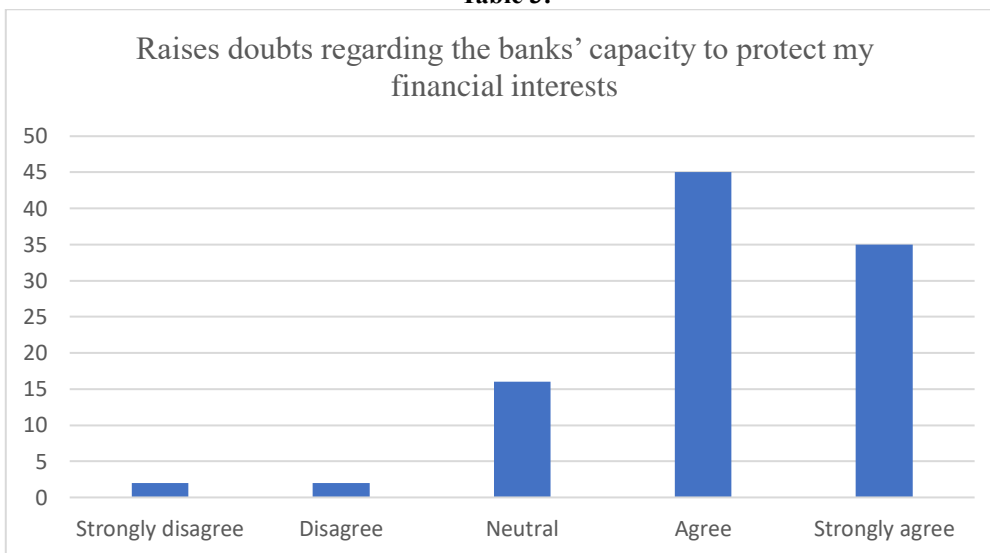




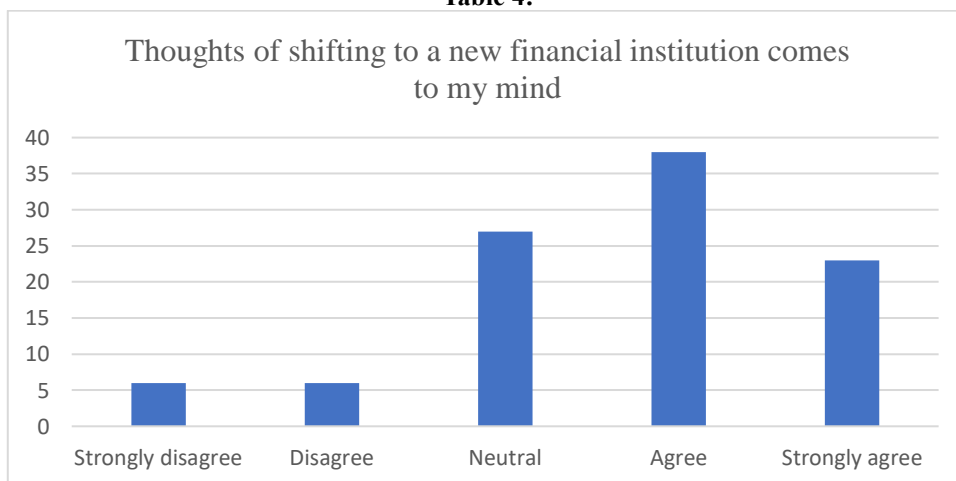
**Table 2:**



**Table 3:**

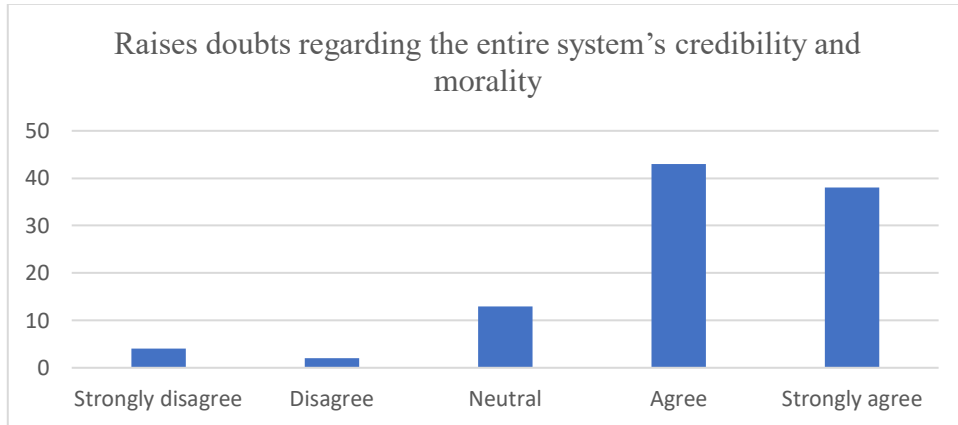


**Table 4:**





**Table 5:**







## GRAFTS AND FLAPS PANORAMIC REVIEW

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**Article DOI:** <https://doi.org/10.36713/epra17625>

**DOI No:** 10.36713/epra17625

### SUMMARY

**Introduction:** Skin grafts over time have progressed to present multiple well-established reconstructive techniques that are remarkably capable of restoring structure, function, and aesthetics to a myriad of surgical wounds. Muscle and myocutaneous flaps are common reconstructive alternatives for individuals with acquired oncologic or traumatic defects. Knowledge of flap anatomy and surgical techniques is paramount for surgeons who practice them to achieve the best results.

**Objective:** to detail current information related to grafts and flaps; definition, description, classification, characteristics, indications and techniques.

**Methodology:** a total of 33 articles were analyzed in this review, including review and original articles, as well as clinical cases, of which 20 bibliographies were used because the other articles were not relevant to this study. The sources of information were PubMed, Google Scholar and Cochrane; the terms used to search for information in Spanish, Portuguese and English were: flaps, grafts, skin, wounds, surgical reconstruction, skin transfers.

**Results:** skin grafting is a basic technique and a widely used reconstruction option in surgery, following tumor resection, ulcers, as well as in burned individuals. Graft retraction is inversely proportional to graft thickness. The graft should globally correspond to the loss of substance to be covered. When planning myocutaneous flaps, knowing the vascular territories of each source artery, or angiosome, allows proper design of the skin island. Unlike fasciocutaneous flaps, muscle and myocutaneous flaps tolerate ischemia poorly, and any concerns about flap ischemia necessitate a timely return to the operating room for exploration.

**Conclusions:** Recognizing when, where and how to perform a graft or flap is of vital importance for the correct management of the affected individual. The surgical fundamentals and associated factors must be well known to achieve the best performance and



achieve the best results in patients. Both grafts and flaps have their indications that must be adapted to the patient in question. It is necessary to emphasize that it is necessary to differentiate perfectly between the graft and the flap, analyzing their peculiarities, different uses and possible complications. Grafts are devoid of any vascular connection, while flaps depend on the vascularization of the recipient wound bed to survive.

**KEY WORDS:** flaps, grafts, skin, wounds, reconstruction, transfers, surgery.

## INTRODUCTION

Skin grafts have progressed over time to present multiple well-established reconstructive techniques that are remarkably capable of restoring structure, function, and aesthetics to a wide range of surgical wounds. A skin graft is a transfer of free skin tissue that is detached from a donor site and transplanted to a recipient site and is chosen when second intention healing, primary closure or flap repair is considered inadequate. Full-thickness skin grafts (FTSG) consist of the entire epidermis and dermis, while partial-thickness skin grafts (PTSG) consist of the entire epidermis and only part of the dermis. Full-thickness skin grafts are relatively simple to obtain and secure at the recipient site. Suitable donor skin should largely match the color, thickness, level of actinic damage, and texture of the skin surrounding the defect(1-3).

Muscle and myocutaneous flaps are common reconstructive alternatives for individuals with acquired oncologic or traumatic defects. Although fasciocutaneous and perforator flaps have emerged as elegant reconstructive alternatives for multiple indications, muscle and myocutaneous flaps remain widely useful flaps in large or infected wounds. Knowledge of flap anatomy and surgical techniques is paramount for surgeons who practice them to achieve the best results(4).

## METHODOLOGY

A total of 33 articles were analyzed in this review, including review and original articles, as well as cases and clinical trials, of which 20 bibliographies were used because the information collected was not important enough to be included in this study. The sources of information were Cochrane, PubMed and Google Scholar; the terms used to search for information in Spanish, Portuguese and English were: flaps, grafts, skin, wounds, surgical reconstruction, skin transfers.

The choice of bibliography exposes elements related to grafts and flaps; definition, description, classification, characteristics, indications and techniques are presented.

## DEVELOPMENT

### Grafts

The skin graft is a piece of skin of variable thickness devoid of any vascular connection, separated from its donor site and subsequently transposed on the recipient site that forms the loss of substance that is intended to restore. Usually, autografts are used, in other words a graft mobilized from the same affected individual. Skin grafting is a basic technique and a reconstructive alternative frequently used in reconstructive surgery, after tumor resection, as well as in case of ulcers or in patients with burns(2,5).

## Classification of Skin Grafts

### A. By thickness

1. skin grafts of variable thickness: made up of epidermis and variable thickness of dermis:
  - a) Ollier-Thiersch thin, consisting of epidermis, basement membrane and dermal papillae (0.15-0.25 mm).
  - b) Intermediate or semi-thick Blair-Brown of 0.3-0.4 mm.
  - c) Thick graft including 75% of the skin (0.5-0.6 mm).
2. Total skin grafts: made up of the epidermis and dermis with the epithelial attachments in their entirety. The attachment is more difficult. Widely used in hand surgery.
  - a) Total skin grafts of 0.8-1.5 mm (Wolfe-Krause). Traditionally, adipose tissue lobules must be removed.
  - b) Supertotal" grafts, some lobules of adipose tissue and the subdermal anastomotic network are included.

### Variants of Total Skin Grafts

Pill grafts or Davis grafts: indicated for chronic leg ulcers, not recommended for use on the face. The mobilization technique consists of raising a small cone of skin with a Reverdin needle, sectioning at its base, obtaining a graft of variable thickness whose center is of full thickness. Subsequently, place the grafts in the recipient area in continuity without suturing, it should be covered with a fatty dressing.

Total skin embedded punch grafts: the graft is mobilized with a punch used for biopsies, then the lobules of adipose tissue are removed. The recipient bed is punctured with the punch to access a better vascularized bed. Lastly, each graft is then engaged in the holes created. This technique is curious and simple, because it does not require specific equipment such as a dermatome.

### Composite Grafts

Composed of 2 different tissue structures, usually skin and cartilage. The chondrocutaneous graft is used in the reconstruction of penetrating substance loss of the nasal free edge. It is recommended that the graft should not exceed 1.5 cm for viability reasons. The donor site is usually the anterior root of the antihelix. It presents a high risk of necrosis(2,5).

### B. By the moment at which the graft is performed:

Immediate graft: performed immediately after the tumor resection, to repair the loss of substance in a short time.

Delayed graft: performed at a second surgical time to obtain pathological certainty of the radical nature of the tumor resection and confirmation of healthy margins. It is justified in aggressive tumors and tumor recurrences, sometimes to obtain granulation tissue when there is an extensive resection in depth

and/or width and rarely when adequate hemostasis of the recipient site is not possible(6).

C. By the mode of use:

**Continuous Graft:** covers the entire loss of substance with a single piece or multiple pieces sutured together.

**Discontinuous Graft:** which does not cover the entire loss of substance such as the Tanner and Vandeput meshed graft and the plurifragmentary graft(7).

**Figure1. Skin condition on the right hand that would benefit from grafting.**



Source: The Authors.

#### Biology of Graft Attachment

By definition, the graft does not present its own vascularization, so the attachment depends on the vascularization of the recipient area, as well as on the revascularization capacities of the graft. Therefore, the graft can only take hold in a dermis of good vitality or in tissues capable of generating granulation tissue such as subcutaneous tissue, muscle, periosteum, perichondrium. The donor site must not be infected or too exudative, and the granulation tissue must not be excessive.

**Blood Revascularization:** it is preceded by an ischemic stage during which the graft presents few exchanges with the recipient bed. The duration of the stage depends on the quality of the recipient bed. The risk of partial or total failure depends on the duration of this stage. The tolerability of this ischemic stage increases with the thickness of the graft.

In the first hours the graft adheres by means of a fibrin network exuded by the recipient bed, then the graft survives by plasma imbibition, usually until the fourth day, then it appears edematous presenting a plasma exudate accompanied by blood cells, giving a pink color, then vascular penetration is maintained until the eighth day. The revascularization of the graft can take place due to the colonization of the vessels sectioned by the vascular buds, with the creation of anastomoses, originating the primary revascularization of the graft, requiring an intimate contact between the graft and the receptor bed. There is also secondary vascularization due to penetration of the graft by neovessels.

**Lymphatic Circulation:** it is restored at the same time as blood revascularization.

**Graft Reinnervation:** takes place in a few weeks, however, from the clinical point of view, sensitivity needs several months. Sensitivity returns in a better way in total skin grafts.

#### Graft Retraction

It is inversely proportional to the thickness of the graft, usually within a few weeks. The dermal component determines the mechanics of the graft, the functional part and the aesthetic result. Normally, the thicker the graft, the better the functional and aesthetic mechanical properties, however, the neovascularization and revascularization conditions worsen.

#### Factors influencing the phenomenon of graft attachment.

There are factors involved that depend on the technique such as asepsis, quality of graft mobilization, graft size, quality of the recipient bed, the effects of endothelial growth factors that improve graft viability(8).

The recipient bed has to present compatibility such as that presented in the muscle, peritendon, subcutaneous cellular tissue, aponeurosis, perichondrium and periosteum. Another recommendation would be that the graft covering dressing should not adhere to the graft, in addition it should be very fatty and should be maintained for 4-5 days. Devitalized, irradiated or excessive fibrosis tissues do not allow revascularization.

Other factors such as arterial and/or venous insufficiency in the lower limb grafts compromises their attachment, as well as microcirculation pathology, smoking, coagulation anomalies, plants that have an antiplatelet, anticoagulant or fibrinolytic effect, some phytotherapeutic drugs with hemorrhagic risk.

Regarding the use of anticoagulants, the recommendations are aimed at seeking safety against bleeding risk, without compromising the expected protection against thrombotic risk(1,9-11).

**Figure 2. Electric dermatome, a surgical instrument used to produce thin sheets of skin from a donor area for use in making skin grafts.**



Source: The Authors.



### Technique, Instruments and indications for Variable Thickness Skin Grafts.

To allow the movement of the graft according to the required thickness, it is necessary to use a dermatome. There are several presentations such as the manual dermatome of Lagrot modified by Dufourmentel that allows the adjustment of the thickness and the electric or pneumatic dermatome of Padgett that allows easier mobilization of the graft by adjusting the micrometric screw to the desired thickness.

### Mobilization of The Graft

An assistant is needed to tense the skin placed in front of the dermatome. To improve the mobilization, a local anesthesia of tumescent anesthesia type could be used, hardening the cutaneous plane. It is recommended to place vaseline oil on the selected area to improve the progression of the dermatome.

Among the most frequently used donor sites are the anterior thigh, buttocks, abdomen, inner and outer arm and forearm. The mesh graft technique is an amplification of a graft in order to cover larger surfaces. The graft is introduced in a cylindrical device provided with very close blades that transforms the continuous cutaneous graft into a mesh. This is then introduced through its dermal side into the device and exits through its epidermal side. Multiplying the surface by 3, it can be applied on an exudative and over-infected bed. For the graft, the dressing is similar to that of the total skin graft.

### Complications

They are hematoma, seroma and superinfection. Retraction, dyschromias and scarring of the donor site worsen the aesthetic result.

### Indications

Thin skin grafting is a mandatory method for repair of extensive substance loss. Retraction is noticeable, usual dyschromias, not used as a choice for facial reconstructions, unless temporary. Useful in burns in ulcer coverage and after resections of Verneuil's disease(5,12).

### Total Skin Graft

#### Graft mobilization- donor site

It must be selected conscientiously, the graft must be well vascularized, be compatible, present a texture, thickness, color and level of photoaging similar to those of the skin to be grafted. The absence of precancerous lesions must be taken into account, as well as hairs in case of grafting hairless sites. In melanoma surgery, it is avoided to mobilize the graft from the homolateral limb to the tumor, because it can present metastasis in transit(2,5).

Grafts from the correction of a tissue excess.

Also called adjacent grafts, because they are contiguous to the loss of substance, which in most cases is partially sutured according to the lines of least cutaneous tension. Tissue proximity provides a resemblance in color and texture.

Graft placement.

The graft should fully correspond to the loss of substance to be covered. The retraction of the total skin graft is minimal. It is

placed on the recipient bed without allowing it to dry. To fix the graft, stitches are given at the four corners of the graft called cardinal points. Subsequently, separate stitches or a continuous suture is performed in the periphery. When suturing, it is recommended that the needle enters first at the level of the edge of the graft, to exit through the edge of the recipient bed, placing the graft on its nourishing zone. Incisions in the center of the graft are constantly debated(1,5,13).

Figure 3. Skin graft placed on the recipient area (distal area), you can see the old flap applied in the most proximal area of the leg.



Source: The Authors.

The dressing should be oily. A tulle or an interphase is used on which the petroleum jelly is deposited, maintaining a moist medium, preventing the dressing from sticking during dressing change. It is recommended to leave the dressing in place for 2-5 days.

### Advantages of Total Skin Grafting

It is a relatively safe solution, infrequently limited by the area to be grafted. If graft attachment is not generated, a new graft can be attempted. Disadvantages of total skin grafting, complications.

A well vascularized recipient bed is required, sometimes the grafting is incomplete. The aesthetic result is uncertain, additional scarring of the donor site, sometimes dyschromia, hypertrophy, partial or total necrosis, hematoma followed by superinfection(14).

The indication of a total skin graft must be individualized because it will depend on the characteristics of the tumor and the patient. The indication of a graft is proposed when resection-suture is not possible and when directed healing is not desired. The technical discussion mainly concerns flaps(5).

**Figure 4. Defect requiring a flap on the back of the right thigh.**



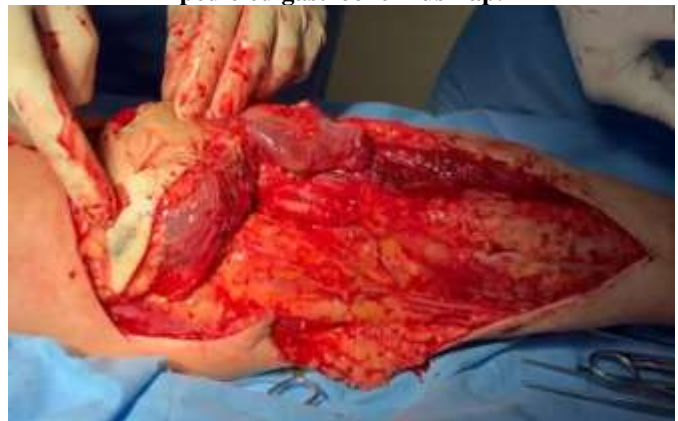
Source: The Authors.

**Figure 5. Removal of the anatomical position of the pedicled gastrocnemius flap.**



Source: The Authors.

**Figure 6. Accommodation at the recipient site of the pedicled gastrocnemius flap.**



Source: The Authors.

### Flaps.

By definition, a flap is a piece of tissue with a defined blood supply, allowing it to be differentiated from a graft. Due to anatomical studies, improved technology and wartime injuries, flap reconstruction has evolved to act on difficult traumatic and oncologic defects(15).

Muscular and myocutaneous flaps are divided according to the pattern of vascular irrigation. According to the classification proposed by Mathes and Nahai there are five fundamental patterns of muscular circulation:

Type I, such as the tensor fascia lata, presents a single dominant vascular pedicle.

Type II, such as the gracilis, presents a dominant pedicle and minor/segmental pedicles.

Type III, such as the rectus abdominis and gluteus maximus, has two dominant pedicles, only one of which is required to innervate the muscle.

Type IV, such as the sartorius or tibialis anterior, present a segmental blood supply without a dominant pedicle.

Type V, such as the pectoralis major or latissimus dorsi, have a dominant pedicle and secondary segmental pedicles; these can be innervated by secondary pedicles if the dominant pedicle is sacrificed.

Muscle flaps can be used locally, continuing to be attached to their blood supply through a pedicle, or used for distant reconstruction as a free tissue transfer, requiring microvascular anastomosis. Myocutaneous flaps are composite flaps with a unique vascular supply incorporating skin, subcutaneous tissue, fascia and underlying muscle. In contrast, in joint or chimeric flaps, each flap component has a distinct perforator that initiates in a source vessel; myocutaneous flaps are dissected en bloc to preserve all the perforator muscles of the overlying soft tissue, which is evident in easier dissections(4,16).

Muscle flaps can occupy dead space and provide a vascularized surface for grafting, however a properly performed myocutaneous flap can provide volume to the recipient site and obviate the requirement for a skin graft. When planning myocutaneous flaps, understanding the vascular territories of each source artery, or angiosome, allows for proper planning of the skin island(17,18).

Once a pedicled or free tissue transfer is performed, the newly transferred flap begins to incorporate into the surrounding tissue. Assuming that the wound bed is well vascularized, vascular ingrowth will be present within four to five days, however, sufficient vascular ingrowth to irrigate a flap independent of its blood supply requires more time, even weeks.

### Indications

Muscular and myocutaneous flaps are used to cover multiple oncologic or traumatic defects throughout the human body. Commonly used in head and neck reconstructions, pressure ulcers, perineal, extremity, breast. In places with a high possibility of infection and a large dead space, muscle flaps could be chosen. For limb reconstruction, weight-bearing sites benefit from a myocutaneous flap.



### Contraindications

Hemodynamic instability requiring vasopressor support represents a contraindication for free tissue transfer. In general, there are few absolute contraindications for muscle or myocutaneous flaps. Among some of the relative contraindications are: previous radiation to donor sites, history of thrombosis or hemorrhage, history of surgery that virtually compromises the vascular supply of the proposed muscle, and when sacrifice of the donor muscle would lead to unacceptable disability. Tobacco use has been associated with delayed wound healing.

### Equipment and preparation.

For muscle or myocutaneous free flap surgery, microsurgical equipment and magnifying loupes or an operating microscope are required, as well as drugs, such as lidocaine or papaverine, for possible vasospasm. In situations of microvascular anastomosis, heparinized saline and intravenous thrombolytics are important, as well as the use of portable Doppler. Local or pedicled muscle flaps do not require any specialized equipment other than typical plastic surgery equipment.

Computed tomography with angiography may be prudent when the status of the vascular pedicles or recipient vessels is unclear. Contaminated wounds should be washed and debrided multiple times to reduce the bacterial load prior to flap. A multidisciplinary team evaluation by the healthcare team is important for a more successful reconstruction(4).

**Figure 7. Immediate Postoperative, after Flap Placement.**



Source: The Authors.

### Technique and treatment

When considering a free tissue transfer, the first step is to identify the appropriate recipient vessels to nourish the muscle or myocutaneous flap. Next, dissection of the flap begins.

In muscle flaps, an incision is marked to gain access to the muscle body and associated vascular pedicle, then deepened to the muscle body with or without the overlying fascia. Subsequently, unneeded perforators are cut or cauterized and the muscle is delaminated from the surrounding soft tissue envelope.

In pedicled flaps, the muscle is skeletonized to ensure a tension-free arc of rotation or renewal; patency of the pedicle can be confirmed with Doppler. Sometimes it is not necessary to see the pedicle to have a safe transfer.

In muscle-free transfer, the vascular pedicle is isolated and trimmed, and shortly thereafter a microvascular anastomosis is quickly performed to minimize ischemic damage to the muscle. The muscle is then inserted and hemostasis of the donor site is obtained prior to closure.

In myocutaneous flaps, the desired skin island is marked and the incision can be extended to allow dissection of the flap. Designing a skin island within the known flap angiosomes will reduce ischemia of the portions of the flap farthest from the vascular pedicle. The decision to reinnervate the muscle for free tissue transfer depends on the reconstructive goal(4).

### Complications

These are infection, seroma or hematoma of the donor and recipient sites, fat necrosis, partial or total loss of the flap and wound dehiscence. Specific flaps, such as the TRAM flap, can generate hernia or significant abdominal laxity, while laxity of the latissimus dorsi donor sites can create seromas. When muscle flaps begin to look gray or slightly bleeding with pinprick, they suggest ischemia. Myocutaneous flaps have the added benefit of a skin paddle that serves as a monitor of the overall condition of the flap. In contrast to fasciocutaneous flaps, muscle and myocutaneous flaps tolerate ischemia poorly. Correct positioning measures are recommended so as not to allow the vascular pedicles to be compressed(19,20).

### CONCLUSIONS

Recognizing when, where and how to perform a graft or flap is of vital importance for the correct management of the affected individual. The surgical fundamentals and associated factors must be well known to achieve the best performance and achieve the best results in patients. Both grafts and flaps have their indications that must be adapted to the patient in question. It is necessary to emphasize that it is necessary to differentiate perfectly between the graft and the flap, analyzing their peculiarities, different uses and possible complications. Grafts are devoid of any vascular connection, while flaps depend on the vascularization of the recipient wound bed to survive.



## BIBLIOGRAPHY

1. Ramsey ML, Walker B, Patel BC. Full-Thickness Skin Grafts. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jun 28]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK532875/>
2. Adams DC, Ramsey ML. Grafts in Dermatologic Surgery: Review and Update on Full- and Split-Thickness Skin Grafts, Free Cartilage Grafts, and Composite Grafts. *Dermatol Surg.* 2005 Aug;31(s2):1055–67.
3. Ratner D. Skin grafting. *Semin Cutan Med Surg.* 2003 Dec;22(4):295–305.
4. Deramo P, Rose J. Flaps: Muscle and Musculocutaneous. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jun 28]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK546581/>
5. Blatière V. Injertos cutáneos: injertos de piel de grosor variable y total. *EMC - Dermatol.* 2021 Jun;55(1):1–17.
6. Andreassi A, Bilenchi R, Biagioli M, D'Aniello C. Classification and pathophysiology of skin grafts. *Clin Dermatol.* 2005 Jul;23(4):332–7.
7. Revol M, Servant JM. Greffes cutanées. *EMC - Tech Chir - Chir Plast Reconstr Esthét.* 2010 Jan;5(1):1–11.
8. Zhang F, Lineaweaver W. Acute and Sustained Effects of Vascular Endothelial Growth Factor on Survival of Flaps and Skin Grafts. *Ann Plast Surg.* 2011 May;66(5):581–2.
9. Steele L, Brown A, Xie F. Full-thickness skin graft fixation techniques: A review of the literature. *J Cutan Aesthetic Surg.* 2020;13(3):191.
10. Palamaras I, Semkova K. Perioperative management of and recommendations for antithrombotic medications in dermatological surgery. *Br J Dermatol.* 2015 Mar;172(3):597–605.
11. Sporbeck B, Bechara FG, Häfner H, Koenen W, Kolk A, Koscielny J, et al. S3 guidelines for the management of anticoagulation in cutaneous surgery. *JDDG J Dtsch Dermatol Ges.* 2015 Apr;13(4):346–56.
12. Serra R, Rizzuto A, Rossi A, Perri P, Barbetta A, Abdalla K, et al. Skin grafting for the treatment of chronic leg ulcers – a systematic review in evidence-based medicine. *Int Wound J.* 2017 Feb;14(1):149–57.
13. Salasche CSJ, Feldman BD. Skin Grafting: Perioperative Technique and Management. *J Dermatol Surg Oncol.* 1987 Aug;13(8):863–70.
14. Kuijpers D, Smeets N, Lapière K, Thissen M, Krekels G, Neumann H. Do systemic antibiotics increase the survival of a full thickness graft on the nose? *J Eur Acad Dermatol Venereol.* 2006 Nov;20(10):1296–301.
15. Fang F, Chung KC. An Evolutionary Perspective on the History of Flap Reconstruction in the Upper Extremity. *Hand Clin.* 2014 May;30(2):109–22.
16. Mathes SJ, Nahai F. Classification of the vascular anatomy of muscles: experimental and clinical correlation. *Plast Reconstr Surg.* 1981 Feb;67(2):177–87.
17. Hartrampf CR, Schefflan M, Black PW. Breast Reconstruction with a Transverse Abdominal Island Flap: *Plast Reconstr Surg.* 1982 Feb;69(2):216–24.
18. Taylor GI, Palmer JH. The vascular territories (angiosomes) of the body: experimental study and clinical applications. *Br J Plast Surg.* 1987 Mar;40(2):113–41.
19. Kroll SS, Schusterman MA, Reece GP, Miller MJ, Robb G, Evans G. Abdominal Wall Strength, Bulging, and Hernia After TRAM Flap Breast Reconstruction: *Plast Reconstr Surg.* 1995 Sep;96(3):616–9.
20. Sajid MS, Betal D, Akhter N, Rapisarda IF, Bonomi R. Prevention of Postoperative Seroma-Related Morbidity by Quilting of Latissimus Dorsi Flap Donor Site: A Systematic Review. *Clin Breast Cancer.* 2011 Dec;11(6):357–63.

### Conflict of Interest Statement

The authors report no conflicts of interest.

### Funding

The authors report no funding by any organization or company.



# THE ETHICAL DIMENSIONS OF AIR POLLUTION REGULATION AND MANAGEMENT

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## ABSTRACT

All living things require clean fresh air to breathe but in our rapidly developing world air pollution is a harsh reality. Industries, governments and people are not doing enough to protect this vital source of life. Air pollution is mostly a result of external sources. The quality of air results from several sources. It is difficult to pinpoint a single source responsible for poor air quality since there are so many activities that release pollutants. But one thing cannot be denied that air quality in cities and developed urban areas is far poorer than in the countryside, or smaller villages. While regulations and policies to prevent air pollutions are somewhat in place they are either not enough, or have loopholes or are not followed in the right spirit. Several ethical dimensions emerge in how the regulations are framed and ethical considerations and dimensions in the area of air pollution. This concept paper proposes to understand the ethical considerations and dimensions of air pollution and propose some remedies.

**KEYWORDS:** Air Pollution, ethical challenges, ethical dimension, regulation and management

## INTRODUCTION

Air pollution is of concern to every human being. The lungs that absorb oxygen and expel carbon dioxide are extremely sensitive to toxins and irritants. Yet, we breathe whatever quality of air is available because we cannot survive without air. Of course, there are those who voluntarily pollute their own air through smoking. Most air pollution is caused by sources external to us. The quality of air is the result of several diffuse sources. It is difficult to identify any one responsible party since almost everyone undertakes activities that release pollutants. Therefore, while the government must take steps to ensure better air quality and better regulations to prevent air pollution communities and society at large must collectively accept responsibility as well.

### Ethical Challenges

The different types of air pollutants reflect distinct ethical challenges. Let us examine these:

- 1) Air pollution from industrial sources is a problem common to all countries. Most countries have regulations in place for industrial pollution. In fact, industries have many available options to prevent air pollution:
  - a) pollution prevention through changes in operating practices, improved and preventive maintenance
  - b) changes in raw materials; building good air pollution control systems into new or modified production processes;
  - c) improving or replacing air pollution control systems in existing facilities; and reducing air pollution and

improving energy efficiency through process change (which often lowers costs as well).

The industry usually assesses the cost of implementing the measure versus the benefits to the public and the good will such a measure would generate. While responsible business' implement all the measures to comply with regulations as well as avoid harm to others, there continue to be the unethical elements who try to by-pass regulations and cut corners.

- 2)The air pollution created by multiple small sources like motor vehicle exhausts, home and building heating systems, or agricultural wastes.

To control this one needs to change consumer behaviour and product technologies. The ethical dilemma is whether consumers should demand for non-polluting products, or if industry should develop non or less polluting products and educate the consumers. This reflects the morally questionable desire to pass the responsibility for change to someone else while profiting from the present situation. Reinforcing ethical behaviour and strengthening corporate responsibility can strengthen action to reduce air pollution.

- 3)Another air pollution challenge is indoor air pollution when poor people in developing countries use biofuels, including wood, dung and agricultural wastes, for cooking and heating, indoors. About 10- 20 % of fuel used is not fully burnt, releasing harmful air-borne pollutants at concentrations above safe limits. Globally, indoor air pollution of fine particles from fuels like charcoal is one of the top ten causes of mortality, causing up to 2.4 million



premature deaths a year from respiratory problems and heart attacks (GEO Year Book 2006). Ethically this is result of poverty and should be addressed as part of any poverty reduction strategy. In the short term, simple improvements in clean-burning stove technology and household ventilation can help. Making clean and affordable energy available to every family should be a high priority.

4) In addition to understanding the extent of air pollution that impacts each and every citizen in any country, ethical considerations make it imperative that provisions be made to secure the interests of susceptible subpopulations. The susceptible sub populations include those groups of individuals who face greater environmental health risks in certain circumstances than members of the general population. Susceptibility results from biological factors, such as age and life stage, genetics, sex, or ethnicity; or social factors, such as geographic proximity to exposure sources, occupation, lifestyle, nutrition, or socioeconomic status; or some combination of intrinsic and extrinsic factors (Environmental Protection Agency 2016a; Grandjean and Landrigan 2014)

Susceptible populations include:

- Children, who are more susceptible than adults to the adverse effects of lead.
- Developing fetuses are highly sensitive to alcohol, medications, and toxic chemicals (Grandjean and Landrigan 2014).
- Asthmatics have negative reactions to air pollution and allergens;
- People with GSTM1, CYP1A1, CYP2E1, and CYP2D6 mutations are more likely to develop lung cancer when exposed to tobacco smoke than are individuals without those mutations (Li et al. 2012).
- Some children exhibit allergic reactions when exposed to dust of products like peanuts (Centers for Disease Control and Prevention 2016d).
- People residing near cattle or hog farms display increased respiratory and gastrointestinal problems (Wing and Wolf 2000).
- Agricultural workers who are exposed to certain pesticides face a higher risk of Parkinson's disease (Allen and Levy 2013).

Clearly, laws are needed to provide additional protections for susceptible subpopulations. A good example, is of the US the Clean Air Act (1990) under which the Environmental Protection Agency (EPA) provides additional protection for susceptible subpopulations, including children, asthmatics, and the elderly, when establishing ambient air quality standards (Marchant 2008). The EPA follows this law by establishing ambient air quality standards for ozone, particulate matter, nitrogen dioxide, sulfur dioxide, and carbon monoxide that incorporate protections for susceptible subpopulations (Environmental Protection Agency 2016b). The main ethical rationale to protect susceptible populations from environmental health risks is to promote distributive justice (Shrader-Frechette

2002; Cranor 2008a; Resnik 2012). Consider the following scenarios:

- Air pollution standards: A regulatory agency wants to determine whether to enhance air pollution protections. While reducing current ozone standard by 25% will provide modest protections for the general population and substantial protections for people with respiratory diseases, however it will adversely affect the economy and lead to job losses.
- Occupational health standards: A regulatory agency wants to determine whether to lower an acceptable level of workplace exposure to a toxic chemical involved during the manufacturing of semiconductors. Lowering the current acceptable exposure level by 50% will provide workers with substantial protection from health risks but will increase the costs of production.

These situations point to the questions about environmental health risks in different circumstances and highlight clashing values and interests.

## CONCLUSION

Thus, it is imperative for the government to frame laws to regulate and ensure acceptable levels of environmental health risks for the general population and also for susceptible subpopulations. The level of air pollution nowadays, is a symbol of the general failure of countries, governments, communities and society at large, to take responsibility for the environmental and human health effects of their actions. A multi-stakeholder approach would result in long range benefits, with government, industry, and NGOs reaching a consensus with support and advice from technical and health experts. Where the government is honest and committed, the businesses ethical, and the NGOs dedicated to public interest, this would be the answer. And yet, policy decision makers might decide that certain types of environmental health protections are too costly, or that some protections are not required because members of these populations have chosen to expose themselves to these risks (e.g., workers in certain types of risky occupations). Policymakers, government officials, and health care professionals must work towards involving general public as well as susceptible subpopulations in public deliberations related to protecting them and an action strategy for air pollution control should also include a public education component. The freedom to clean air should be seen as a fundamental human right and should be defended in the same spirit.

## REFERENCES

1. Allen MT, Levy LS. Parkinson's disease and pesticide exposure – A new assessment. *Critical Reviews of Toxicology*. 2013;43(6):515–34. doi: 10.3109/10408444.2013.798719.
2. Centers for Disease Control and Prevention; Food allergies in schools. 2016d
3. Clean Air Act. U.S. Code. 1990 Title 42, Chapter 85.
4. Cranor CF. Risk assessment, susceptible subpopulations and environmental justice. In: Gerrard MB, Foster S, editors. *The*





- law of environmental justice: theories and procedures to address disproportionate risk*. 2. Chicago, IL: American Bar Association; 2008b. pp. 341–94.
5. Cranor CF. *Legally poisoned: How the law puts us at risk from toxicants*. Cambridge, MA: Harvard University Press; 2011.
  6. Daniels N. *Just health care*. Cambridge, UK: Cambridge University Press; 1985
  7. Environmental Protection Agency. *The basics of the regulatory process*. 2015a
  8. Environmental Protection Agency. *National ambient air quality standards for ozone; Final rule*. Federal Register. 2015b;80(206):65292–468.
  9. Environmental Protection Agency; *Exposure assessment tools by life stages and populations – Highly exposed or other susceptible population groups*. 2016a
  10. Frank R. *Lautenberg chemical safety for the 21st century act*. Public Law. 2016:114–82.
  11. Grandjean P, Landrigan PJ. *Neuro behavioural effects of developmental toxicity*. *Lancet Neurology*. 2014;13(3):330–38. doi: 10.1016/S1474-4422(13)70278-3.
  12. Li W, Yue W, Zhang L, Zhao X, Ma L, Yang X, Zhang Z, Wang Y, Gu M. *Polymorphisms in GSTM1, CYP1A1, CYP2E1, and CYP2D6 are associated with susceptibility and chemotherapy response in non-small-cell lung cancer patients*. *Lung*. 2012;190(1):91–98. doi: 10.1007/s00408-011-9338-8.
  13. Marchant GE. *Setting air quality standards in the postgenomic era*. In: Sharp RR, Marchant GE, Godsky JA, editors. *Genomics and environmental regulation*. Baltimore, MD: Johns Hopkins University Press; 2008. pp. 116–138.
  14. Resnik DB. *Environmental health ethics*. Cambridge, UK: Cambridge University Press; 2012.
  15. Shrader-Frechette KS. *Environmental justice: Creating equity, reclaiming democracy*. New York, NY: Oxford University Press; 2002.





# IMPORTANCE OF VAJIKARANA IN MALE INFERTILITY

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## ABSTRACT

**Introduction:** Vajikarana or Vrishya chikitsa is a one among eight major specialities of Ashtanga Ayurveda. This branch is concerned with aphrodisiacs, virility and rejuvenate the health of reproductive system. Vajikarana is widely and commonly adopted treatment modality that provides benefit in reproductive health to achieve healthy progeny. In the context of infertility, Vajikarana refers to Ayurvedic practice of improving one's reproductive health and overall well-being before attempting to conceive a child. This practice is aimed at Apathya Santanakara by enhancing fertility, ensuring a healthy conception and promoting the birth of healthy child.

**Aim:** To understand the importance of Vajikarana in male infertility.

**Materials and Methods:** Review of ancient classical texts, textbooks, websites and articles on vajikarana and infertility were done to analyse the importance of vajikarana in male infertility.

**Results:** After analysing the available sources, it was observed that Vajikarana is playing a vital role in managing the infertility related issues males.

**Conclusion:** The practice of Vajikarana corrects the impairments of reproductive systems and helps in managing the infertility problem in males and it will contribute to the fulfilment of healthy progeny and happy parenthood

**KEY WORDS:** Apathya Santanakara, Infertility, Reproductive system, Vajikarana

## INTRODUCTION

Infertility is acknowledged as global concern by WHO having 9% of prevalence with 56 million couples seeking medical treatment across world. In India nearly 30 million couples suffering from infertility making the incidence rate up to 10%. Male infertility is discussed in context of *Klaibya* and developed separate specialty named *Vajikarana Chikitsa* (Aphrodisiac therapy). *Vajikarana* deals with preservation and amplification of sexual potency of healthy man and conception of healthy progeny as well as management of defective semen, disturbed sexual potency, spermatogenesis along with treatment of seminal related disorders in male. It promotes sexual capacity and performance as well as improves the physical, psychological and social health of an individual.

## AIM & OBJECTIVES

1. To study the concept of *Vajikarana* and male infertility
2. To understand the importance of *Vajikarana* in male infertility

## MATERIALS AND METHODS

Review of literature regarding *Vajikarana* and Male infertility was done to analyse the concept of *Vajikarana* and available research articles and various websites were reviewed to understand the effect of *vajikarana* in male infertility

### Concept Of *Klaibya* and Male Infertility

#### *Klaibya*

- “*Klaibhyam Maithune Asamarthyam*”
- “*Klaibhyam Iti Dwajanuchraya*”

The male sexual dysfunctions have been elaborately described as *Klaibya* in *Ayurvedic* classics. The word *Klaibya* is defined as, a person's persistent inability to perform. sexual act refers to impotence i.e., a man who is unable to perform sexual intercourse, being powerless, helpless or the inability to carry out sexual activities.<sup>1</sup>

#### Male Infertility

It is a disease/dysfunction of reproductive system defined by failure to achieve clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (WHO-ICMART glossary)<sup>2</sup>

Conditions In Male Infertility -Table 1

Azoospermia	Inability to produce sperm cells
Oligospermia	The production of low- or poor-quality sperm
Aspermia	Neither ejaculate nor sperm is produced
Asthenospermia	Asthenozoospermia or sperms with abnormal sperm motility can occur by itself or together with low sperm count.
Teratozoospermia	Morphologically abnormal sperms
Oligoasthenospermia	Decreased sperm count and sperm motility



Erectile dysfunction / Impotence	Persistent inability to achieve or maintain penile erection
Premature ejaculation	Inability to delay ejaculation for more than a minute
Problems caused with testicles by injury, infection	Testicular trauma AND STIs

**Vajikarana**

“Vaji Pum Vajivego Asyasyeti”

“Vajikaranam Avaji Vajeeva Kriyate Anena Iti Veeryavruddhikaram Vajino Ashwagandha” (Sh.K.Dr)

The term *Vajikarana* is the composition of two words *Vaji* and *Karana*. *Vaja* means *Shukra* and *Vaji* means the person having

sufficient quantity and quality of *Shukra*. Another meaning of the word *Vaji* is horse <sup>3</sup> as its practice improving one’s reproductive health and overall well-being before attempting to conceive a child. This practice is aimed at *Apathya Santanakara* by enhancing fertility, ensuring a healthy conception and promoting the birth of healthy child.

**Vajikarana Dravya**

*Vajikarana dravya* according to different Authors Table -2<sup>4</sup> & 5,6

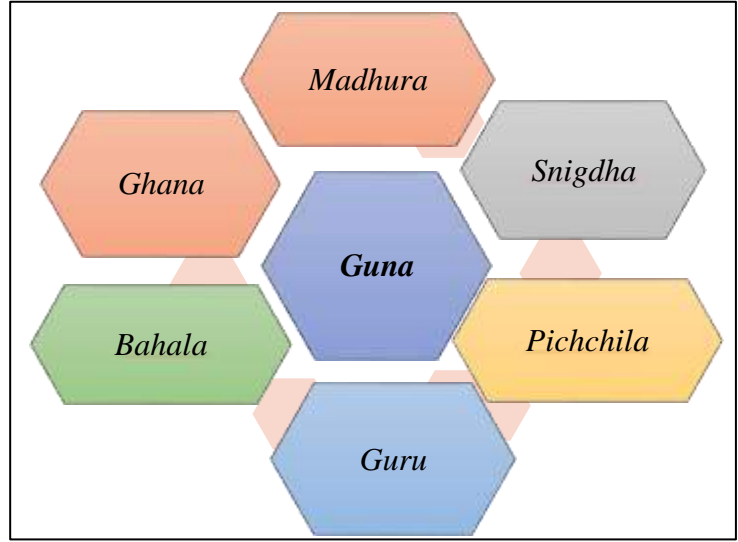
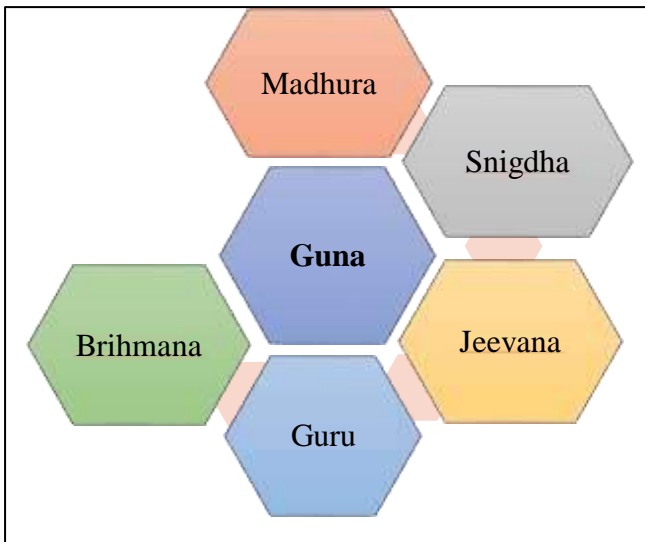
<b>Chakrapani</b>	<b>Dalhana</b>	<b>Sharangadhara</b>
1. <i>Vruddhikara</i>	1. <i>Janaka</i>	1. <i>Pravartaka</i>
2. <i>Shrutikara</i>	2. <i>Pravartaka</i>	2. <i>Rechaka</i>
3. <i>Shrutivruddhikara</i>	3. <i>Janaka Pravartaka</i>	3. <i>Stambhaka</i>
		4. <i>Shoshaka</i>

**Properties Of Vajikarana Dravya**

**Properties of Shukra**

Table -3<sup>4</sup>

Table-4<sup>6</sup>

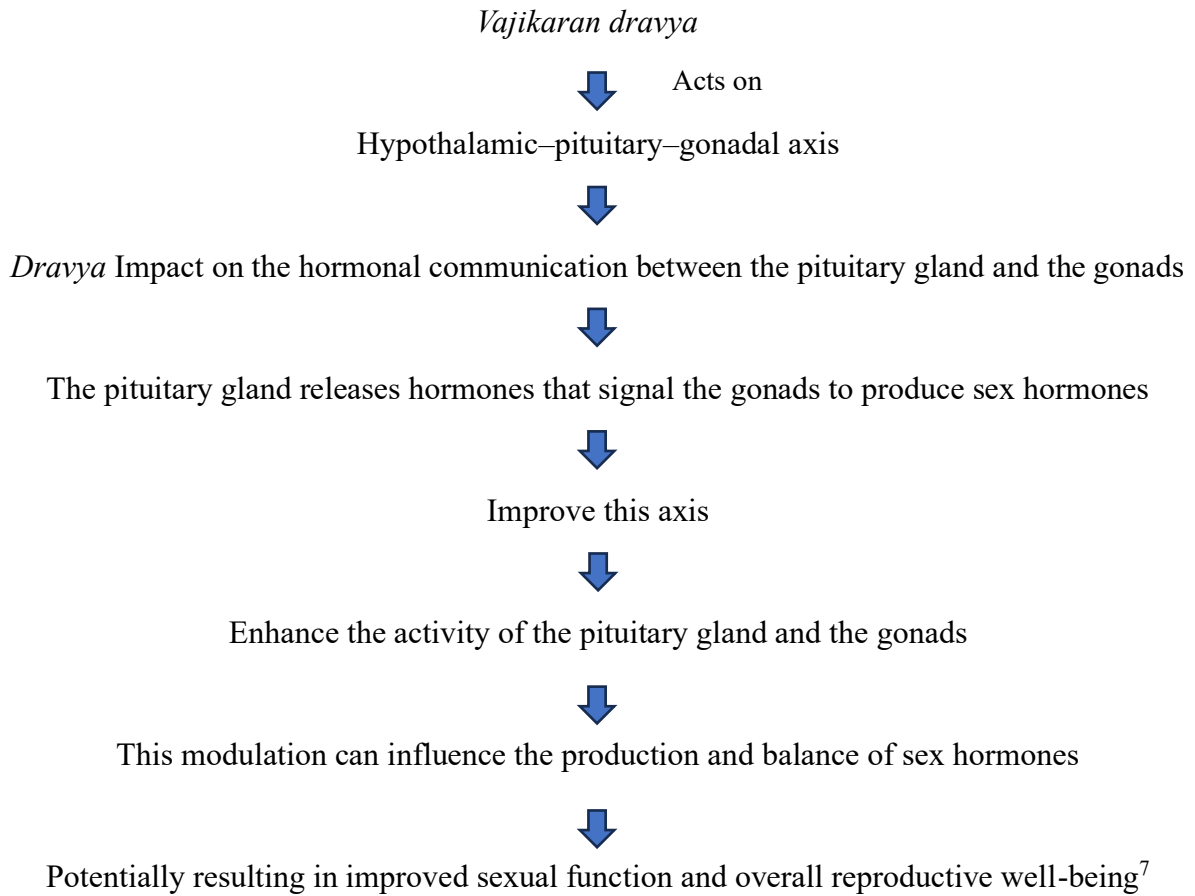


Here Properties of *vajikarana Dravya* - *Guru*, *Snigdha Guna* and *Madhura Rasa* are similar to the properties of *Shukra*, Hence it increases the *Shukra*

*Upyukta Shikram Sheeghram Virechayeti” (Su.sam.chi 26)*  
 “*Vajikarana Dravya* acts by its *Prabhava*; the drugs possess *Virechana Guna*, thereby inducing *Sheeghra Rechana* of *Shukra* it enhances reproductive health.<sup>5</sup>

**Action Of Vajikarana Dravya**

“*Vajikarastoshadhayah Swalpa Gunotkarshat Virechanavat*



## DISCUSSION

Male Infertility is mainly discussed under the heading of *Klaibya* and *Purusha Vandhyatwa* with some scattered references relating to the symptoms in *Shukragatavata*, *Shukravruta vata*, *Shukra Kshaya* and *Sama Shukra* conditions. Practice of *Vajikarana* provides benefits like increased sexual capacity, improving health of future progeny as well as in treatment of many common sexual disorders like infertility, erectile dysfunction and premature ejaculation etc

## CONCLUSION

Infertility is a wide spreading problem recognized as a global concern. Keeping in mind the concept of *vajikarana*, *Acharya's* had classified the drugs on the basis of their actions observed *Shukrajanaka* drugs may initiate or enhance either spermatogenesis or androgen synthesis or both; whereas *Shukrapravartaka* drugs either improve ejaculation or improve the action of androgens; *Shukrajanaka Pravartaka* drugs may perform all the above said functions Practice of *Vajikarana* in infertility will definitely contribute to the fulfilment of healthy progeny and happy parenthood

## REFERENCES

1. *Agnivesha, Charaka. Chikitsa Sthana, Vajikarana Adhyaya In:Shulka V Thripathy R Editors Charaka Samahita 1<sup>st</sup> Edition Delhi Chaukhambha Sanskrit Pratishthan 2010 Vol.2 Page 47-69*
2. *Vander Borght M, Wyns C. Fertility and infertility: Definition and Epidemiology. Clinical Biochemistry [Internet]. 2018 Dec [cited 2024 Jul 2];62(62):2–10. Available from:*

3. *Prashant Rajaram Shirke, Jadhav Pradeep Uttam. Conceptual study on Vajikaran in Ayurveda. J Ayurveda Integr Med Sci [Internet]. 2022Mar.20 [cited 2024Jul.2];7(1):240 -243. Available from: <https://jaims.in/jaims/article/view/1706>*
4. *Vaidya Jadavji Trikamji Acharya ed.Caraka Samhita-Cakrapani, chikitsa 2<sup>nd</sup> chapter, Reprint ed.2007, Chaukhambha Orientalia, Varanasi*
5. *Susurta,Dalhana,Shri Gayadasa Chikitsa Sthana Chapter 26 Verse 8 Dalhana Commentary In In:Thakara K K Traslater Susruta Samhita 2<sup>nd</sup> Edition Varanasi Chaukhambha Orientalia 2016 Part 2 Page 446*
6. *6.Sharangadhara.Uttarakhand, .In:Tripathi B Editor. Sharangadhara Samhita, Varanasi: Chaukhambha Sanskrit Series Office;2006.*
7. *Chauhan NS, Saraf DK, Dixit VK. Effect of vajikaran rasayana herbs on pituitary–gonadal axis. Eur J Integr Med. 2010;2:89–91*



# VIRUDDHA AHARA AS CUMULATIVE TOXICITY IN TERMS OF DUSHI VISHA

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## ABSTRACT

*Viruddha* refers to foods that provoke *Doshas* but do not expel these disturbed *Doshas* from the body. In the *Visha Chikitsa* section of *Kriya Kaumadi*, it is mentioned that consuming incompatible foods (*Viruddha Ahara*) and eating when digestion is incomplete (*Ajeerna Ashana*) lead to the formation of *Dushivisha*. *Viruddha Ahara* encompasses food incompatibility, including interactions between different types of food, which disrupt the body's homeostasis and cause various diseases. Since the symptoms of *Dushivisha* and the effects of *Viruddha Ahara* are similar, it can be inferred that both have latent toxic effects. Different types of *Viruddha Ahara* can cause various diseases by affecting the *Dhatus* (bodily tissues) or under favorable conditions. Cumulative toxicity refers to the accumulation of toxins over time, resulting in severe effects on the body and mind. This concept of cumulative toxicity aligns with the *Dushi Visha* concept defined by Acharya Sushruta.

**KEY WORDS:** *Dushivisha*, Cumulative toxicity, *Viruddha*

## INTRODUCTION

*Viruddha Ahara* refers to any kind of food that aggravates the *Doshas* without expelling them from the body, making them unsuitable or unhealthy.<sup>1</sup> *Viruddha Ahara* not only provokes the *Doshas* but also aggravates the *Dhatus* (body tissues)<sup>2</sup>. Certain diets and food combinations have properties opposite to those of the *Dhatus*, thereby inhibiting and interrupting the formation and metabolism of body tissues in various ways. Ayurveda literature describes 18 types of *Viruddha Ahara*,<sup>3</sup> which are said to cause many systemic disorders. Individuals who consume *Viruddha Ahara* are prone to developing numerous disorders. It is very important to correlate the mechanism of *Viruddha Ahara* in causation of many metabolic disorders.<sup>4</sup> To emphasize the importance of a compatible diet, the branch of *Trophology* has been established, which is the science of combining foods or nutrients to promote good health.<sup>5</sup>

*Dushi visha* refers to a toxin with mild potency. It frequently vitiates the *Dhatus* (body tissues) when triggered by contaminated environment (*desh*), time (*kala*), food (*anna*),

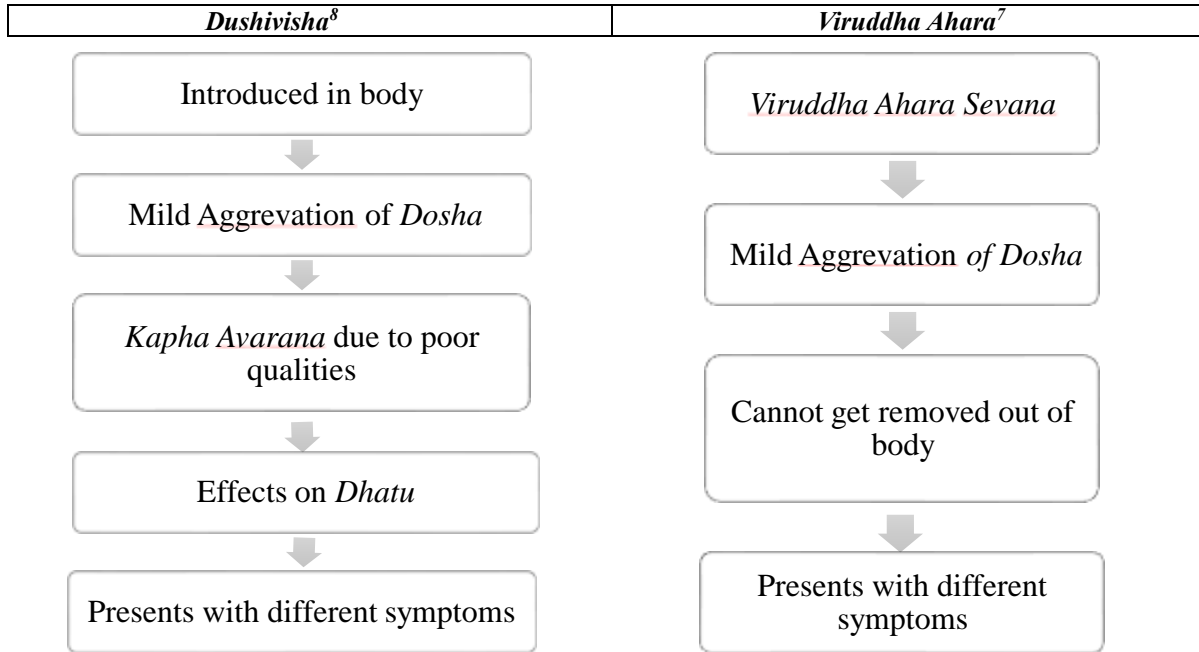
and habits like frequent daytime sleeping (*Diwa Swapna*), without being expelled from the body. Cumulative poisons act slowly and are not immediately eliminated, leading to their accumulation in the body and causing symptoms of chronic poisoning.<sup>6</sup>

*Dushi Visha* is the one which has poor qualities of *visha*. It vitiates *Dhatu* frequently on being excited itself by *Dushita desha*, *Kala*, *anna* and frequent *Diwa Swapna* and is not expelled out of body. Cumulative poisons are slow acting poisons. These poisons are not immediately eliminated from the body and they tend to accumulate in the body which causes symptoms of chronic poisoning.<sup>6</sup>

Food or medicine which elevates *Doshas* to their respective place and don't let them excrete out of body, all those are *VIRUDDHA AHARA*. "*DUSHI VISHA*" and "*VIRUDDHA AHARA*" both remain in body until they get a favourable condition, they show their symptoms and do not excrete out of the body.<sup>7</sup>



*Viruddha Ahara as Dushivisha*



**SIMILARITIES BETWEEN LAKSHANA OF VIRUDDHA AHARA SEVANA AND DUSHIVISHA (Table 1)<sup>9</sup>**

Table 1

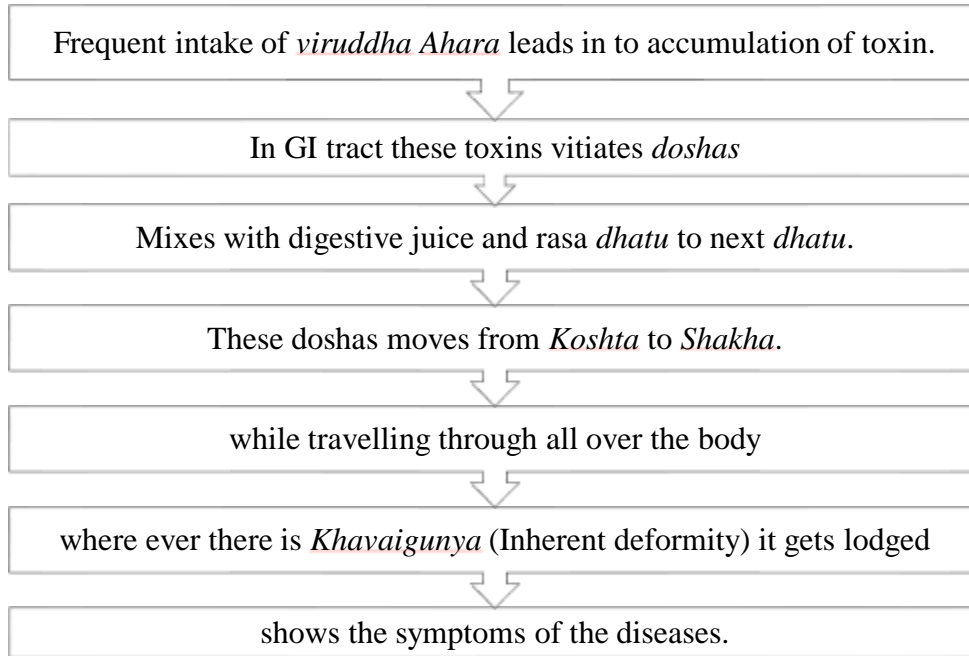
LAKSHANA	In <i>Viruddha Ahara</i>	In <i>Dushivisha</i>
<i>Aruchi</i>	+	+
<i>Murcha</i>	+	+
<i>Trishna</i>	+	+
<i>Vamana</i>	+	+
<i>Avipaka</i>	+	+
<i>Anaha</i>	+	+
<i>Kushta</i>	+	+
<i>Panipada Shotha</i>	+	+
<i>Bhinnavarna</i>	+	+
<i>Bhinnapurisha</i>	+	+
<i>Arochak</i>	+	+
<i>Dushtastrarogi</i>	+	+
<i>Trushna,</i>	+	+
<i>Murcha,</i>	+	+
<i>Vamana</i>	+	+
<i>Gadgadvak</i>	+	+
<i>Vishannata</i>	+	+
<i>Unmada</i>	+	+
<i>Vicheshta</i>	+	+
<i>Dushyodara</i>	+	+
<i>Moha</i>	+	+
<i>Bhrama</i>	+	+
<i>Vigandha</i>	+	+
<i>Avipaka</i>	+	+
<i>Annamada</i>	+	+
<i>Dhatukshaya</i>	+	+
<i>Akshishotha</i>	+	+
<i>Aanaha</i>	+	+
<i>Keshanasha</i>	+	+
<i>Vishamajwara</i>	+	+
<i>Shukranasha</i>	+	+
<i>Kushtha</i>	+	+





<i>Mandala/ Kotha</i>	+	+
<i>Kitibha /Aru</i>	+	+
<i>Mamsakshaya</i>	+	+
<i>Shwasa</i>	+	+
<i>Panipadashotha</i>	+	+

**Mode of action of *Viruddha Ahara* and *Dushivisha***



**DISCUSSION**

Acharyas explain *viruddha ahara* as *Ama Visha*. In *Ashatanga Hrudaya* Acharya explain that repeated consumption of incompatible diet acts nothing but *Dushi visha*<sup>8</sup>. As the *Dushi Visha* and *Viruddha Ahara* causing molecular level of inflammation by their similar properties producing the GI related disorders and then circulates alters the gut axis and produces the symptoms.

*Dushi Visha* is the one which is having less potency to show its effects in body and which aggravates on frequent intake/exposure to *Dushita kala, Desha, Anna, Diwaswapna*. According to *Sushruta* the poison which is not eliminated fully out of the body, which is stored for long duration, which is having less qualities of *Visha*.

*Ahara* is one of the three supporting factors of life, plays a key role in the promotion of health and prevention of diseases. As per *Ayurveda* incompatible diet or *Viruddhaa Ahara* is one of the root causes of various health problems and this *Viruddhaa Ahara* in the body acts as *Dushi Visha*. Acharya Charaka explained in detail and said that person who consume *Viruddhaa Ahara* is prone to imbalance of doshas leading to formation of *Dushi Visha* and later on to many disorders.<sup>10</sup>

Mode of action of *Dushivisha* and *Viruddha Ahara* are very similar to each other and clinical manifestations are also similar where both acts as *Visha* which is having less potency

**CONCLUSION**

*Viruddha Ahara* is a one among neglected yet important in today's improper dietary items and food habits. This may lead into various Immunological disorders. *Lakshana* of *Dushivisha* and *Viruddha Ahara* are similar by this one can understand latent toxic effects of both will be same. By above discussion One can understand *viruddha ahara* as *Dushivisha* because of their same cumulative toxic effect.

**REFERENCE**

1. Charaka. *Charaka Samhita (Charak Chandrika Hindi commentary)*. Brahmanand Tripathi, Ganga Sahay Pandey, editors. 1st ed. Varanasi: Chaukhamba Surbharti Prakashan; 2007. Sutra Sthana, 26/85. p.496
2. Agnivesha. In: *Charaka, Dridhabala, Charaka Samhita, Sutra Sthana, 26/81*. Reprint. Vaidya Jadaoji Trikamaji Acharya., editor. Varanasi: Krishnadas Academy; 2000. p. 149. [Google Scholar]
3. *Viruddha Ahara (Incompatible Diet) | CCRAS | Ministry of AYUSH (Govt. of India)* [Internet]. ccras.nic.in. [cited 2024 May 25].
1. Available from: <http://ccras.nic.in/content/viruddha-ahara-incompatible-diet>
4. Agnivesha In: *Charaka, Dridhabala, Charaka Samhita, Sutra Sthana, 26/81*. Reprint. Vaidya Jadaoji Trikamaji Acharya., editor. Varanasi: Krishnadas Academy; 2000. p. 149. [Google Scholar]
5. *The nutrition of animals is related to (a) Trophology(b) Teratology(c) Dysteleology(d) Trichology* [Internet]. [www.vedantu.com](http://www.vedantu.com). [cited 2024 May 25]. Available from: <https://www.vedantu.com/question-answer/the-nutrition-of->



- animals-is-related-to-a-class-11-biology-cbse-5f773199f0a76525d214047f*
6. Kishor MA, Anita S, M PS, Rohit K. CUMULATIVE POISONS & ITS MANAGEMENT WITH SPECIAL REFERENCE TO DUSHI VISHA. *International Journal of Ayurveda and Pharma Research* [Internet]. 2016 Apr 3 [cited 2024 May 25]; Available from: <https://ijapr.in/index.php/ijapr/article/view/318>
  7. Sartha Vagbhat, by Dr Ganesg Krushna Garde, Anmol Prakashan Pune, Reprint2006. Uttarsthana, chapter no 35, verse no 34, page no 459
  8. Charaka Samhita of Agnivesha elaborated by Charaka & Drudhabala with Ayurveda Dipika Commentary by Chakrapanidatta, edited by Vaidya Jadavaji Trikamji Acharya, Sutrasthana chapter 26, verse no.102-103, page no.151, Choukhambha Surbharati Prakashan Varanasi, Fifth Edition 2001.
  9. Tomar S, Pravin Jawanjil. Interlinking Junk Food as Viruddha Aahara and Exploring Its Role as Dushivisha. 2020 May 29[cited 2024 May 25];9(1).
  10. A SURVEY STUDY TO ASSESS THE EXTENT OF "DUSHI VISHA" AND PREVALENCE IN OUR DAILY LIFESTYLE [Internet]. [cited 2024 May 25]. Available from: <https://jrps.in/uploads/2020/v11i4/12.v11i4.pdf>



# ADVERSE EFFECTS OF PESTICIDES IN GARBHINI - AHARAJA AND VIHARAJA NIDANA

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## ABSTRACT

Ayurveda gives great importance to health of pregnant women during and after pregnancy period in terms of Ahara i.e. specific dietary regimen and vihara i.e. activity for physical, mental and emotional wellbeing. In our classics Ahara -vihara is described under the context of Garbhini Paricharaya. Garbhini Paricharya is divided in three categories such as Masanumasika Pathya ahara and Vihara (monthly dietary regimen and lifestyle), Garbhasthapaka karma (diet and activities for maintenance of pregnancy and better progeny) and avoidance of Garbhopaghatakar Bhavas (diet and activities which are harmful to fetus) its believed that fetal growth is dependent on appropriate diet and life style of pregnant mother. In current era diet and lifestyle are adversely effected by multiple factors one among which is exposure to pesticides Pesticides is an umbrella term for insecticides, nematicides, fungicides, herbicides, fumigants, repellents, and attractants used against unwanted plants and animals to control diseases and losses exposure to these toxins have a higher risk of miscarriage, low birth weight, still birth and birth defects compared to non-exposed pregnant women and such a major incidence witnessed was endosulfan poisoning in Dakshinakkanda region. Hence Ahara and Vihara play significant role towards the health of pregnant women and development of fetus.

**KEYWORDS** – Vihara, pesticides, toxins, vihara

## INTRODUCTION

Ayurveda gives great importance to health of pregnant women during and after pregnancy period in terms of Ahara and vihara, described under the context of Garbhini paricharaya. i.e. mananumasika Ahara and Vihara, Garbhasthapaka karma, Garbhopaghatakar bhavas. Child healthy is closely related to maternal health, a healthy mother brings forth a healthy baby, there is less chance for a premature birth, still birth or Abortion. In current era diet and lifestyle are adversely affected by multiple factors. one among is, exposure to pesticides.

**Aim and Objectives** - To understand the importance of vihara and adverse effect of exposure to pesticides in Garbhini

**Materials and methods**- Ayurveda classics with other various internet sources are referred in correlating the concept

### Garbhini Paricharya

Garbhini Paricharya refers to antenatal care which recommends Ahara, Vihar and Vichara The main intend behind advising Garbhini Paricharya is Paripurnatva (provide proper growth of the fetus and mother), Anupaghata (uncomplicated pregnancy), Sukhprasava

### Pesticides

Pesticides is a wide group of compounds that are used in agriculture to “prevent, destroy, repel or mitigate any pest ranging from insects (i.e., insecticides), rodents (i.e., rodenticides) and weeds (herbicides) to microorganisms (i.e., algicides, fungicides or bactericides).<sup>2</sup>

### Route of Exposure

Contact, ingestion, inhalation

Pesticides one of the key xenobiotics that mother can be exposed to and which can lead to neonatal health problems. Some of the pesticides are known of their toxic properties and thus are prohibited to use, such as organochlorines (e.g. DDT), but still greatly used for crops both in poorly and well-developed countries.<sup>3</sup>

### Effect of pesticides on pregnant women (ref health effects on neonates)

Maternal exposure to pesticides can disrupt foetal organ formation and rapid cell division, leading to abnormalities. Pesticide exposure can result in both acute and chronic toxicity symptoms, including headaches, vomiting, abdominal pain, respiratory issues, and ulceration in the upper gastrointestinal tract<sup>4</sup>. Chronic effects may manifest as asthma, paediatric cancer, acute lymphocytic leukaemia, hormonal imbalances, preterm birth, and low birth weight. Furthermore, pesticides can increase the prevalence of premature births, birth defects, neurological and behavioural disorders, blood cancers, and respiratory and endocrine disruptions in newborns<sup>5</sup>.

### Exposure and effect of pesticides on fetus (3 ref how pesticides effects neonates)

Exposure to pesticides during fetal and childhood stages is particularly perilous because these are critical periods of vulnerability when organs are forming and cells are dividing rapidly. The brain undergoes crucial development between weeks 3 and 16, making it especially sensitive to pesticide exposure, which can lead to cognitive deficiencies. In the first



four weeks, major developments like the formation of the amnion, umbilical vesicle, and chorionic sac occur. Between the fourth and eighth weeks, during organogenesis, exposure to teratogens, including pesticides, can cause significant birth defects, both in terms of function and structure. Additionally, during the fetal period, especially after the ninth week, there's a risk of functional issues like cognitive deficits and minor anatomical abnormalities, particularly in the ears<sup>6</sup>.

Organophosphate, organochloride, and neonicotinoid pesticides pose significant health risks, particularly during pregnancy and childhood. Organophosphates, including dibutyl phosphate and diethyl phosphate, can cause endocrine disruption, neurocognitive dysfunction, ADHD, aggressive behaviour, and intoxication. Organochlorides are linked to low birth weight, neuropsychological and neurodevelopmental impairments, and increased BMI, with specific chemicals like B-HCH, endosulfan, aldrin, DDT, and HCBs causing neurobehavioral and neurodevelopmental disorders<sup>7</sup>. Neonicotinoids, a newer class of insecticides, are known for their neurotoxicity, leading to cognitive and developmental issues. Reducing exposure to these pesticides and finding safer alternatives are crucial for protecting public health<sup>8</sup>.

#### Discussion

*Garbhini Paricharya*, an essential aspect of Ayurvedic medicine, is given prime importance in maintaining the health of *Garbhini* (pregnant women) as well as ensuring a healthy progeny. This traditional practice emphasizes a holistic approach to pregnancy, advocating for proper diet, lifestyle, and medical care throughout the gestation period to promote the well-being of both mother and child. Key components include nutritional guidelines, herbal supplements, physical activity, and mental well-being, all tailored to each stage of pregnancy. However, due to globalization, there has been a drastic change in lifestyle and environment, directly impacting the health of pregnant women. One of the major contributing factors in the present era is pesticide exposure. Many studies have claimed a positive association between pesticide exposure and adverse outcomes such as spontaneous abortions, birth defects, and other abnormalities, including fetal death. These risks are exacerbated by modern agricultural practices and the pervasive use of chemicals, which are in stark contrast to the natural and organic approaches emphasized in *Ayurveda*. A significant incident highlighting this issue was the Endosulfan poisoning in the Dakshina Kannada district, which underscored the severe consequences of pesticide exposure. Such incidents demonstrate the urgent need for stricter regulations and safer alternatives to protect maternal and fetal health in the face of changing environmental and lifestyle factors. *Ayurveda* advocates for the use of organic farming methods and natural pest control to minimize such risks, emphasizing a return to traditional practices that align with the principles of natural harmony and health. By integrating Ayurvedic principles with modern practices, it is possible to mitigate the adverse effects of globalization and ensure the health and well-being of pregnant women and their unborn children.

#### CONCLUSION

To avoid the complications of these toxins, we should emphasize *Shodhana* (detoxification) during the pre-conception stage to remove toxins and ensure a healthy progeny. Prime importance should be given to *Garbhini Paricharya* (care during pregnancy), and practices such as *Pranayama* (breathing exercises) and *Yoga* should be followed to avoid such consequences. Certain Ayurvedic medicines like *Devdaru*, *Ksheerakakoli*, *Shatavari*, *Sariva*, *Kantakari*, *Bala*, *Gokshura*, *Musta*, and *Ashwagandha* should be consumed according to a month-wise regimen. Thus, *Ahara* (diet) and *Vihara* (lifestyle) play significant roles in the health of pregnant women and the development of the fetus.

#### REFERENCES

1. Shashri S, Pandey K, Chaturvedi G. *Charak Samhita of Agnivesha, revised by charak and Dridhabala, elaborated with hindi commentary, Sharirsthana, ch np.8, verse no33, Varanasi, chaukhamba bharti Acadamy, 2007, p.939*
2. <https://www.sciencedirect.com/science/article/pii/S0048969722059587>
3. <https://www.sciencedirect.com/science/article/pii/S0048969722059587>
4. [https://www.researchgate.net/publication/328096060\\_Health\\_Effects\\_of\\_Pesticides\\_on\\_Pregnant\\_Women\\_and\\_Children](https://www.researchgate.net/publication/328096060_Health_Effects_of_Pesticides_on_Pregnant_Women_and_Children)
5. [https://www.researchgate.net/publication/328096060\\_Health\\_Effects\\_of\\_Pesticides\\_on\\_Pregnant\\_Women\\_and\\_Children](https://www.researchgate.net/publication/328096060_Health_Effects_of_Pesticides_on_Pregnant_Women_and_Children)
6. <https://doi.org/10.1016/j.scitotenv.2022.158859>
7. <https://doi.org/10.1016/j.scitotenv.2022.158859>
8. <https://www.intechopen.com/chapters/72504>



# ETHNOMEDICINAL PLANTS FOR EASY DELIVERY USED BY THE PRIMITIVE AND VULNERABLE TRIBAL GROUPS (PVTGS) OF VISAKHAPATNAM DT. ANDHRA PRADESH

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## ABSTRACT

The paper deals with 17 ethnomedicinal plant species as many as genera and families used for easy delivery of pregnant women prevalent among the Primitive and Vulnerable tribal groups of Visakhapatnam district. *Grewia orientalis* and 14 practices were found to be new or less known.

**KEYWORDS:** Ethnomedicine, Easy delivery, PVTGs, Visakhapatnam

## STUDY AREA

Visakhapatnam district is situated in the north eastern part of Andhra Pradesh. It lies between 17° -34' 11" and 18° - 32' 57" in northern latitude and 81°1 -51' 49" and 83°-16' 9" in eastern longitude with a total area of 6,298 sq km covering 11 mandals of Visakhapatnam districts of Andhra Pradesh. Very few publications are available in India [6-9] and exclusive studies on the easy delivery were not available necessitating the present study.

## Ethnology

Tribes in India have their own way of living within social and cultural moorings, purely governed on the basis of local conditions and ethos. The term "tribes was first included in the Government of India Act 1935. Article 342 of the Constitution of India defines 'tribes' as "an endogamous group with an ethnic identity; who have retained their traditional cultural identity; they have a distinct language or dialect of their own; they are economically backward and live in seclusion, governed by their own social norms and largely having a self-contained economy." The term 'Primitive tribes' was first used by western anthropologists to represent, "a primary aggregate of people living in a primitive or barbarous conditions under a headman or chief". In the study area *Gadaba*, *Khond* and *Porja* are the primitive and vulnerable tribal groups.

## Gadaba

The Gadaba call themselves 'Mogililu' or 'Modililu' in their own dialect. The Gadaba were formerly employed as palanquin-bearers. They owe their name to the fact that its ancestors emigrated from the bank of the Gadabari (Godavari) river, and settled at Nandapur, the former capital of the Rajas of Jeypore. Sometimes it is to Kadava in Tamil, because of their prominent earrings, *kadu* in Tamil meaning ear. It may be more proper to derive it from the Sanskrit *gatvara*, which in Oriya means locomotive and palanquin-bearers may deserve the adjective 'gatvara'. Another derivation may be from the Sanskrit *kadavada*, which means speaking indistinctly. As per 2001 census reports, the total population of the Gadaba was 36078 of which 17836 were men and 18242 women. The low

literacy level (36.63%) indicates educational backwardness among the community. Gadaba belong to the Austro-Asiatic linguistic family. There are four major endogamous groups, each having its own recognition as a primitive tribal group by the government of India.

## Kondh

The Kondh, are also called Kodulu, Samantha and Jatapu. They call themselves 'Kuvinga' in their 'Kui' dialect. The Kondhs are very primitive, inhabiting inaccessible hills and forests. As these people live in deep forests and on hills, they are called 'Kondhulu'. Kandha or Khondh are a Dravidian tribe in the hills of Orissa and neighbouring districts, commonly called Kondh. Since they mainly depend on 'podu' cultivation, shifting from place to place for fresh podu fields, is ultimately led to their migration from Orissa to Andhra Pradesh. They live in the hills separating the districts of Ganjam and Vizagapatnam in the Madras Presidency and continuing northwards into the Orissa territory crossing the Mahanadi into Angul and the Khondmals. The population of the Kondh according to 2001 census is 85324 with a low literacy rate (17.81%). They speak 'Kui' language among themselves and only men speak Telugu with other communities. The Kondh are nonvegetarian, who eat beef, pork and carrion. Males are addicted to liquor especially during hot weather, when the sago palm is in full flow. They also drink liquor and toddy available in the shandies and also homemade liquor. Women take alcoholic drinks occasionally. Smoking is very common. Women smoke only cigars. They chew betel and use snuff. Reverse smoking is a common habit.

## Porja

The Porja are hill tribe, inhabiting the Agency Area of Visakhapatnam district, and spread over the adjoining areas of Orissa state. They are chiefly shifting agriculturists and cultivate lands on the high level hill slopes. A numerically small tribe with a population of 32669 (0.65%) and a literacy rate of 26.55%. They reside mainly in the Munchingput, Ananthagiri and Pedabayalu mandals. Their mother tongue is 'Parji' dialect, a corrupt form of Oriya language. The term *Porja* seems to have been derived from Oriya words *po* and *raja* which mean 'so of





a king'. Most of them have migrated from Orissa state about 300 years back to the present habitat in search of cultivable land. They are nonvegetarian. They drink home-made 'landa', *ragi* liquor or *ippasara* and *caryota* palm sap. Both males and females smoke loose tobacco, cigar and ganja and also chew tobacco along with some local narcotics, namely, *ganja* and *nalla mandu* (opium).

## MATERIALS AND METHODS

The ethnomedicinal data presented here are the outcome of a series of intensive field studies conducted during 2008-2011 in 95 interior tribal pockets with good forest cover and 165 *vaidyas* were consulted. Each field trip was of 5-8 days duration covering all seasons of a year. After establishing good rapport with the tribe, the utility of plants, detailed methods of uses were documented and cross-checked for authenticity. Plants are identified with floras [1-2]. Voucher specimens were prepared and deposited in the Herbarium of the Department of Botany, Andhra University, Visakhapatnam (AUV).

### Enumeration

The plants are arranged in an alphabetical order with botanical name followed by family, vernacular name, English name, method, mode and duration of the treatment. Plants and practices marked with an asterisk (\*) are considered to be new or less known.

***Abrus precatorius*** L. (Fabaceae) Gurivinda, Guriginja, Crab's eye

\* Bark paste mixed with 50 ml of water is given.

***Achyranthes aspera*** L. (Amaranthaceae) Kukkurudhanthi, Prickly chaff flower

\* Wear the root in the axil of the ear.

***Argemone mexicana*** L. (Papaveraceae) Yerrikusuma, Mexican poppy

\*Root paste along with root paste of *Andrographis paniculata* mixed with half tea glass of hot water is administered at the time labour pains.

***Belamcanda chinensis*** Leman (Iridaceae) Kusudabbareku, Block lily, Leopard lily

\*Leaves are kept in the axil of ear at the time of labour pains.

***Cassia tora*** L. (Caesalpiniaceae) Tantepu mokka, Foetid cassia

\* Roots are crushed and kept near the vagina.

***Crinum asiaticum*** L. (Amaryllidaceae) Jamirica kalabanda, Poison bulb

\*Fifty g of leaf paste mixed with half tea glass of water is administered at the time of delivery. ***Ficus racemosa*** L. (Moraceae) Medi chettu, Cluster fig

\*Root paste is applied beneath the feet.

***Gloriosa superba*** L. (Liliaceae) Vanka vajram. Superb lily  
Tuber paste is applied under the foot, palms and navel.

\****Grewia orientalis*** L. (Tiliaceae) Chilakam pothadi

Root paste or flower paste is administered at the time of delivery.

***Kalanchoe pinnata*** (Lam.) Pers. (Crassulaceae) Disthi mandhu,

A piece of leaf is eaten at the time of delivery.

***Catunaregam spinosa*** (Thunb.) Tirv. (Rubiaceae) Manga chettu, Emetic nut

\*Dried unripe fruits are burnt on the fire and smoke is exposed to vagina.

***Oroxylum indicum*** (L.) Vent. (Bignoniaceae) Bapana, Pumpena, Indian trumpet-flower

\*Bark paste mixed with half tea glass of hot water is given at the time of delivery.

***Rauvolfia serpentina*** (L.) Benth. ex Kurz. (Apocynaceae) Pathala garidi, Sarpentina root

\*One spoon of tuber decoction is given orally during delivery.

***Sterculia urens*** Roxb. (Sterculiaceae) Kovila chettu, Gum karaya

\*Stem bark with that of *Madhuca longifolia* is made into powder. One to two spoons of it is taken with one cup of water.

***Trichodesma indicum*** (L.) R. Br. (Boraginaceae) Nosanugu

\*Tribals uproot the whole plant at the time of delivery. If uprooted smoothly without any hindrance it is an omen for easy delivery. If it is uprooted hardly it is considered as bad omen indicating delayed delivery. Crushed root juice is administered orally for easy delivery.

***Yucca gloriosa*** L. (Liliaceae) Osso, Spanish dagger

\*Leaf top is kept either in the axil of the ear or in the plait at the time of delivery.

***Zizyphus oenoplia*** (L.) Mill. (Rhamnaceae) Rubba chettu, Jackal jujule.

A piece of root is collected from the East facing side of the plant and keeps it in the hair of the woman at time of delivery. Then it relieves from pain.

## RESULTS AND DISCUSSIONS

The paper deals with 17 ethnomedicinal plants species as many as genera and families used by the Primitive and Vulnerable tribal groups of Visakhapatnam district for easy delivery. Habit-wise analysis showed the dominance of herbs represented with 9 species followed by trees with 6 species and climbers and shrubs each 1 species. Morphological analysis showed the root in 6 practices followed by leaf (4), stem bark (3), tuber (2), fruit and whole plant each one practice. *Grewia orientalis* and 14 practices were found to be new or less known [4-5]. The study is great importance to preserve the knowledge of medicinal plants for easy delivery by the primitive and vulnerable tribal groups of Visakhapatnam district, Andhra Pradesh.



### Acknowledgements

The authors are grateful to the primitive and vulnerable tribal informants and practitioners for their cooperation and help during field work by providing information.

### REFERENCES

1. Gamble, JS., (1915-1936). *Flora of the Presidency of Madras, Vol. 1-3, (Vol. 3 by C.E.S. Fischer)*. Adbard & Sons Ltd., London.
2. Rao, GVS., Kumari, GR., (2002). *Flora of Visakhapatnam district, Andhra Pradesh*. B.S.I., Kolkata.
3. Jain, SK., (1989). *Methods and approaches in Ethnobotany*. Society of Ethnobotanists, Lucknow. (Ed.).
4. Jain, SK., (1991). *Dictionary of Indian Folk Medicine and Ethnobotany*, Deep Publications, New Delhi.
5. Kirtikar, KR., Basu, BD., (Reprinted). (2003) *Indian Medicinal Plants, Oriental Enterprises, Dehra Dun, Uttaranchal*.
6. Sen, SK., et al. (2015). *Ethnomedicinal uses of plants related to delivery problem in Bargarh district of western Odisha*. *International Journal of Herbal Medicine*. 2 (5): 31-33.
7. Mahamad, SM., et al. (2021). *Ethnomedicinal Uses of Plants by Major Ethnic Tribes in Terai Districts of Nepal*. *International Journal of Applied Biology*. 5(1): 130-174.
8. Rao, JK., et al. (2011). *Ethnomedicine of the Gadabas, a primitive tribe of Visakhapatnam district, Andhra Pradesh*. *International Multidisciplinary Research Journal*. 1(2):10-14.
9. Rao, VLN., et al. (2006). *Ethnomedicinal practices among Khonds of Visakhapatnam district, Andhra Pradesh*. *Indian J. Trad. Knowl*. 5(2): 217-219.



# ACCENTUATING THE HEART OF TEACHING: THE LIVED EXPERIENCES OF STUDENT-CATECHISTS

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Article DOI: <https://doi.org/10.36713/epra17631>

DOI No: 10.36713/epra17631

## ABSTRACT

For more than a decade, St. Mary's College of Tagum, Inc., Philippines, has been actively involved in the community through the catechetical ministry. It is henceforth, the purpose of this study to accentuate the heart of teaching by exploring the lived experiences of the student-catechists. This employed qualitative research specifically phenomenological design. The researchers used in-depth interviews and focus group discussions. The participants of the study were chosen through purposive sampling wherein participants were selected based on some pre-inclusion criteria. The participants were student-catechists from our school. The responses were gathered through audio recordings. Coding and thematic analysis of participants' responses were used to extract answers. Results of the investigation revealed that student-catechists view catechism as inspires students and exemplifying good role models. It gives positive experiences by students' constructive responses, co-catechists shared experiences, and learning from interactive activities. The challenges faced include lack of provision for instructional materials, attitude towards catechism, lack of knowledge, and difficulty in managing responsibilities. Despite these factors, participants learned to cope by lesson planning, proper classroom management and respecting beliefs of others. The results of this study imply that there is a sense of fulfilment on being a student catechist.

**KEYWORDS:** Education, student catechism, college students, phenomenology, coding, and thematic analysis, Philippines

## INTRODUCTION

*For God so loved the World that He gave His only begotten Son so that who so ever believe in Him may not perish but may have eternal life. (Jn 3:16).*

Jesus, the Word Incarnate, the visible presence of the invisible God, in perpetual and perfect obedience to the will of the Father instituted the wondrous gift, the Holy Church. The Church, the living witness of Jesus' life and ministry; the visible presence of Jesus, the mystical body of the risen Lord and the sacrament of God's Compassionate love to humanity. Cleansed by his own blood, Jesus commanded his disciples, the Church, the Good News to the whole world and to baptize them in the name... † (Mt. 28: 18-20).

It is for this sacred mandate that this humble research has been conceived in response to the continuing and ever changing challenges which the Church thru her Catholic Educational Institutions has ever confronted with. The need for an honest and sincere witnessing has always been called upon and challenges all catholic educational institutions to be even more introspective and innovative in facing the signs of the times in which their students are very much involved and vulnerable.

It is important, at this very juncture, to emphasize the fact that the child's first catechetical experience must begin at home and so to accentuate the necessity of the presence of parents and god-parents (during the child's baptism) and to re-catechize and remind them of their sacred role to be the first catechists of the child as she/he grows under their care and guidance. The moment the child reaches schooling life, she/he must have already her/his natural notion about the reality of the Divinity, of Christ, and of the Church and her (church) prayers and rituals. By then, the school's catechetical instructions may lead and guide the child's relationship with the Divine into a deeper sphere and wider realms achieving maturity of her/his faith. For it is with maturity of faith, with the help of the Holy Spirit, which will ignite the child's spirit to catechize others when the proper time comes for her/him to do the same. The same maturity of faith would eventually be necessary to support and assure her/him in responding to the invitation which more often than not would be tough and challenging.

Thus, according to the Declaration on Christian Education written by Pope Paul VI (1965), he said and I herein quote: "since all Christians have become by rebirth of water and the Holy Spirit a new creature so that they should be called children of God, they have a right to a Christian Education. A Christian education does not merely strive for the maturing of a human person, but has as



its principal purpose this goal: ‘that the baptized, while they are gradually introduced to the knowledge of the mystery of salvation, become ever more aware of the gift of Faith they have received, and that they learn in addition how to worship God the Father in spirit and truth,’ thus maturity not only of age but more so of and in faith. Moreover, in fulfilling its educational role, the Church, eager to employ all suitable aids, is concerned especially about those which are her very own. Foremost among these is catechetical instruction, which enlightens and strengthens the faith, nourishes life according to the spirit of Christ, leads to intelligent and active participation in the liturgical mystery and gives motivation for apostolic activity.

The challenges of catechetical apostolate are so enormous and seem insurmountable to deal with, however this venture is undoubtedly rewarding and fulfilling for those whose spirits are open and responsive to the urging of the Holy Spirit as it happened to the disciples in the so called ‘upper room’ during the Pentecost. For indeed, catechetical apostolate being a part of the God’s plan, would mean simply a passing on of the Good News of salvation from generation to generation, thus it is an apostolate.

Henceforth, catechetical instruction must provide clear doctrinal continuity and unity of faith handed down by Christ, the Divine Teacher. This continuity is expressed by what the Church calls the “deposit of faith,” that is, what Christ handed down to his Apostles and their successors and to us the catechists of the modern times.

According to Hater (2008), a catechist’s faith is the basis for his or her love of God and one another. It invites them to share God’s word with children, adolescents and adults. Smiling and laughing are good symbols for catechesis. Catechists help people smile when they share Jesus’ joyful message.”

Furthermore, Fitz (2014) added that great teachers in any subject have a passion for their topic. Thus, the most important prerequisite for being a catechist is having that passion for Christ. In that way, students who aren’t coming to class out of their own personal desire to know and follow Jesus can at least find themselves caught with amazement on the instructor’s passion. It might be enough to ignite a full-fledged personal conversion, or it might be just enough to open the student’s mind to at least learning a few things that will prove helpful down the road.

Again, according to Burke (2000), there are difficulties in catechesis that need to be addressed and one of it is the need for catechists to understand catechesis as a school of faith which deepens Christian life in all of its aspects like knowledge, prayer and worship and witness.

Vatican Declaration on Christian Education has this instruction for Catholic School teachers: ‘Teachers must remember that it depends chiefly on them whether the Catholic school achieves its purpose. They should therefore be prepared for their work with special care, having the appropriate qualifications and adequate

learning both religious and secular. They should also be skilled in the art of education in accordance with the discoveries of modern times (Vatican II, *Gravissimum Educationis*, #55; 28 October, 1965).

Specific example of these difficulties was shared by Madrilena de la Cerna from Cebu City, narrating her experience as a catechist in teaching High School students in Public High School. According to her, it was very challenging because many students in the classroom are older than her and few Protestant students would question and argue about certain doctrinal/theological issues discussed in class.

Almost similar sentiment was shared by the student-catechists of St. Mary’s College of Tagum, Inc. When she was assigned in a Public School, she described the instances in which she found it difficult to continue with her prepared lessons because protestant students tend to raise question just for the sake of questioning for mostly they don’t accept answers, aside from the fact that she herself is not always prepared to answer questions outside the prepared topic.

Student catechist of batch 2017 also has observed the students’ inability and lack of attention to the lessons in the class may be due to several factors one of which would be electronic gadgets. Most of the public schools do not have any mechanism which controls the use of electronic gadgets.

Deprivation or lack of religious text books or any religious material from the school, according to another catechist of batch 2016, which accordingly, would often result into his failure to make attractive visual and audio aids that would win and stimulate the imagination of his students. Additionally, since he also has subjects to deal with being a student himself, he often lack of time to prepare for his catechetical classes. In short, time management.

Summative diagnoses based on the aforementioned four (4) difficulties or challenges of Student catechists, truthful as they are, taking them collectively as whole would always lead us on the issue of ‘maturity of faith.’ For, as what was stated, maturity of faith, would bring forth the passion to share ones lived faith experience which would naturally begot the innovative potential of the catechist. A spirit that is moved by the Divine Spirit knows no obstacles. The beautiful and glorious experience of the apostles and Mary during the Pentecost would serve as summative imagery.

An undetermined number of researches have already been conducted on the effect of Catechesis to the recipients; to the school children, to the youth and even to the adults, and yet, very rarely do we make an intensive studies on the influence and impact of catechism to the ones doing the catechesis themselves especially on their intellectual and spiritual preparedness, a holistic preparation that would showcase their maturity of faith on the sublimity and sanctity of their task to their apostolate area, these we believe to be even more crucial, relevant and absolutely





necessary and for these purposes and intensions that this study have been conceived and to hopefully be able to cope and fill in the gap of studies that address these very concerns and issues.

For more than a decade, St. Mary's College of Tagum, Inc. had been sending student-catechists for the Catechetical Ministry of Christ the King Cathedral, this would need a thorough re-evaluation for the sake of those who are sent.

The findings of this study will be significant for the students, teachers of the faith (catechists), the Teacher Education Program, Catechetical Apostolate Club of the entire institution.

### Research Questions

This study aimed to explore and understand the lived experiences of the student catechists.

This sought answers to the following research questions:

1. What are the participants' perceptions on student catechism?
2. What are the participants' positive experiences on being a catechist?
3. What are the challenges that the participants faced in teaching catechesis?
4. How do the participants cope with the challenges encountered?
5. What are the participants' realizations out of their experiences?

### Theoretical Lens

This study is seen through the Social Action Theory of Max Weber (1864-1920) which argued that social action occurs as a result of cooperation and struggle between the individual and wider society. Talcott Parsons stated in his Structural Functionalism that society functions as the institutions like education and religion interact each other (Norwood, 2003).

We also make use of Lawrence Kohlberg on his theory of Moral Development which is a basis for ethical behavior. This is the assumption that humans are inherently communicative, capable of reason, and possess a desire to understand others and the world around them. He understands values as a critical component of the right. Whatever, the right is, for Kohlberg, it must be universally valid across societies, a position known as moral universalism.

Wade (2001) also stated that social action is at the heart of teaching of all student learning. It only means that social action can be integrated with different subjects and much more in religious education which will clarify values of the students. Nelson, Beaudoin, and Maro (2010) further articulated that communication theology bridges education and catechesis. The creation of "common living space" serves as an avenue of teaching and learning just like in liturgy. In academic setting, we can build common living space through the classroom where there is preaching and sharing God's word.

Raths, Harmin, and Simon (1978) in their Value Clarification Model provides an educational solution. They said that through valuing process, which can be done in the teaching-learning process, it helps to reduce the symptoms of values confusion.

It was also supported by the Social Action Model of Newmann (1975) which recommends community involvement. The model suggested four different roles of teachers in the Social Action: General Resource, Counsellor, expert resource, and activist.

## METHODOLOGY

### Research Design

This research is qualitative in nature. This is basically a type of phenomenological research. As stated by Waters (2000), phenomenological research is a study that attempts to understand people's perceptions, perspectives and understanding of a particular situation or phenomenon.

### Research Participants

In this study, the participants were the selected ten (10) student-teachers of St. Mary's College of Tagum, Inc. Further, the participants of this study were based from the following criteria: they must be a student of the Teacher Education Program and who have taught catechesis in Tagum City National High School regardless of grade levels either male or female and must be willing to participate in the conduct of the study.

### Research Instruments

Interview was the primary source of data in this study. Aside from writing responses of the participants, the researchers used a phone recorder to ensure that their responses was not altered or misinterpreted. The written or recorded responses were analysed carefully.

The sampling method used is the nonprobability sampling which is Purposive Sampling Technique. In this type of sampling, participants were selected or sought after on pre-selected criteria based on the research questions stated in the above mentioned paragraph.

The in-depth interview (IDI) had five (5) participants. Focused group discussion (FGD) also was used as a means for us to gather sources and information about our participants. Five (5) key-participants were accommodated for FGD.

Moreover, this study was conceptualized, carefully planned and authentically established by the researchers. The information gathered especially the background of the study and the reviews of related literature were with citations.

### Data Gathering Procedure

In gathering the data, the researchers used interviews to capture the responses of the participants which help us in accentuating the heart of teaching and to find out the lived experiences of the student-catechist. Interviewing is a method of qualitative research in which the researchers ask open-ended questions orally and





record the participant's answers. It is typically done face-to-face, but can also be done via other communication devices such as online interview and the like. The open-ended questions enable the participants to answer in their own spontaneous words (Babbie, 2001).

Aside from the in-depth interview, we also used focus-group discussion (FGD) wherein the participants were gathered together. It was one way of capsulizing a free conversation. It was a benefit for us to obtain a free conversational relationship with our participants. It led us to know them better that enable us to really accentuate the heart of their teaching.

Firstly, the researchers provided the participants consent forms informing them about the purpose of our study.

Secondly, after the approval, we gave them short information about the main core of conducting the study. Along with this, we also provided them the scope and limitation for the participants to be guided as to where this study evolved and also for them to share and give only what is necessary with the help of our questionnaires.

Thirdly, we had an in-depth interview among our participants. We conducted an interview with the participants individually.

After the in-depth interview, focus-group discussion followed. We gathered all the participants together for us to have a free conversational relationship with the participants in order to capsulize and generalize the students-catechists responses.

In addition, the responses of the participants were recorded as it is without alteration of words to obtain accurate responses as the basis for interpretation and analysis.

Lastly, findings were discussed.

### **Data Analysis**

According to Taylor and Gibbs (2010), qualitative data analysis is the range of processes and procedures whereby we move from the qualitative data that have been collected into some form of explanation, understanding or interpretation of the people and situations we are investigating.

Before the data was analyzed, all in-depth interviews and documents were transcribed into written form for a closer study. The transcription process help the researchers to have a deep understanding of data as it encompasses what were in the transcript.

The answers of the participants were documented in a tabular form. We transcribed their answers from specific questions to follow-up questions.

Another column was for coding followed by thematic analysis where we got the main themes and core ideas of the responses in order for us to capsulize it. Analysis and interpretation was made after.

According to Saldana (2009), a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data.

In coding, we looked for distinct concepts and categories in the data, which formed the basic units of our analysis. In other words, we break down the data into first level concepts, or master headings, and second-level categories, or subheadings. It is from specific to general categories to have a comprehensive set of themes.

Braun and Clarke (2006) define thematic analysis as "a method for identifying, analyzing and reporting patterns within data."

After coding, we extracted the main concepts and proceed to thematic analysis. We put together the concepts to come up with a major theme.

### **Trustworthiness of the Study**

In qualitative research, using Guba's constructs, four issues of trustworthiness demand careful attention: credibility, transferability, dependability and confirmability. This paper considered the criteria in detail.

### **Ethical Considerations**

According to Kimmel (2007), ethical aspects of a study must be addressed in the following manner: informed consent of the participants were obtained before involving them in the study, members of the sample group were not subjected to coercion in any ways, privacy of the research participants was ensured so that no personal data were collected from the participants, research participants were debriefed about the aims and objectives of the study before the primary data collection process.

The researchers considered certain research ethics to ensure quality, validity and integrity of the study, by using consent forms that were given to the participants. Before doing the interview, the participants were informed that they have the right to refuse to be a subject of this study, and all of their personal information and data were kept confidential.



## RESULTS AND DISCUSSION

### Participants' Perceptions about Student Catechism

Table 1

*Major Themes and Core Ideas on Participant's Perception about Student Catechism*

Major Themes	Core Ideas
Channel of Faith	<ul style="list-style-type: none"> <li>• It is an opportunity to share knowledge</li> <li>• A tool to inspire students</li> <li>• Satisfying if we can share</li> </ul>
Exemplary Action	<ul style="list-style-type: none"> <li>• A student catechist is seen as a good role model</li> <li>• A student catechist is living the action he teaches</li> </ul>
Attributes of a Catechist	<ul style="list-style-type: none"> <li>• Commitment and dedication</li> <li>• Passionate and responsible</li> <li>• Patient and understanding</li> <li>• Knowledgeable</li> </ul>

As cited by Hater (2008), a catechist's faith is the basis for his or her love of God and one another. It invites us to share God's word with children, adolescents and adults. As for the participants, they find catechism as a medium for them to inspire students and an opportunity to share knowledge. Second theme highlights that catechism is an exemplary action wherein student-catechist are

viewed as a role that lived with the words they teach. Many of them also pointed out that a certain catechist must possess values like committed, dedicated, knowledgeable, passionate, responsible, patient, and most of all understanding.

### Participants' Positive Experiences on being a Catechist

Table 2

*Major Themes and Core Ideas on the Participant's Positive Experiences on being a Catechist*

Major Themes	Core Ideas
Students Influence in Teaching Catechesis	<ul style="list-style-type: none"> <li>• Students positive response to catechism and warm welcome</li> <li>• Looking at the eyes of the students eagerness to learn</li> <li>• Learning from the students as well</li> </ul>
Co-catechist Shared Experiences	<ul style="list-style-type: none"> <li>• Collaboration with co-catechist to come with certain teaching strategy</li> <li>• Sharing of individual experiences</li> </ul>
Learning from Interactive Activities	<ul style="list-style-type: none"> <li>• Open-forum</li> <li>• Group sharing</li> <li>• Bible sharing</li> <li>• Reflection time</li> <li>• Seeing students' full cooperation and participation</li> </ul>

Fits (2014) mentioned that great teachers in any subject have a passion for their topic. The most important pre-requisite for being a catechist is having that passion for Christ. In that way, students can at least find themselves caught with amazement on the experience and on the instructor's passion. With this, the participants have mentioned experiences that struck them on their

catechism journey. One theme highlighted the positive experience of some of the student-catechists as students heartedly welcome them. It was also viewed that one of the positive experience that they encounter is to see the eyes of the students eagerness to learn, where they can also learn from them and vice versa.

**Challenges that Participants' Faced in Teaching Catechesis****Table 3*****Major Themes and Core Ideas on the Challenges that Participant's Faced in Teaching Catechesis***

Major Themes	Core Ideas
Encountered Problems	<ul style="list-style-type: none"> <li>Classroom's electronic concerns</li> <li>Instructional materials</li> <li>Conflict between academic and catechism responsibilities</li> <li>Students act of disrespect</li> </ul>
Diversity of Students' Belief	<ul style="list-style-type: none"> <li>Attention span of non-Catholic students</li> <li>Dealing with non-Catholic students</li> </ul>
Student-Catechist Ignorance of the Doctrines of the Faith	<ul style="list-style-type: none"> <li>A need to deepen understanding of the Christian faith</li> <li>Inability to answer queries of students</li> </ul>

We also gathered a lot of real-life problems encountered in the catechism journey. Some of the participants experienced difficulty in setting up the classroom because of electronic concerns, instructional material concerns and students act of disrespect. Students are known to be diverse individual who came

from different backgrounds. This has become also an encountered problem from most of the participants because of their lived beliefs; they had problems on dealing with non-Catholic students whose attention span runs only in couple of minutes and tend not to be attentive.

**Participants' Way of Coping with the Challenges Encountered****Table 4*****Major Themes and Core Ideas on How the Participant's Cope With the Challenges Encountered***

Major Themes	Core Ideas
Lesson Planning	<ul style="list-style-type: none"> <li>Planning when it comes to instructional materials</li> <li>Proper preparation through research</li> </ul>
Act of Advice	<ul style="list-style-type: none"> <li>Respect students' respective beliefs</li> <li>Let students know about our different perceptions</li> <li>Emphasis on our differences and commonalities</li> </ul>
Classroom Management	<ul style="list-style-type: none"> <li>Giving class activities and tasks</li> </ul>

There are ways that the participants had shared as to how they cope with the challenges they encountered. One theme extracted was for them to plan. These employ the participants' way of planning in terms of their instructional materials and do an in-depth research on the topics on their manuals. They also

mentioned that one of coping with those challenges is a need to respect students' respective beliefs, let students know about their different perceptions and put emphasis on each of our differences and commonalities.

**Participants' Realizations of their Experiences****Table 5*****Major Themes and Core Ideas on the Participants' Realizations of their Experiences***

Major Themes	Core Ideas
Room for Improvement	<ul style="list-style-type: none"> <li>One must be ready at all times</li> <li>Feeling of wanting to have a deeper connection and relationship to God</li> <li>A need to be knowledgeable</li> <li>Provide variety of teaching strategies</li> <li>Avenue to apply today's experiences to future teaching</li> </ul>
Sense of Fulfilment	<ul style="list-style-type: none"> <li>Satisfaction</li> <li>Gratitude</li> <li>Enlightenment</li> </ul>

According to Burke (2000), there are difficulties in catechesis that need to be addressed and one of it is the need for catechist to understand catechesis as a school of faith which deepens

Christian life in all of its aspects like knowledge, prayer, worship and witness. This thought of Burke greatly highlights to the response of the participants as to their realizations based on their



experience. Most of the participants shared that there is always a room for improvement wherein they added that one must be ready at all times and provide variety of teaching strategies. They also realize the need to have a deeper connection and relationship to God. Thus, an avenue to apply today's experiences to future teaching. They also feel the sense of fulfilment, satisfaction, gratitude and enlightenment with this spiritual endeavor.

## CONCLUSION

As we analyzed the result in these research questions, we came up with the following conclusive findings: (1) catechetical instruction opens wider opportunity for the catechized to share events in their lives that are spiritual in nature and in a venue that is suitable for them to see the spiritual dimension of their experiences; (2) catechetical instruction allows them to get out from their own shelves for them to see and realize the amazing truth that their own pains and suffering are the same pains and sufferings won by Jesus on the Cross. That Jesus may become their source of Hope and comfort in the lives; (3) catechetical instruction may highlight the invitation of the ministry of Jesus through proper guidance for the catechized to find their respective vocations in life; (4) for the student-catechists to do primarily a continuity of Jesus' mission and above all for them to assimilate the values, culture and language of our Divine Teacher.

## IMPLICATIONS OF THE STUDY

### For Teaching Practice

Catechetical apostolate serves as our institutional response to the invitation of the ministry of Jesus, the greatest teacher. As future Ignacian Marian teachers, we must be fully equipped with the knowledge of the faith in order for us to be effective in doing the mission entrusted to us.

Thus, a holistic preparation for maturity of the faith is deemed necessary. This research may lead to us to create the following program:

1. Series of seminars that would highlight on Jesus's life and mission. Christological discussion would help the student-catechists to realize that what they are about to do is primarily a continuity of Jesus' mission and above all for them to assimilate the value, culture and language of the Divine Teacher. 'Christification' of the catechists is what the signs of our time is called us to do.
2. Recollections that are solely for catechists, if possible, to spiritually prepare them for this sacred task.
3. It is also seen as necessary to modify and intensify our mode of selection of the would-be catechists to ensure preparedness and readiness to face any challenges that may come along the way, a set of criteria and qualification may be followed.
4. A new and updated catechetical lesson guide and module must be used to facilitate ease in doing catechesis.
5. The use of the electronic equipment; televisions and even gadgets like phones and the likes may also be utilized for the good use instead of making them as obstacles and source of destructions.

## For Future Research

Since the findings of this study were limited only on the views, opinions and experiences of the participants, the implications of this study suggest that further research study should be made to validate all the answer of the students using larger sample size and/or greater number of participants for us to have a wider view about this catechetical endeavor. We may also suggest that further research be performed on the inner beauty behind SMCT catechetical classes to the recipients especially in TCNHS to confirm its influence of this missionary venture.

## REFERENCES

1. Braun and Clarke (2006). *What is thematic analysis?* Retrieved May 20, 2019 from <https://sites.google.com/site/howtouse thematicanalysis/home/what-is-thematic-analysis>
2. Burke (2000). *Catechesis in the Process of Evangelization.* Retrieved February 10, 2019 from <https://www.catholiceducation.org/en/education/catholic-contributions/catechesis-in-the-process-of-evangelization.html>
3. *Catechism of the Catholic Church* (1994). *The process and spirit of drafting the text.* Broadway, New York: Bantam Doubleday Dell Publishing Group, Inc.
4. Fitz (2014). *Catechesi Tradendae of Pope John Paul II on Catechesis in our Time.* Retrieved February 15, 2019 from <http://catholic.net/op/articles/4748/a-letter-to-catechists.html>
5. Flannery, A. (1994). *Vatican Council II.* Harrison, Pasay, Metro Manila, Philippines
6. Paul, J. II. (1985). *Catechesi Tradendae. Daughters of St. Paul: Harrison, Pasay, Metro Manila, Philippines.*
7. Hater, R. (2008). *Catechesis and Culture: An analysis of Catechetical Approaches.* Retrieved February 10, 2019 from <https://www.biola.edu/talbot/ce20/database/robert-hater>
8. Kimweil (2009). *Ethical issues in behavioural research: basic and applied perspective.* Retrieved from February 10, 2019 from [https://www.jstor.org/stable/43103815?seq=1#page\\_scan\\_tab\\_cont](https://www.jstor.org/stable/43103815?seq=1#page_scan_tab_cont)
9. Norwood (2003). *Social Action Theory.* Retrieved May 20, 2019 from <https://www.historylearningsite.co.uk/sociology/theories-in-sociology/social-action-theory/>
10. Simon et al. (1978). *The Value Clarification Model educational Solution.* Retrieved December 20, 2019, from <http://scholarworks.umass.edu/cgi/viewcontent.cgi?article>
11. Sri, E. (1999). *Leading Students to Christ.* Retrieved March 10, 2019 from <https://www.catholiceducation.org/en/culture/catholic-contributions/leading-students-to-christ.html>
12. Wilson, T. (2008). *What is Qualitative Research?* Retrieved from March 2, 2019, from <http://www.qua1res.org/HomeWhat-3513.html>



# THE EBB AND FLOW OF LEARNING ENGLISH AS A SECOND LANGUAGE IN THE AGE OF AI

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## ABSTRACT

The emergence of Artificial Intelligence (AI) has significantly improved English as a Second Language (ESL) in higher education. AI tools like Wordtune, Questgen AI, Duolingo, Taskade, and Memrise can help learners improve their language skills, improve intercultural understanding, and enhance communication abilities. These tools play a crucial role in global corporations and AI-dependent industries. Wordtune is an AI-driven writing tool that enhances language skills by identifying grammatical errors, providing instant feedback, and suggesting alternative words, thereby improving accuracy and fluency. Questgen is an AI tool that creates interactive learning materials, assessments, and language practice tasks, including vocabulary quizzes and flashcards, to aid learners in memorizing and reinforcing new words. Duolingo is a language learning app that uses gamification to make language learning enjoyable for all skill levels, offering personalized feedback and points. Taskade is a tool that enhances language learning productivity by facilitating collaboration, planning activities, monitoring progress, and promoting motivation among learners. Memrise is a popular language learning app offering interactive courses, multimedia elements, spaced repetition, and community features like discussion forums and social sharing. Thus, this paper deals with the ebb and flow of afore-mentioned AI tools in learning English as a Second Language. The authors would analyse the use of AI tools in accelerating the progress of students' English language learning as a second language in the age of AI.

**KEYWORDS:** AI tools, English as a Second Language, Language Skills, Analysis, Assessment

## INTRODUCTION

In today's world, using technology has become inevitable. Technology has not only changed people's lives, but it has also affected the way we work, interact, and learn. Innovations of all kinds are always emerging, improving the practicality and efficacy of our activities and job. Artificial Intelligence has made it possible to provide the digital learning content that is being developed today. AI as the foundation of the modern era 4.0 is essential for supporting the technologically mediated learning process (Fitria, 2021). However, there are many variables involved in the intricate process of acquiring a language, and there are many potential results. The degree of acculturation, the volume of intelligible information, the attention paid to second language characteristics and aspects, and the availability of opportunities for meaningful negotiation and production are the factors that specifically impact language learning (Woo & Choi, 2021). Individuals deliberately endeavor to enhance their language proficiency when they pick up more languages.

In order to acquire the four fundamental language skills—reading, writing, speaking, and listening—this process entails comprehending vocabulary and grammar. In the last few years, AI language learning systems have advanced significantly in terms of both their functionality and usability. Many of these tools now

provide immersive and interactive learning through the use of virtual reality and augmented reality. AI has benefits and drawbacks for language learning, including the requirement for increased human engagement and the challenge of accurately capturing contextual and cultural subtleties (De la Vall & Araya, 2023). There is no denying these technologies' ability to have a significant impact on schooling in the future. It is our duty as educators and researchers in education to accept accountability for our part in assisting students in acquiring the abilities and information necessary for success. In order to support our students in their future pursuits, we contend that banning the use of AI-based tools in the second language classroom will only harm their learning and chances for success outside of the classroom. Consequently, we need to find a way to tame the beast of AI (Tseng & Warschauer, 2023).

In this connection, this paper discusses the AI tools; Wordtune, Questgen AI, Duolingo, Taskade, and Memrise and their significance in improving the English language. Wordtune, Questgen AI, Duolingo, Taskade, and Memrise are some of the AI tools that are used in the process of learning English as a second language. The authors of this paper examine how these tools can be used to improve students' English language learning in the age of AI by adjusting content and difficulty based on user





performance and preferences, tracking progress, and making personalized recommendations.

## REVIEW OF LITERATURE & ANALYSIS OF AI TOOLS

**Wordtune:** The development of artificial intelligence (AI) technology has greatly advanced society. Writing assistants driven by artificial intelligence (AI) have drawn more attention from English as a second language (ESL) communities in recent years. But the majority of these online writing resources concentrate on the editing and revision phases. There aren't many digital tools designed to support users when they write, such as helping them organize or translate their thoughts into written form. Wordtune is an AI-powered writing aid that comprehends the writer's ideas and offers alternatives for recreating them in various lengths and tones (e.g., professional, informal). With the use of this tool, ESL writers can learn how to write in English consistently and in meaningful ways. In higher education, the use of AI-powered tools for writing instruction has grown in recent years. Examples of these tools include Intelligent Tutoring System (ITS), Automated Writing Evaluation (AWE), and Automated Essay Scoring (AES) (Zhao et al., 2024). Wordtune caters to users of varying writing skill levels. For example, Wordtune lets novices translate words and phrases from other languages into English. This even allows a user to have an English paraphrase of the source text with a few non-English words. With Wordtune's multiple rewrite feature, more experienced L2 learners can improve the quality of their writing. Intermediate users can choose the right words and concise sentence patterns for their prose by evaluating and comparing these rewrites (Fitria, 2021).

### Advantages Of Wordtune

**Improvement of Vocabulary:** Wordtune could be a mnemonic for memorizing methods that improves students' retention of new words and their definitions. To help with retention, this could entail matching words to catchy songs or melodies.

**Tailored Comments:** Based on each learner's unique strengths and shortcomings, an AI language learning program like Wordtune may offer them individualized feedback. Learners can use this feedback to focus on particular areas for improvement, such pronunciation, grammar, or vocabulary usage.

**Learning that adapts:** Wordtune may modify its activities and material in response to the development and performance of the learner. Through the analysis of learner data, including regions of difficulty and exercise replies, the tool is able to dynamically modify the content and level of difficulty to meet the needs of the user.

**Help with Composition and Grammar:** Wordtune can help students improve their writing and correct their grammar. The tool's use of natural language processing (NLP) algorithms could help writers become more fluent and clear by spotting

grammatical mistakes, making suggestions for improvements, and providing alternative wording.

**Practice Pronouncing Words Correctly:** Wordtune may have features for pronunciation practice, such as voice recognition software that evaluates and reports on the accuracy of learners' pronunciation. When speaking in the target language, this can help learners sound more natural and enhance their spoken language abilities.

**Interactive and Captivating Learning:** Wordtune could use interactive exercises and gamification components to increase learners' enjoyment and engagement with language acquisition. Through the use of features like progress tracking, challenges, and incentives, the program can encourage users to remain dedicated to their language learning process.

### Disadvantages Of Wordtune

**Overuse of technology:** Learning should not be passive, with students not actively using the language or honing their critical-thinking abilities if they rely too much on online resources such as Wordtune.

**Limited Language Content:** Students studying less frequently taught languages may discover less resources or help than those studying more generally spoken languages, depending on the language or languages that Wordtune supports.

**Possible Distraction:** Wordtune's gamified and interactive features run the risk of diverting students from their intended language study, which could result in ineffective study techniques or a shorter attention span.

**Questgen AI:** Numerous online resources have been developed to automatically produce questions from any text section and their succinct responses. The comparison's criteria such as; maximum text size permitted, question types that can be generated, maximum number of questions that can be generated with the tool, instrument availability (free vs paid), language in which text can be entered, automatic vs manual intervention, duration of task completion as determined by our experiment, and algorithm used by this tool to generate the question. Advanced artificial intelligence algorithms and computational linguistics are the foundation of the Questgen Question Generator (QG) tool4. There are numerous models of transformers utilized, including GPT-3, GPT-2, T5, and BERT. It can be accessed via an open-source NLP library, an application, and an API. There is a trial version available, however it only allows for 15 free attempts. An API and application subscription is needed to access features and try them all at no cost. The application and API are more accurate than the free and open-source Questgen QG library. It is possible to construct three different kinds of questions: multiple-choice (MCQs), Boolean (yes/no), and short-answer. After choosing the type of inquiry and inserting a text message of between 50 and 500 words, the user can expect the questions and answers to show up in seven seconds (Alnefaie et al., 2023).



NLP models are able to produce text that incorporates functional game elements, such as tasks and relationships, and produce a player narrative that is aware of the player's surroundings. Word probability is predicted using Bidirectional Encoder Representations from Transformers (BERT) in a given context. For quests, we employ BERT in PCG by selecting words from a list according to the given score. This then acts as a cue for a different model that we employ: trained on a sizable corpus of English text data, the Generated Pre-trained Transformer 2 (GPT-2). GPT-2 was created expressly to produce writings in response to prompts (Al-Nassar et al., 2023). Human respondents are asked to grade the generated quests according to the specified criteria in a poll designed to assess the quality of quest generation using LLMs. The quest generating model's level of hallucination or how incorrectly the quests relate to the story is measured by contradiction, progression value, relatedness, and coherence. Relatedness and coherence also measure how well the created quest represents the story (Mishra, 2023).

#### Advantages of Questgen AI

**Time Management:** When preparing tests, quizzes, or study materials, educators can save a lot of time by using Questgen AI, which can quickly produce a huge number of questions on a variety of topics.

**Personalization:** To ensure that assessments closely match the curriculum and instructional goals, users can modify the generated questions to fit particular learning objectives, levels of difficulty, or formats.

**Continuity:** Questgen AI can reduce potential biases or inconsistencies that may occur from manual question development by maintaining consistency in question structure, formatting, and difficulty level.

**Adaptability:** The tool offers a wide variety of question kinds, including multiple-choice, true/false, short answer, and essay questions, to satisfy different assessment demands. It can also adjust to individual learning styles and preferences.

**Accessibility:** Questgen AI can increase the accessibility of educational resources for students in underserved or distant places where access to traditional learning materials may be limited by automating the development of questions.

**Feedback Generation:** Questgen AI can produce explanations or feedback for both right and wrong responses in addition to questions. This feature improves learning by offering insightful information and support.

**Engagement:** Questgen AI-generated well-written questions have the power to effectively engage learners by fostering critical thinking, problem-solving abilities, and a deeper comprehension of the material.

**Constant Enhancement:** By using feedback loops and data analysis, Questgen AI can continually learn from and enhance its question-generation skills, guaranteeing that the relevance and quality of created questions change over time.

#### Disadvantages of Questgen AI

**Insufficient Contextual Knowledge:** Questgen AI may find it difficult to fully understand a topic or issue, which could result in the creation of questions that are superficial, inappropriate, or irrelevant.

**Managing Subjective Content:** Questgen AI may have trouble coming up with questions on qualitative or subjective subjects when there are no absolute right or incorrect answers. This can make it less applicable in fields like philosophy or literature.

**Quality Control:** Questgen AI may generate questions that differ in terms of quality, accuracy, and relevancy if appropriate supervision and quality control procedures aren't in place. To guarantee that the generated questions are appropriate for assessment, educators must examine and validate them.

**Limited Creativity:** Questgen AI might have trouble coming up with original or open-ended questions that call for higher-order cognitive abilities like synthesis, analysis, or problem-solving. This might make it less useful for evaluating intricate learning goals.

**Duolingo:** Approximately 95 languages are available for learning on Duolingo as of the time of the current systematic review, and users can also learn languages other than English. First, users select the language they want to learn, and if they know a little bit about the subject already, they can take a placement test. They receive bonuses for reaching daily goals of earning a specific number of experience points. The Streak is increased by one day for each lesson finished on a given day (achievement), and it is reset to zero if no lessons are completed on any particular day (reinforcement). The program occasionally presents the user with optional challenges, such extending the streak for a number of extra days, comparing experience points with players in other leagues, or rewarding the user when the task is finished (Shortt et al., 2023). At first, Duolingo was designed to be a fun and free online language learning tool that would be enhanced by user translations. Badge is one of Duolingo's key features. A badge is a visual, online depiction of an accomplishment that is defined as a prerequisite for achieving objectives, moving forward, and producing outcomes in an educational setting. The primary objective of the badges is to increase students' motivation for their studies (Inayah et al., 2020). Duolingo is favored over traditional assignments and media due to its ease of use. This indicates that Duolingo is more engaging and simple to use, making it a comfortable choice for use as a teaching tool in the classroom (Ajisoko, 2020).

#### Advantages of Duolingo

**Availability:** Anyone with a device, such as a computer or smartphone, and an internet connection can use Duolingo. Users



can easily participate in language learning at any time and from any location because of this accessibility.

**Interesting User Interface:** To make learning interesting and pleasurable, the platform uses gamification strategies including leveling up, earning points, and receiving incentives. This can support consistent practice and help sustain motivation.

**Tailored Education:** Duolingo's algorithm provides activities and content that are tailored to each user's learning preferences and level of proficiency. Users are able to focus on areas that require improvement and learn at their own pace thanks to this customized method.

**Language Variety:** Duolingo provides lessons in a large number of languages, including less often taught languages like Swahili and Welsh as well as well-known languages like Spanish and French. Users can investigate languages of curiosity or practical utility thanks to this variety.

**Interactive Lessons:** Text-to-speech technologies, graphics, audio, and other multimedia components are all incorporated into the platform's interactive lessons. This multimodal method improves understanding and helps with retention.

**Tasks for Developing Skills:** Duolingo offers tasks that address a range of language skills, such as grammar, vocabulary, speaking, listening, and reading comprehension. Through the use of these abilities in various settings, users cultivate a comprehensive command of the language.

**Progress tracking:** By monitoring their performance over time, users may see how they've improved and pinpoint areas in which they still need to grow. This feedback system promotes goal-setting and ongoing education.

**Cost-effective:** Duolingo is a reasonable choice for language learners on a tight budget because it provides a free edition with access to all of its essential features. Furthermore, Duolingo Plus, the platform's premium subscription, offers more features and advantages at an affordable cost.

**Additional Learning Resource:** Duolingo is a useful additional resource for language learners, even though it might not be enough to become fluent in a language on its own. To improve overall language skills, it can be utilized in conjunction with other resources like textbooks, classes, or immersion experiences.

### Disadvantages of Duolingo

**Insufficient Contextual Learning:** For some users, Duolingo's exercises are not sufficiently contextualized, which might make it challenging to understand words and phrases in everyday situations. Learners could have trouble understanding idioms and subtleties if they are not given context.

**Excessive Reliance on Translation:** Duolingo makes extensive use of translation activities, which could not accurately represent how people naturally think in a foreign language. As a result, students may translate words for words rather than comprehending the structure and meaning of sentences in the original language.

**Limited Depth in grammatical Explanation:** Although Duolingo teaches grammatical principles, its explanations are frequently succinct and might not be sufficient for certain learners. Users may require additional resources to completely comprehend complex grammatical rules as part of their learning process.

**Limited themes and Vocabulary:** It's possible that Duolingo's themes and vocabulary aren't always suited to each learner's unique interests or requirements. It's possible for users to find themselves unable to talk about more complicated subjects or lacking terminology in specific specialist areas.

**Possibility of Plateauing:** If a user only uses Duolingo, they may find that their language learning progress stalls. In order to keep improving, students might need to add more resources to their Duolingo practice or have more exposure to the language in real-world settings.

**Taskade:** Effective use of an AI Language Learning Partner Bot is around personalizing your learning process. You may program Taskade's AI bots to meet your unique language learning requirements. They can understand your learning objectives and adjust their teaching approach by reading the materials you give them. You can instruct the bot to concentrate on the circumstances that are most pertinent to you, whether you're trying to brush up on business jargon or get ready for an international trip. Because of this active customisation process, your bot continuously adapts to your shifting interests and advances in language proficiency. Taskade provides practice sessions in vocabulary, grammar, and pronunciation that are customized according to your learning objectives and current skill level. You may quickly improve and make corrections to your language activities since you receive immediate feedback. The representative monitors your progress, emphasizing areas for development and subjects that need more attention. In order to help you not only speak the language but also comprehend its subtleties, it might offer cultural background and examples of idiomatic usage. Practice speaking and understanding by having simulated conversations to help you get ready for real-life situations.

The technology of artificial intelligence (AI) is a new and exciting field that improves and shapes work processes. Artificial intelligence (AI) tools improve education delivery and acquisition, including research, teaching, and learning. Intelligent services like document writing, online interaction, assessment, verification, translation, task analysis, feedback, prediction, error correction, summary, article review, and more are provided by the software- and digitally-dependent instruments. Although it is not



an unprecedented task, the ability of GenAI technology to produce acceptable student texts is a practical barrier for education. According to Sharples, "Transformer AI systems belong to an alternative history of educational technology, where students have grabbed developing equipment to make their lives easier, such as computer software, mobile phones, pocket calculators, and now AI essay generators. Teachers and other institutions respond in a predictable manner: they ignore, resist, and then eventually adjust (Griffiths et al., 2024).

### Advantages of Taskade

**Organized Learning:** Taskade enables users to arrange their vocabulary, exercises, lessons, and language learning activities in an orderly fashion. This organization supports students in maintaining attention and efficiently monitoring their development.

**Collaborative Learning:** Taskade facilitates group work so that students can complete language learning assignments. Learning languages can be very helpful for those who wish to practice writing or speaking with others thanks to this function.

**Task Management:** Using Taskade, language learners can divide their learning objectives into more manageable, smaller tasks. This method helps students feel less overwhelmed by the amount of content to cover and makes learning more attainable.

**Flexibility:** Taskade is accessible from a range of gadgets, such as PCs, tablets, and smartphones. Because of its flexibility, language learners can study at any time and from any location, which facilitates the integration of language learning into daily activities.

**Multimedia Integration:** Taskade is capable of handling multimedia files, including pictures, audio files, and movies. With the help of this tool, language learners can add real-world resources to their learning process, such as songs, movies, and podcasts.

**Customization:** Taskade gives users the ability to personalize their language learning experience to suit their own requirements and tastes. They are able to design exercises, vocabulary lists, and study programs that are specific to their learning goals.

**Progress Tracking:** Taskade offers a variety of features, including task completion indicators, progress bars, and checklists, for monitoring progress. Learners can track their progress in language competency using this feature, highlighting areas that still need work.

**Integration with Other Language Learning Tools and Resources:** Taskade can be combined with other language learning tools and resources, including online courses, language exchange websites, and apps for flashcards. Learners now have simple access to more learning resources and the learning process is streamlined by this connection.

### Disadvantages of Taskade

**Restricted Language Learning capabilities:** Taskade's main purpose is task management, and although it provides customization, it might not have all the capabilities needed for language learning. More extensive tools specifically designed for language acquisition may be available on specialized language learning platforms or applications.

**Interface Complexity:** Some language learners may find Taskade's interface overly complex, especially if they are used to simpler tools that are only focused on language learning. This is because of the platform's numerous work management and collaboration functions. This intricacy has the ability to divert students from their main objective, which is to acquire a language.

**Possibility of Distraction:** Taskade offers personalization and freedom, but it also makes room for possible distractions. Learners can discover that they spend more time experimenting with these features than really concentrating on language learning assignments because of its collaborative capabilities and integration with multimedia content.

**Dependency on Technology:** Using Taskade to learn a language requires reliance on technology, which has benefits and drawbacks. Technical difficulties, such as device compatibility issues, internet access issues, or software bugs, may interfere with the learning experience and irritate students.

**Memrise:** With Google Classrooms, educators can efficiently generate and arrange homework, offer insightful criticism, and interact with learners. Online or hybrid learning approaches have many advantages over traditional classroom instruction. The main advantages of Google Classroom are its free availability, student scheduling flexibility, and work adaptability. A free tool for learning languages is called Memrise. The program is used by users in communities to enhance and instruct language acquisition for all participants. Memrise offers a number of special features. The Memrise workout system is one of this application's features. Strong memories can be trained and stored in the brain using this technique. Similar to how this method, when paired with games and flashcards, makes learning languages, particularly vocabulary, enjoyable. Implementing a deeper learning process is made simpler for both teachers and students by this application. This is because there are no lesson deadlines to worry about, allowing teachers and students to gather, distribute, and mark assignments (Taebenu & Katemba, 2021).

This tool is intended specifically for people who are interested in learning more about vocabulary development. Therefore, the target audience for this tool should include any instructor who wants to motivate their pupils to discover their vocabulary data or any student who wants to increase their vocabulary in a straightforward and enjoyable way. Memrise is incredibly user-friendly. Using a flash card repetition method to speed up learning and memorization (Nuralisah & Kareviati, 2020).





Memrise is a digital flashcard app that uses spaced-repetition system (SRS) and adaptive learning to teach vocabulary. It is thought that this approach will help students build their vocabulary in a more desirable way. According to one definition, adaptive learning is "an online learning approach where the learner's engagement with earlier content influences (at least somewhat) the type of materials presented later on." Presuming that vocabulary and adaptive learning are related is a sign of its dynamic and interactive nature, which is also present in Memrise (Fathi et al., 2018).

### Advantages of Memrise

**Content Created by Users:** With Memrise, users may make and share their own courses, giving students access to a wealth of material catered to their individual requirements and areas of interest. Specializing in subjects or dialects not commonly taught in general language courses, this user-generated content can address them.

**Rich Multimedia Content:** Memrise uses multimedia to help with comprehension by including audio files, pictures, and sample phrases. Especially for visual or auditory learners, this multimodal method can improve learning efficacy.

**Interactive Learning:** To make learning interesting and fun, Memrise uses interactive techniques including games, quizzes, and flashcards. Learning can remain motivated and concentrated with the support of this interaction.

**Spaced Repetition:** To enhance the remembering process, the platform uses algorithms for spaced repetition. It makes sure that learners revisit content at the appropriate moment to strengthen their memory by presenting words and phrases at intervals timed to enhance retention.

**Interaction within the Community:** Memrise uses social sharing, forums, and leaderboards to help language learners feel more connected to one another. In addition to tracking their development in comparison to others, users can interact with other students and share pointers and advice.

**Mobility:** Students may study anywhere, at any time, with Memrise's mobile apps for iOS and Android smartphones. The adaptability of this allows students to include language practice into regular activities, including taking breaks or commuting.

**Gamification Components:** Memrise uses gamification components like points, streaks, and prizes to encourage consistent practice and keep students interested. These gamified elements have the potential to increase learning enjoyment and addictiveness, which will encourage students to keep going with their studies.

### Disadvantages of Memrise

**Rote memorization is overemphasized:** Memrise's spaced repetition method helps users learn vocabulary quickly, but it may encourage rote memorization at the expense of a deeper

comprehension of word meanings and usage contexts. It might be difficult for learners to use recently learned terminology in everyday communication contexts.

**Variations in Audio Quality:** Although Memrise offers audio recordings to help with pronunciation, the caliber of these recordings varies according to the course developer. Accurate pronunciation skills development may be hampered by low audio quality or imprecise pronunciation models.

**Limited Possibilities for Writing and Speaking:** Memrise's interactive features mostly concentrate on word identification and recall, offering minimal chances for practicing speaking and writing. It is possible that language learners will not improve their writing or speaking fluency as quickly as they would with more communication-focused language learning techniques.

**Limited Attention to Grammar:** Memrise may not place enough emphasis on sentence structure and grammar rules in favor of focusing largely on vocabulary learning. With Memrise courses alone, learners could struggle to put together meaningful sentences or comprehend difficult grammar topics.

## CONCLUSION

The complex process of learning a language involves a lot of variables, with a lot of possible outcomes. The factors that specifically affect language learning are the level of acculturation, the amount of comprehensible material, the attention given to the qualities and aspects of the second language, and the availability of opportunities for meaningful negotiation and production. After all this thorough analysis, the researchers conclude that the deployment of the above-mentioned AI-driven tools of education technology help empower all the core skills of the English language. At the same time, it has a few limitations such as restricted language learning capabilities, interface complexity, possibility of distraction, and over-dependence on technology. However, the learners cannot hold back thinking about the disadvantages of the AI tools as they emerged as elemental tools in aiding them to master their language learning.

## REFERENCES

1. Fitria, T. N. (2021, December). Artificial intelligence (AI) in education: Using AI tools for teaching and learning process. In *Prosiding Seminar Nasional & Call for Paper STIE AAS (Vol. 4, No. 1, pp. 134-147)*.
2. Woo, J. H., & Choi, H. (2021). Systematic review for AI-based language learning tools. *arXiv preprint arXiv:2111.04455*.
3. De la Vall, R. R. F., & Araya, F. G. (2023). Exploring the benefits and challenges of AI-language learning tools. *Int. J. Soc. Sci. Humanit. Invent*, 10, 7569-7576.
4. Tseng, W., & Warschauer, M. (2023). AI-writing tools in education: If you can't beat them, join them. *Journal of China computer-assisted language learning*, 3(2), 258-262.
5. Zhao, X., Xu, J., & Cox, A. (2024). Incorporating Artificial Intelligence into Student Academic Writing in Higher Education: The Use of Wordtune by Chinese international students.





6. Alnefaie, S. S. M., Atwell, E., & Alsalka, M. A. (2023). Using Automatic Question Generation Web Services Tools to Build a Quran Question-and-Answer Dataset. *International Journal on Islamic Applications in Computer Science And Technology*, 11(2), 1-12.
7. Al-Nassar, S., Schaap, A., Zwart, M. V. D., Preuss, M., & Gómez-Maureira, M. A. (2023, April). QuestVille: procedural quest generation using NLP models. In *Proceedings of the 18th International Conference on the Foundations of Digital Games* (pp. 1-4).
8. Mishra, M. K. (2023). *Generating video game quests from stories* (Master's thesis, University of Twente).
9. Shortt, M., Tilak, S., Kuznetcova, I., Martens, B., & Akinkuolie, B. (2023). Gamification in mobile-assisted language learning: A systematic review of Duolingo literature from public release of 2012 to early 2020. *Computer Assisted Language Learning*, 36(3), 517-554.
10. Inayah, N., Yusuf, Q., & Fibula, N. (2020). Exploring undergraduate students' perception toward the use of Duolingo in learning English. *Humanities & Social Sciences Reviews*, 8(3), 76-85.
11. Ajisoko, P. (2020). The use of Duolingo apps to improve English vocabulary learning. *International Journal of Emerging Technologies in Learning (iJET)*, 15(7), 149-155.
12. Griffiths, D., Frías-Martínez, E., Tlili, A., & Burgos, D. (2024). *A Cybernetic Perspective on Generative AI in Education: From Transmission to Coordination.*
13. Taebenu, S. F., & Katemba, C. V. (2021). Vocabulary enhancement through Memrise and Google classroom. *Journal of Linguistics Literature and Language Teaching*, 5(1), 228-241.
14. Nuralisah, A. S., & Kareviati, E. (2020). The effectiveness of using Memrise application in teaching vocabulary. *Professional Journal of English Education*, 3(4), 494-500.
15. Fathi, J., Alipour, F., & Saeedian, A. (2018). Enhancing vocabulary learning and self-regulation via a mobile application: An investigation of the Memrise app. *Journal of Modern Research in English Language Studies*, 5(1), 27-46.



# PSYCHOPATHOLOGICAL DISORDERS AND ASSOCIATED FACTORS ACCORDING TO SRQ

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**Article DOI:** <https://doi.org/10.36713/epra17671>

**DOI No:** 10.36713/epra17671

## ABSTRACT

**Background:** mental illnesses are a challenge for health systems and nations. Globally, mental disorders account for 12% and in the Americas alone, there are an estimated 400 million people with psychiatric and neurological disorders. By means of the SRQ test (self-reporting questionnaire) created by the World Health Organization (WHO), it is possible to detect and attend to mental health problems in primary care services, mainly in developing countries, requiring less time and trained personnel.

**Objective:** to describe psychopathological disorders and associated factors according to the SRQ in individuals from San Luis de Cumbe Parish, Cuenca Canton.

**Methods and materials:** The study was a cross-sectional quantitative research, with a universe of 6,582 inhabitants of the San Luis de Cumbe Parish, from which a sample of 364 people was taken with a confidence of 95%, margin of error of 5% and prevalence of 50%. The information was collected by means of a sociodemographic survey and the SRQ test. The data were analyzed through tables and graphs with the statistical calculation program SPSS 25 test version. To determine the association between the object of study and the associated factors, the OR was obtained with its 95% CI and the p value to determine the statistical significance. In addition, several bibliographic studies were used as a source, mainly PubMed, Google Scholar and Cochrane.

**Results:** In the study population, 19.2% presented depression, 40.7% had anxiety, 13.2% presented psychosis, 6.6% had epilepsy and 13.2% showed alcoholism.

**Conclusions:** depression and anxiety are the most representative psychopathological disorders found in this study, being more common in young adult women, without leaving behind psychosis and alcoholism present in adults regardless of sex, while epilepsy is more common in males regardless of age group. The Chi-square test between sociodemographic factors and risk factors showed that psychosis, epilepsy and alcoholism are present in people whose marital status is free union. Similarly, it was found that Afro-Ecuadorians have epilepsy, while anxiety was present in those of indigenous and mestizo ethnicity. It is advisable to carry out intervention programs and early detection of any psychopathological disorder is of utmost importance, so that the affected individual can receive timely care and reduce possible complications throughout his or her life. The population should be educated about the risk factors involved in the appearance of these pathologies, so that they can prevent or on the other hand learn to live with them, in addition to motivating people, especially health personnel to conduct new research to contribute to the health of the people not only in this parish but also in others.

**KEY WORDS:** depression, anxiety, alcoholism, psychosis, epilepsy, SRQ, Cumbe, DSM5.

## INTRODUCTION

It is crucial to know the prevalence of mental disorders such as depression, anxiety, alcoholism, psychosis and epilepsy in the communities, as well as to recognize the associated factors. The test self-regulation questionnaire is a tool that allows easy and accurate identification of cases with a high possibility of suffering from any of these disorders.

These psychopathological disorders usually become disabling for the individuals who suffer from them. Sociodemographic factors influence their appearance. It is thought that the origin depends on a combination of biological, psychological and social factors; such as stressful events, family inconveniences, brain diseases, hereditary or genetic pathologies, as well as



other medical inconveniences. It is interesting to mention that this study was focused on the Cumbe Parish belonging to the Cuenca Canton, which has a higher rate of migration within and outside the country.

In the Americas, an estimated 400 million people suffer from psychiatric and neurological disorders. Worldwide, mental disorders account for about 12% of all existing diseases. According to the World Health Organization (WHO), depression is the most common. In Ecuador, 73.5% of people between 19 and 59 years of age were treated for depressive episodes. It is estimated that anxiety is the main complaint in 11% of individuals in consultation and in 60% of hospital patients; schizophrenia has a prevalence of 38% of all psychiatric hospital admissions and 21.7% of outpatient care(1-5).

The mental health condition not only encompasses the symptomatology that is well defined in the DSM-5 nosological criteria, but also multiple associated factors should be evaluated: biological and psychosocial, there are also protective factors such as good employment, health and education. The determinants of mental health and mental disorders have shown an association, although there are dilemmas for diagnosis, treatment and referral; so many psychiatric screening instruments have been developed that require time and trained personnel. The SRQ test identifies depression, anxiety, alcoholism, psychosis and epilepsy requiring less time and personnel. The Self Reporting Questionnaire is self-administered and designed by the World Health Organization with the aim of expanding the detection and care of mental health problems in primary care services, especially in developing countries. It has a sensitivity ranging from 63-90% and a specificity of 44-95%. Due to the above mentioned, in the following study we try to show which are the most frequent psychopathological disorders in the people of Cumbe parish, as well as their associated factors(6-10).

## METHODOLOGY

A cross-sectional quantitative study was carried out on psychopathological disorders: depression, anxiety, alcoholism, psychosis and epilepsy according to the SRQ in individuals of the San Luis de Cumbe parish of the Cuenca canton.

The universe was made up of individuals of majority age of male and female sex. Based on a known universe of 6,582 people, with a confidence level of 95%, margin of error of 5% and considering a prevalence of 50%, a random sample of 364 people was obtained. All those who agreed to participate in the study and signed an informed consent form were included in the study.

Individuals with physical or mental problems affecting communication or the application of the instruments, such as visual problems, hearing loss, dementia, mental retardation and autism, were excluded.

The method used was systematic observation, which helped us to uniformly measure the psychopathological variables using the standardized instrument of the SRQ Test.

To determine the association between mental disorders and the associated factors studied, the OR was obtained, with its 95% confidence interval, and statistical significance was determined by obtaining the p value using the chi-square test. In addition, several bibliographic studies were used as a source, mainly using PubMed, Google Scholar and Cochrane.

## DEVELOPMENT

Mental health is a pillar established in the WHO Constitution. The different associated factors alter such harmony among which the socioeconomic one has been the strategy on which all efforts for promotion, prevention, cure and rehabilitation are directed. In industrialized countries, frequent mental disorders have reported a prevalence of 7 to 30%, with an average of 17%. In Latin America, Africa and India, the prevalence exceeded 30%. According to 2017 PAHO statistics there is high prevalence of depression, anxiety, suicide and alcohol use, often going unnoticed and not providing effective treatment. Studies have consistently reported a high prevalence of psychiatric disorders worldwide, especially in developing countries such as Ecuador, where, health research priorities are 19, with schizophrenia, alcohol abuse and depression ranking eleventh in the area of mental health and behavioral disorders(11-14).

## DEPRESSIVE DISORDERS

Depression is one of the most commonly observed mental disorders, however, it is often overlooked. This is a clinically detectable mood pathology, different from despondency, normal sadness, or grief reactions.

Primary depressions are depressions that are not related to any other medical or psychological pathology or that have a history of affective disorders. Currently, antidepressant treatment, within clinical pharmacology, is the most effective and safe treatment. To this is added the use of psychotherapy, which aims to make the unconscious conscious and to confront it.

## ANXIETY DISORDERS

They are disorders that are characterized by the presence of anxiety or anguish, understood as an effect similar to fear, but unlike fear, it does not have a real and external cause. It includes:

- Specific phobia
- Social phobia
- Obsessive-compulsive disorder
- Post-traumatic stress disorder
- Acute stress disorder
- Distress disorder without agoraphobia
- Distress disorder with agoraphobia
- Agoraphobia without panic disorder
- Generalized anxiety disorder
- Anxiety disorder due to medical illness
- Substance-induced anxiety disorder
- Unspecified anxiety disorder

Anxiety disorders are classified according to specific ICD 10 diagnostic criteria. Among which are included as the most representative; the feeling of nervousness, agitation or tension, feeling of imminent danger, panic or catastrophe, increased



heart rate, rapid breathing, sweating, trembling and feeling of weakness or tiredness. For the treatment of anxiety the main thing is to establish an excellent relationship with the patient, to listen to him, to give support and to offer to be available if necessary. In addition to following the recommended guidelines, the physician will prescribe medication if the case warrants it.

### ALCOHOLISM DISORDERS

The World Health Organization (WHO) defines it as "any form of drunkenness that exceeds traditional and ordinary food consumption or exceeds the boundaries of social customs. It is a disorder suffered by a person when drinking liquor frequently and excessively, in such a way that it can cause problems of all kinds (e.g., family, work, social, psychological, personal and physical). The goal of treatment is prolonged maintenance of total sobriety.

### PSYCHOTIC DISORDERS

Psychoses are the most severe mental disorders. In which the loss of contact with reality is very striking, which occurs to varying degrees in many psychiatric disorders, including severe neuroses, but in psychotic disorders this symptom is more characteristic or gross. Although their frequency is not very high, it is essential to be able to identify and treat them. In spite of their severity and dramatic form of presentation, it is possible to treat them adequately on an outpatient basis.

- Acute psychosis
- Chronic psychosis
- Schizophrenia
- Schizotypal disorder
- Disorder of persistent delusional ideas.

The best known psychotic disorder is schizophrenia, which affects the central nervous system and usually begins between 20 and 30 years of age. Its cause is not completely known, but genetic and other factors affecting the development of nervous tissue are known to be important. It is characterized by distortion of thinking, sensory perception and behavior. The individual presents alterations in thinking such as strange or false beliefs, alterations in sensory perception such as auditory hallucinations, the most common, and much less frequent visual or tactile hallucinations, as well as alterations in behavior such as withdrawal and social isolation, disinterest, lack of motivation, distrust, strange behavior, neglect of habits and progressive difficulty in academic or work performance. In the treatment, the first changes are in the motor aspect; later on, medications allow combating hallucinations, delusions and the individual's reactions to other people. Drugs are used to treat agitated, hyperactive and violent individuals.

### EPILEPTIC DISORDERS

This is the seizure disorder of most interest, as its frequency is abundant. This chronic disease alters the central nervous system and causes affected individuals to have recurrent seizures, these seizures occur when groups of nerve cells (neurons) in the brain send erroneous signals, the origin is unknown in most cases, in other cases may be associated with a variety of disorders within which are infections of the central nervous system, such as meningitis, brain abscesses, head trauma or intoxication by

drugs or alcohol. To speak of epilepsy it is necessary to have suffered at least two crises. These may be focal or partial seizures that originate in a single part of the brain or generalized seizures that are the result of abnormal neuronal activity that emerges rapidly on both sides of the brain. These in turn are subdivided into: absence seizures, tonic seizures, clonic seizures, myoclonic seizures, atonic seizures, tonic-clonic seizures and secondary generalized seizures. The diagnosis is specifically clinical, with evidence of epileptic seizures, loss of consciousness, sudden fall to the ground, body stiffening, violent movements, tongue biting, among others. This stage is followed by a period of relaxation and deep sleep, at the end of which the patient does not remember what happened or where he/she is; he/she complains of headache, muscle pain, dizziness and sleepiness. This picture can be complemented with diagnostic tests such as: computed axial tomography (CT), magnetic resonance imaging (MRI), electroencephalography (EEG). The therapeutic objective during a seizure episode is to avoid physical harm to the patient. The treatment of choice is pharmacological, generally quite effective, the treatment time is indefinite and can take years.

### The SRQ (Self Reporting Questionnaire) (Symptom Questionnaire for Adolescents, Young Adults and Adults).

This instrument measures five specific areas: depression, anxiety, alcoholism, psychosis and epilepsy. It is used in adults and adolescents over 16 years of age. In case the person completing the questionnaire does not have at least five years of schooling, the questions should be read to him/her. It consists of 30 questions of easy inquiry, as it presents YES and NO response options, and also investigates specific situations that the person has experienced in the last 30 days, provides the possibility of determining the health situation of the user and assess the presence of a condition that may be affecting their mental health, so its proper management allows early identification, especially of those patients who need treatment so that they can be assisted within the general health system(15-20).

### RESULTS

The study population consisted of 51.9% women. Fifty-eight percent were young adults, while 36% were adults. A total of 77.2% were mestizos. While 13.5% were indigenous, 50.8% attended primary school, while 0.5% attended the fourth level. Some 34.6% were merchants, 24.7% had another occupation and 9.3% were artisans. Some 47.5% were married and 24.2% were single.

In the study population 19.2% had depression, 40.7% had anxiety, 13.2% had psychosis, 6.6% had epilepsy and 13.2% had alcoholism.

In this study young adults presented depression in 15.6% of which 24.9% were women compared to 13.1% for men, 36% presented anxiety of which 49.2% were women, while 31.4% were men, 7.1% presented epilepsy of which 7.4% were men and 5.8% were women. Psychosis was evidenced in 18.3% and alcoholism in 10.4% of which 14.8% were women and 11.4% were men.





In this study, according to ethnicity, mestizos presented depression in 19.9%, anxiety in 44.5%, psychosis 14.6%, epilepsy 7.1% and alcoholism 14.6%.

In this study, according to education, 33.3% presented depression, 45.8% anxiety, 25% psychosis, 8.3% epilepsy and 25% alcoholism, all of whom had no education.

In this study, according to occupation, farmers presented depression in 23.1%, anxiety in 52.8% of the unemployed, epilepsy in 17.6% of artisans, the population with another profession presented psychosis in 14.4% and alcoholism in 14.4%.

In this study, according to marital status, widowers presented 22.7% depression and anxiety in 45.5%, divorcees with psychosis in 23.8% and alcoholism in 23.8%, epilepsy in 15% of persons in free union.

Obtaining depression and anxiety in the test is related to sex; moreover, being male or female is 0.457 (95%CI: 0.264 - 0.791) times more risky to have depression, and this is statistically significant ( $p=0.005$ ). In addition, being male or female is 0.473 (95%CI: 0.308 - 0.726) times more risky to have anxiety and this is statistically significant ( $p=0.001$ ).

The variables of psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with sex, and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with age according to the adolescent stage, and did not constitute a risk or protective factor for producing alterations in the psyche of this study population.

Obtaining depression and anxiety in the test is related to the young adult who is 1.720 (IC95%: 1.018 - 2.906) times more at risk for having depression, and this is statistically significant ( $p=0.041$ ) and is 1.578 (IC95%: 1.033 - 2.413) times more at risk for having anxiety, being statistically significant ( $p=0.034$ ).

The variables of psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with young adulthood, and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

Being an adult is 0.511 (95%CI: 0.278 - 0.944) times more at risk for having psychosis and alcoholism, being statistically significant ( $p=0.029$ ).

The variables of depression, anxiety and epilepsy did not present a statistically significant association ( $p>0.05$ ) with the adult, and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with age according to the older adult stage, and does not constitute a risk or protective factor for producing alterations in the psyche of this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with any education, and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with primary education, and did not constitute a risk or protective factor to produce psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with secondary education, and did not constitute a risk or protective factor to produce psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism, did not present statistically significant association ( $p>0.05$ ) with third level education, and did not constitute a risk or protective factor to produce psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with fourth level education, and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism, did not present statistically significant association ( $p>0.05$ ) with the occupation of farmers, and did not constitute a risk or protective factor to produce psychopathological alterations in this study population.

Obtaining epilepsy in the test is related to being a Craftsman which is 0.269 (95% CI: 0.099- 0.733) times more risk to have epilepsy and this is statistically significant ( $p=0.006$ )  $< 0.05$ .

The variables of depression, anxiety, psychosis and alcoholism, did not present statistically significant association ( $p>0.05$ ) with occupation (artisan), and did not constitute a risk or protective factor to produce psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with occupation (merchant), and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with occupation (unemployed), and does not





constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism, did not present statistically significant association ( $p>0.05$ ) with occupation (Other), and does not constitute a risk or protective factor to produce psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with married persons, and does not constitute a risk or protective factor for producing psychopathological alterations in this study population.

Obtaining psychosis, epilepsy and alcoholism in the test is related to people living in a free union which is 3.301 (CI95%: 0.991- 10.997) times more risk to have psychosis, and this is statistically significant ( $p=0.04$ ) and is 0.294 (CI95%:0. 122 - 0.708) times more risk to have epilepsy, being statistically significant ( $p=0.004$ ) and it is 3.301 (95%CI: 0.991- 10.997) times more risk to have alcoholism, being statistically significant( $p=0.04$ ).

The variables of depression and anxiety did not present a statistically significant association ( $p>0.05$ ) with marital status (free union) and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with single persons, and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with widowed persons, and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with widowed persons, and did not constitute a risk or protective factor for producing psychopathological alterations in this study population.

Being of mestizo ethnicity is 0.478 (95%CI: 0.280 - 0.817) times more likely to have anxiety, being statistically significant ( $p=0.006$ ).

The variables of depression, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with persons of mixed ethnicity and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

Being of indigenous ethnicity is 2.659 (95%CI: 1.311- 5.392) times more likely to have anxiety, being statistically significant ( $p=0.005$ ).

The variables of depression, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with persons of indigenous ethnicity and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

Being of Afro-Ecuadorian ethnicity is 0.068 (95%CI: 0.004- 1.120) times more likely to have epilepsy, being statistically significant ( $p=0.013$ ).

The variables of depression, anxiety, psychosis and alcoholism did not present a statistically significant association ( $p>0.05$ ) with people of Afro-Ecuadorian ethnicity and do not constitute a risk or protective factor for producing psychopathological alterations in this study population.

The variables of depression, anxiety, psychosis, epilepsy and alcoholism did not present a statistically significant association ( $p>0.05$ ) with persons of white ethnicity and did not constitute a risk or protective factor for producing psychopathological alterations in this population.

## DISCUSSION

In our study we found that in the population under study 19.2% showed depression, 40.7% anxiety, 13.2% psychosis, 6.6% epilepsy and 13.2% alcoholism, of which young adult women predominated in most psychopathological disorders (depression in 24.9%, anxiety 49.2%, psychosis and alcoholism in 14.8%) with the exception of epilepsy in 7.4% of men. These results are related to what Piña, 2018, who showed depression in 17.12% of the population of which 9.88% were women being higher in windows with 12.50%, while Torres determined a prevalence of 6. 2% for major depressive episode compared to WHO where disorders tend to occur more frequently in young people of early ages around 20-25 years, in the review of Perez et al , 2017, depressive disorder has a prevalence ranging from 8 to 12% affecting twice as many women with respect to men where one in ten adults suffer from it, the results differ with the study of Mohamed, 2017, who presented data in 3 European countries: Finland, Poland and Spain, finding that depression was found between 18 and 49 years, widowed and at a lower educational level, the other associated factors included financial problems, higher frequency of outpatient care visits, higher level of disability, more pressing loneliness, and low levels of well-being, in the case control study of Jimenez ,2016, the average age  $34.9 \pm 11.4$  years, 55.8% women, prevalence of depression was 26.1% where almost a third of young adults present some degree of depression and their risk factors were men with low socioeconomic status, married and under 30 years old(21-25).

Based on the above, it was identified that having depression and anxiety is related to some socio demographic variables such as sex and age, being a woman is 0.457 (95%CI: 0.264 - 0.791) times more risky to have depression being statistically significant ( $p=0.005$ ) and is 0.473 (95%CI: 0.308 - 0.726) times



more risky to have anxiety with statistical significance ( $p=0.001$ ). In addition, being a young adult is 1.720 (95%CI: 1.018 - 2.906) times more risky to have depression with a value of  $p=0.041$  and is 1.578 (95%CI: 1.033 - 2.413) times more risky to suffer from anxiety, being statistically significant ( $p=0.034$ ). In this regard, Jácome's 2018 research shows that in women, neurotic disorders, secondary to stressful situations and somatoform disorders are the most prevalent with 30.4%, especially the mixed anxiety-depressive disorder with 18.8%, in middle adulthood, neurotic disorders, secondary to stressful situations and somatoform disorders prevail with 31%, gender is seen as a risk variable for suffering from some type of mental illness, with the female gender being the most vulnerable due to factors such as violence, inequality of opportunities, the addition of domestic work, childcare, among other roles. Likewise, in Ecuador it has been identified through outpatient care registered in 2015 that depression and anxiety affect women to a greater extent, occurring three times more than in men, while in Aguilera's project of 2019, in 984 people the male sex older than 65 years followed by 18- 28 years presented greater anxiety and whose only risk factor and associated was having a dysfunctional family. The study of Aguilera and Diaz ,2019, in terms of sex is more frequent in women aged 41.74 years with a ratio of 1. 5-1 similar to that reported by the National Institute of Mental Health, the factors that may explain the female predominance of psychiatric disorders, are psychosocial and sociocultural that include differences in the type of coping of the person, sexual role, other factors that suggest sex differences are the existence of pathological antecedents such as thyroid pathology, genetic predisposition, personality traits, sex hormones, endocrine reactivity to stress, neurotransmitter systems and neuropsychological conclusions; the high rate of young adults may be due to the fact that the older adult population is minimal in the Canton of Cumbe and the sex is consistent with studies from the United States where anxiety is linked to women, inhibited temperament and family history(26-27).

Another risk found in the study is being an adult with 0.511 (95%CI: 0.278 - 0.944) times more risk to have psychosis and alcoholism, being the value of  $p=0.029$ . According to the study in the Institute of Neurosciences of 2016 the patients mostly affected with psychotic symptoms are found in women whose prevalence is between 31 and 40 years, while, in the Hospital del Valle in Colombia, 2016, 65 % of the patients were men and the age ranged from 13 to 89 years, with an average of 40 years. In the 2016 Ruisoto study, the prevalence of alcohol consumption was 92.24% in men and 82.86% in women. In men, the problematic drinking profile was defined by higher scores on anxiety and depression, especially if they showed higher levels of psychological stress and lower engagement with life. In women, problematic use showed a tendency toward psychological inflexibility, especially in those with less commitment to life. Meneses' 2019 research work shows that poor people without secondary or higher education and who are unemployed, on average, have a higher probability of being heavy alcohol drinkers. In addition to the economic factor, this probability increases if the individual is male, single, older than 65 years and lives in the urban area; the risk factors verified with other studies do not differ in terms of age, but sex may

vary according to the population with respect to psychosis and alcoholism(28-31).

It was also found that psychosis, epilepsy and alcoholism are related to people whose marital status is common-law marriage which is 3.301 (95% CI: 0.991- 10.997) times more at risk for psychosis, and is 0.294 (95% CI: 0.122 - 0.708) times more at risk for epilepsy, and is 3.301 (95% CI: 0.991- 10.997) times more at risk for alcoholism, with the same statistical significance for alcoholism, with the same statistical significance for psychosis. 708) times more at risk for epilepsy, and is 3.301 (95% CI: 0.991- 10.997) times more at risk for alcoholism, with the same statistical significance for psychosis and alcoholism ( $p=0.04$ ) while for epilepsy ( $p=0.004$ ). These results are similar to those reported by Pajares, in the year 2020, in which the prevalence of mental disorders in people living in free union constitutes 42.75%, followed by singles with 34.02%, married with 13.30%, divorced with 8.07% and widowhood would only be represented by 1.85%. In total contrast with the study conducted in the population of the state of Jalisco, 2019, where it was found that married people represent 73.2% with 10.75% free union and a minimum of 3% for widowers, on the other hand Porcelli and collaborators in 2020, determined that psychosis is less common in people living in free union as in married people representing 15% of the variance of social dysfunctions, while Azurduy Jaliri, and Faicán-Peralta in 2017-2018, obtained as a result that alcoholism and epilepsy is more frequent in married people with 39% and 45.8% respectively. Another case-control study conducted at the Eugenio Espejo Hospital in 2019, determined that according to the data collected, epilepsy is more common in singles 70.1% without employment 52.9% and with depressive symptoms 65.5%. This shows that the mere presence of a partner is not necessarily a protective element because although the crises that are generated in the relationship or that involve an individual psychopathology in each of the spouses/cohabitants, may involve a deterioration in mental balance (32-37).

Being an artisan and being of Afro-Ecuadorian ethnicity are also related to epilepsy, since in this study it was found that there is a statistically significant relationship between occupation (artisan) and epilepsy (OR: 0.269 (95% CI: 0.099- 0.733)  $p=0.006$ ). Likewise, people of Afro-Ecuadorian ethnicity are 0.068 (IC95%: 0.004- 1.120) times more at risk of having epilepsy, being statistically significant ( $p=0.013$ ); these results are opposite to those also found by Pajares, in his study on mental disorders where it was determined that according to the work they perform the majority 46. 46% would not have a paid job and would dedicate themselves to domestic work, followed by working people 27.48%, those who work for a company (employees) 11.01%, those who work independently 8.29% and students with 6.76%. Orozco and collaborators in 2017, in their study specifically oriented only to people with epilepsy with cord with Pajares, as obtained that the majority 48% are also unemployed, followed by those who no data were obtained on their employment status 24%, those who are in an active job 15% and within (students - retired) 13%. Ocampo on the other hand in 2018 in his study obtained that 31.8% of epileptics are students, 27.8% have no occupation, 26.6% have



a formal job, compared to 13.8% of subjects who have an informal job. In this context, it should be taken into account that mental disorders, specifically epilepsy, lead to social dysfunction that starts from a limited education caused by the early onset of the disease, low income, financial stress, high work stress and unemployment; in addition to the lack of support from society causing labor barriers, limiting the possibility of getting a better job, increasing stereotypes and existing prejudices. Ocampo also found that epilepsy is predominant in the mestizo ethnicity 91.7% followed by 7% of subjects classified as white, while minorities were the black and Asian race with 0.6%, similarly in a study conducted the Hospital Abel Gilbert Pontón in Guayaquil-Ecuador, 2019 evidenced that the highest number of cases occurred in the mestizo ethnicity with 58.69% while the lowest number of cases occurred in the white ethnicity with 4.34%. These studies are totally opposite to ours. While people of mestizo and indigenous ethnicity have a relationship with anxiety, with their respective statistical significance (OR 0.478 (IC95%: 0.280 - 0.817)  $p=0.006$ ) and (OR 2.659 (IC95%: 1.311- 5.392)  $p=0.005$ ). According to Horwath and Weissman, (1995) cited by Cano A. According to Horwath and Weissman, (1995) cited by Cano A. "not everyone has the same probability of developing an anxiety disorder, but there are clearly a number of risk factors that may be different according to each disorder" study in which he emphasized agoraphobia and generalized anxiety being common in the female sex and in the African-American race. Currently there are no studies related to ethnicity and this disorder, although it is because it is not considered a protective or risk factor, so we can say that it is a factor inherent to the person which should be investigated a little more to find some contribution in the genesis of this disorder(38-42).

## CONCLUSIONS

Depression and anxiety are the most representative psychopathological disorders found in this study, being more common in young adult women, without leaving behind psychosis and alcoholism present in adults regardless of sex, while epilepsy is more common in males regardless of age group. The Chi-square test between sociodemographic factors and risk factors showed that psychosis, epilepsy and alcoholism are present in people whose marital status is free union. Similarly, it was found that Afro-Ecuadorians have epilepsy, while anxiety was present in those of indigenous and mestizo ethnicity. It is advisable to carry out intervention programs and early detection of any psychopathological disorder is of utmost importance, so that the affected individual can receive timely care and reduce possible complications throughout his or her life. The population should be educated about the risk factors involved in the appearance of these pathologies, so that they can prevent or on the other hand learn to live with them, in addition to motivating people, especially health personnel to conduct new research to contribute to the health of the people not only in this parish but also in others.

## BIBLIOGRAPHY

1. Zamora D, Suárez D. Análisis de las necesidades y uso de servicios de atención en salud mental en Colombia. *Rev. salud pública*. 2019 Enero/Abril; 21(2).

2. Silva J, Mejía A, Quinteros G. Caso clínico: Esquizofrenia Paranoide. *Revista ESPOCH*. 2018 Abril; 9(1).
3. Vinuesa M. Niveles de ansiedad y asertividad en los estudiantes del Colegio Particular Juan Bautista. Tesis de grado. Ambato: Universidad Técnica de Ambato, Psicología Clínica; 2016.
4. Organización Panamericana de la Salud. Depresión y otros trastornos mentales comunes. Estimaciones sanitarias mundiales. Washington D.C.: Licencia: CC BY-NC-SA 3.0 IGO; 2017.
5. Instituto Nacional de Estadística y Censos. INEC. [Online]; 2017 [cited 2020 febrero 5. Available from: <https://www.ecuadorencifras.gob.ec/documentos/web-inec/Infografias-INEC/2017/infografia-depresion.pdf>.
6. Commonwealth of Australia. Commonwealth Department of Health and Aged Care, Promotion, Prevention and Early Intervention for Mental Health Canberra: Commonwealth Department of Health and Aged Care; 2000.
7. Tejada P, Jaramillo L, Sánchez L, Sharma V. Revisión crítica sobre los instrumentos para la evaluación psiquiátrica en atención primaria. *Rev.Fac.Med*. 2014 Marzo; 62(1).
8. Silva A, Vargas L, Moraes R. Prevalência e fatores associados ao transtorno mental comum em assentados rurais. *Revista eletrônica saúde mental álcool e drogas*. 2019 Enero; 15(1).
9. Brhane T, Mehari M, Berhane R. Validation of the WHO self-reporting questionnaire-20 (SRQ-20) item in primary health care settings in Eritrea. *Int J Ment Health Syst.* 2018 Octubre; 12(61).
10. Romero A, Sánchez F, Lozano A. Estructura de la sintomatología psiquiátrica según el SRQ-18 en pacientes ambulatorios con trastornos mentales evaluados en un hospital general de Lima. *Rev Neuropsiquiatr*. 2016 Julio; 79(3).
11. Ortiz RT, Bermúdez V. Consumo de alcohol y su dependencia en las poblaciones rurales de Cumbe y Quingeo. *Diabetes Internacional y endocrinología*. 2017; 9(2).
12. Barreto M, Do Santos L, Feitosa C. Screening for common mental disorders using the SRQ-20 in Brazil: what are the alternative strategies for analysis? *Revista Brasileira de Psiquiatria*. 2018 Abril; 40(2).
13. Ministerio de Salud Pública. Prioridades de investigación en salud, 2013-2017. [Online]; 2013 [cited 2020 Febrero 05. Available from: [https://www.academia.edu/5699183/Prioridades\\_de\\_investigacion\\_i\\_O\\_n\\_en\\_salud\\_2013-2017](https://www.academia.edu/5699183/Prioridades_de_investigacion_i_O_n_en_salud_2013-2017).
14. Gómez C. Prevalencia de Trastornos Mentales y del Comportamiento en el Primer Nivel de Atención de la Coordinación Zonal 9-Salud. Trabajo de Investigación previo a la obtención del Título de Psicólogo Clínico. Quito: Universidad Central del Ecuador, Psicología Clínica; 2018.
15. Chávez H, Samaniego N, Aguilar E. Manual de Atención Primaria en Salud Mental. [Online]; 2006 [cited 2020 Enero 05. Available from: <https://aplicaciones.msp.gob.ec/salud/archivosdigitales/documentosDirecciones/dnn/archivos/MANUAL%20ATENCION%20PRIMARIA%20EN%20SALUD%20MENTAL.pdf>.
16. Ministerio de salud del Gobierno del Salvador. Guías clínicas para la atención en salud mental y psiquiatria. [Online]; 2017 [cited 2020 Enero 0. Available from: [http://asp.salud.gob.sv/regulacion/pdf/guia/guias\\_clinicas\\_atencion\\_salud\\_mental\\_y\\_psiquiatria\\_v1.pdf](http://asp.salud.gob.sv/regulacion/pdf/guia/guias_clinicas_atencion_salud_mental_y_psiquiatria_v1.pdf).
17. Rodríguez D. Diagnóstico y tratamiento médico de la epilepsia.. *Revista Cubana de Neurología y Neurocirugía*. 2015 Julio; 5(2).
18. National Institute of Neurological Disorders and Stroke (NINDS). Las epilepsias y las crisis: Esperanza en la investigación. [Online]; 2017 [cited 2020 Enero 05. Available





- from:  
[https://espanol.ninds.nih.gov/trastornos/crisis\\_epilepticas.htm](https://espanol.ninds.nih.gov/trastornos/crisis_epilepticas.htm).
19. MSP del Ecuador. Diagnóstico, tratamiento y seguimiento de la esquizofrenia. [Online].; 2017 [cited 2020 Enero 05. Available from: <https://es.slideshare.net/perezabel150975/diagnostico-tratamiento-y-seguimiento-de-la-esquizofrenia-ecuador-2017>.
  20. OMS. Epilepsia. [Online].; 2019 [cited 2020 Enero 05. Available from: <https://www.who.int/es/news-room/fact-sheets/detail/epilepsy>.
  21. Toral F, Piña A. Depresión y su relación con factores determinantes de la salud. Población de 40 y más años. Comunidad Chuichun, Cantón El Tambo. enero -Diciembre 2018. Posgrado. Cuenca: Universidad del Azuay, Medicina familiar y comunitaria; 2019.
  22. Torres C. Salud mental en estudiantes universitarios ecuatoriano. Tesis doctoral. Santiago de Compostela: Universidad de Santiago de Compostela, Psicología; 2016.
  23. Mohamed S. Undiagnosed depression. Tesis doctoral. Madrid: Universidad Autónoma de Madrid, Departamento de Medicina; 2017.
  24. Jiménez M, Márquez H, Monsreal J. Horizonte preclínico de la depresión en adultos. *Gac Med Mex.* 2016 agosto; 152(4).
  25. Pérez E, Cervantes V, Hijuelos N. Prevalencia, causas y tratamiento de la depresión Mayor. *Rev Biomed.* 2017 mayo-agosto; 28(2).
  26. Aguilera J, Díaz. Briseida. Prevalencia del trastorno de pánico en la población rural del cantón Cuenca. Tesis grado. Cuenca: Universidad del Azuay, Medicina; 2019.
  27. Aguilera J, Guncay T, Manzo V. Prevalencia de los trastornos fóbicos en la población rural de Cuenca. Tesis grado. Cuenca: Universidad del Azuay, Medicina; 2019.
  28. Orozco M. Depresión grave, síntomas psicóticos en edades de 20 a 40 años, estudio realizado en Instituto de Neurociencias, período 2010-2015. Tesis de grado. Guayaquil: Universidad de Guayaquil, Medicina; 2016
  29. Ruisoto P, Cacho R, López J, Vaca S. Prevalencia y perfil de consumo de alcohol en estudiantes universitarios en Ecuador. *Gaceta sanitaria.* 2016 septiembre-octubre; 30(5).
  30. Benavides M, Beitia P, Osorio C. Características clínico-epidemiológicas de pacientes con esquizofrenia atendidos en el Hospital Psiquiátrico Universitario del Valle, Colombia. *Revista Investigación en Salud Universidad de Boyacá.* 2016 diciembre; 3(2).
  31. Meneses K, Cisneros M, Braganza E. Análisis socioeconómico del consumo excesivo de alcohol en Ecuador. *Revista Ciencias de la Salud.* 2019; 17(2).
  32. Pajares K. Perfil clínico epidemiológico de trastornos mentales en pacientes adultos del Centro de Salud Mental Comunitario Virú. Tesis Doctoral. Trujillo-Perú: Universidad César Vallejo, Medicina; 2019.
  33. Porcelli S, Siegfried K, Joseph Z, Souery D, Moutgomery S, Ferentinos P, et al. Social dysfunction in mood disorders and schizophrenia: Clinical modulators T in four independent samples. *ELSEVIER.* 2019 December.
  34. Azurduy R. Relación de factores sociodemográficos con el consumo de alcohol en la población de 18 a 60 años de la localidad de Coroico-Primer trimestre de 2016. Tesis de grado. La Paz-Bolivia: Universidad Mayor de San Andrés, Tecnología Médica; 2018.
  35. Faicán K, Erika P. Prevalencia de las reacciones adversas del tratamiento farmacológico de la epilepsia en el Hospital José Carrasco Arteaga. Cuenca. Enero 2014 - diciembre 2017. Tesis doctoral. Cuenca-Ecuador: Universidad de Cuenca, Medicina; 2017.
  36. Solano L. Control de la epilepsia asociada a depresión en pacientes adultos atendidos en consulta externa del Hospital de Especialidades Eugenio Espejo durante el período abril-septiembre del 2019. Tesis doctoral. Quito: Universidad Central del Ecuador, Medicina; 2020
  37. Ojeda D, Gonzáles C, Cambero E, Madrigal E, Gonzáles J, Calderón D. Prevalencia de los trastornos mentales en la salud mental en el Estado de Jalisco. *SaludJalisco.* 2019 Marzo.
  38. Orozco J, Quintero J, Marin D, Montoya J, Hernández P, Pineda M, et al. Perfil clínico y sociodemográfico de la epilepsia en adultos de un centro de referencia de Colombia. *Elsevier.com.* 2017 Abril.
  39. Ocampo W. Estudio del perfil clínico epidemiológico de los pacientes con epilepsia en el área clínica del Hospital Metropolitano y Centro de epilepsia Neurovida de la ciudad de Quito durante el periodo de Enero 2006 a Diciembre del 2016. Tesis doctoral. Quito: Pontificia Universidad Católica del Ecuador, Medicina; 2018.
  40. Duchí G, Tenesaca M. Prevalencia de desordenes emocionales relacionados con ansiedad en niños de la Escuela cazadores de los rios de cuenca, Marzo-Julio del 2016. Tesis de grado. Cuenca: Universidad de Cuenca, Enfermería; 2016.
  41. Cano A. Seas.com (Sociedad Española para el estudio de la Ansiedad y el Estrés). [Online]. [cited 2021 02 25. Available from: <https://webs.ucm.es/info/seas/ta/epidemi/index.htm>.
  42. Rodríguez J. Factores asociados a epilepsia refractaria, Hospital Abel Gilbert Pontón, año 2018. Tesis de grado. Guayaquil: Universidad de Guayaquil, Medicina; 2019.

#### Conflict of Interest Statement

The authors report no conflicts of interest.

#### Funding

The authors report no funding by any organization or company.



## CONCEPTUAL REVIEW OF PAKSHAGHATA

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### ABSTRACT

All three Brihatrayi texts emphasize the significance of VataVyadhi due to its involvement in complex multiple aetiologies and Pathogenicity. Pakshaghata is one such VataVyadhi characterized by symptoms such as loss of strength/weakness in half of the body loss. Specific Nidana for Pakshaghata is not extensively detailed; it is generally considered that Samanya VataVyadhi Nidana contribute to its manifestation. Detailed explanations of symptoms, prognosis, and treatments are elucidated by all Acharyas. In contemporary medical science, based on clinical observation, it can be likened to cerebrovascular disease. This article aims to compile existing data from classical texts on Pakshaghata

**KEYWORDS:** Pakshaghata, Pakshavadha, Ekanga Roga, Stroke

### INTRODUCTION

Pakshaghata is one of the Vataja Nanatmaja Vyadhi. The term Pakshaghata is derived from "Paksha" meaning half side of the body and "Aghata" indicating injury, thus denoting loss of function in one side of the body. When both sides are affected, it is referred to as Sarvanga Vata<sup>1</sup>.

From contemporary medical science perspective, it is analogous with hemiplegia a condition often resulting from a stroke. Non-communicable diseases, such as cardiovascular diseases, cerebrovascular accidents, and neoplasms, are increasingly prevalent among adults worldwide. According to the World Health Organization (WHO), cerebrovascular accidents alone affect approximately 15 million people globally each year, resulting in 5 million deaths and leaving another 5 million individuals with permanent disabilities<sup>2</sup>.

The term 'stroke' is related to the Greek word apoplexia which implies being struck with a deadly blow. Apoplexia was an umbrella term used for describing a condition in which patient had a sudden abolition of all activities of mind with the preservation of the pulse and respiration<sup>3</sup>. The term **Stroke** is

- **Aharaja**

defined as rapid onset of focal neurological deficit, resulting from disease of cerebrovasculature<sup>4</sup>. A **Transient ischaemic attack** [TIA] denotes complete recovery of such a deficit within 24 hours<sup>5</sup>, whereas **Completed stroke**- If the focal deficit is persistent and not worsening and **Evolving stroke** -If the focal deficit continues to worsen after about 6 hours from the onset<sup>6</sup>. Based on pathological changes stroke can be classified as Ischemic stroke, Haemorrhagic stroke and lacunar stroke<sup>7</sup>

### REVIEW AND DISCUSSION

#### Nidana

There is a limited explanation of specific Nidana for Pakshaghata. It is considered that Samanya VataVyadhi Nidana will also be responsible for manifestation of Pakshaghata. For better understanding Nidana can be categorized under different domains such as Aharaja, Viharaja, Abhigataja, Manasika Nidana which are explained by Acharyas.

In Sushruta samhitha and Astanga Hrudaya specific Vata Vyadhi Nidana/ Pakshaghata Nidana is not available hence Vata Dosha Prakopa Karana can be considered

	C.S <sup>8</sup>	S.S <sup>9</sup>	A.H <sup>10</sup>	A.S <sup>11</sup>	M.N <sup>12</sup>	B.P <sup>13</sup>
Ruksha	+	+	+	+	+	+
Sheeta	+	+	-	+	+	+
Alpa Ahara	+	-	+	+	+	+
Laghu Ahara	+	+	-	+	+	+
Abhojanat	+	+		-	+	+
Katu Kshaya Tikta sevana		+	+	+		+
Intake of Suska Shaka, Vallura, Varaka, Uddalaka, Koradusa, Syamaka, Nivara, Mudga, Harenu, Kalaya, Nishpava	-	+	-	-	-	-
Vishamashana, Adyasana	-	+	-		-	-
Intake of water while hunger				+	-	-





- **Viharaja**

	C.S	S.S	A.H	A.S	M.N	B.P
<i>Ativyavaya</i>	+	+	+	+	+	+
<i>Atiprajagara</i>	+	+	+	+	+	+
<i>Plavana</i>	+	+	-	+	+	+
<i>Atiadhva</i>	+	-	-	+	+	-
<i>Ativyayama</i>	+	+	-	+	+	+
<i>Atichesta</i>	+	-	-	+	+	-
<i>Dukha Shayana Asana</i>	+	-	-	-	+	-
<i>Divaswapna</i>	+	-	-	-	+	-
<i>Vegadharana</i>	+	+	+	+	+	+
<i>Abhighata</i>	+	+	-	+	+	+
<i>Marmaaghata</i>	+	+	-	-	+	-
<i>Balavat Vighraha</i>	-	+	-	+	-	-
<i>Atiadyayana</i>	-	+	-	-	-	-
<i>Pradhavana</i>	-	+	-	-	-	-
<i>Prapatana</i>	-	+	-	+	-	-
<i>Bhara Harana</i>	-	+	-	+	-	+
Physical excretion due to riding animals like Elephant, Horse etc	+	+	-	+	+	-
<i>Atibhasana</i> with loud pitch	-	-	+	+	-	-

- **Manasika**

	C.S	S.S	A.H	A.S	M.N	B.P
<i>Chinta</i>	+	-	+	-	+	+
<i>Shoka</i>	+	-	+	+	+	+
<i>Krodha</i>	+	-	-	-	+	-
<i>Bhaya</i>	+	-	+	+	+	+

- **Iatrogenic cause**

	C.S	S.S <sup>14</sup>	A.H	A.S	M.N	B.P
<i>Vishama Apachara</i>	+	-	+	+	+	-
<i>Ati Asruk Sravana</i>	+	-	-	+	+	+
<i>Atidosha Sravana</i>	+	-	-	-	+	+
<i>Raktamokshana</i> done in <i>Atiushna kala</i> , <i>Athisveditha</i> person, and physician negligence	-	+	-	-	-	-
<i>Langana</i>	+	-	-	-	-	-

- **Any<sup>15</sup>**

- *Ama*
- *Dhatukshaya*
- Afflicted with the other disease for long term

**Purvarupa**

- *Avyakta Lakshana*<sup>16</sup>- No clear manifestation of the premonitory symptoms  
 Madhukosha commentary explains that due to instability of *Vata* there is absence (*Apaya*) of *Lakshana* such as *Sthamba Sankocha Kampa*<sup>17</sup>



**RUPA**

<b>Lakshana</b>	<b>C.S<sup>18</sup></b>	<b>S.S<sup>19</sup></b>	<b>A.H<sup>20</sup></b>	<b>A.S<sup>21</sup></b>	<b>M.N<sup>22</sup></b>	<b>B.P<sup>23</sup></b>	<b>Sh<sup>24</sup></b>
<i>Chesta Nivruti</i> in half part of the body	+	+	+	+	+	+	+
<i>Sandhibandha Vimokshana</i>	+	+	+	+	+	+	+
<i>Vak Sthamba</i>	+	-	-	-		-	-
<i>Ruja</i>	+	-	-	-	+	+	-
<i>Daha</i>	-	-	-	-	+	+	-
<i>Santapa</i>	-	-	-	-	+	+	-
<i>Murcha</i>	-	-	-	-	+	+	-
<i>Saithya</i>	-	-	-	-	+	+	-
<i>Shoatha</i>	-	-	-	-	+	+	-
<i>Gurutha</i>	-	-	-	-	+	+	-
<i>Vichetana</i>	-	+	+	+	+	+	+
<i>Akarmanya</i>	-	+	+	+	+	+	+
<i>Achetana</i>	-	+	-	-	-		-

• **Akarmanya means**

*Akarmanya Irshathkarmakshaya*<sup>25</sup> [loss or reduced movement of body parts]

*Akarmanya Irshath Chesta Akshama*<sup>26</sup> [Inability to even minute activities]

• **Vichetana refers**

*Vichetanamalpachethana Irshathsparshadhijnana Anityarthaha*<sup>27</sup> [Decreased conscious and sensory function]

• **Achetana – Achetana Alpachena**<sup>28</sup>

**Bheda**<sup>29,30,31</sup>

1. *Vata Pittaja*

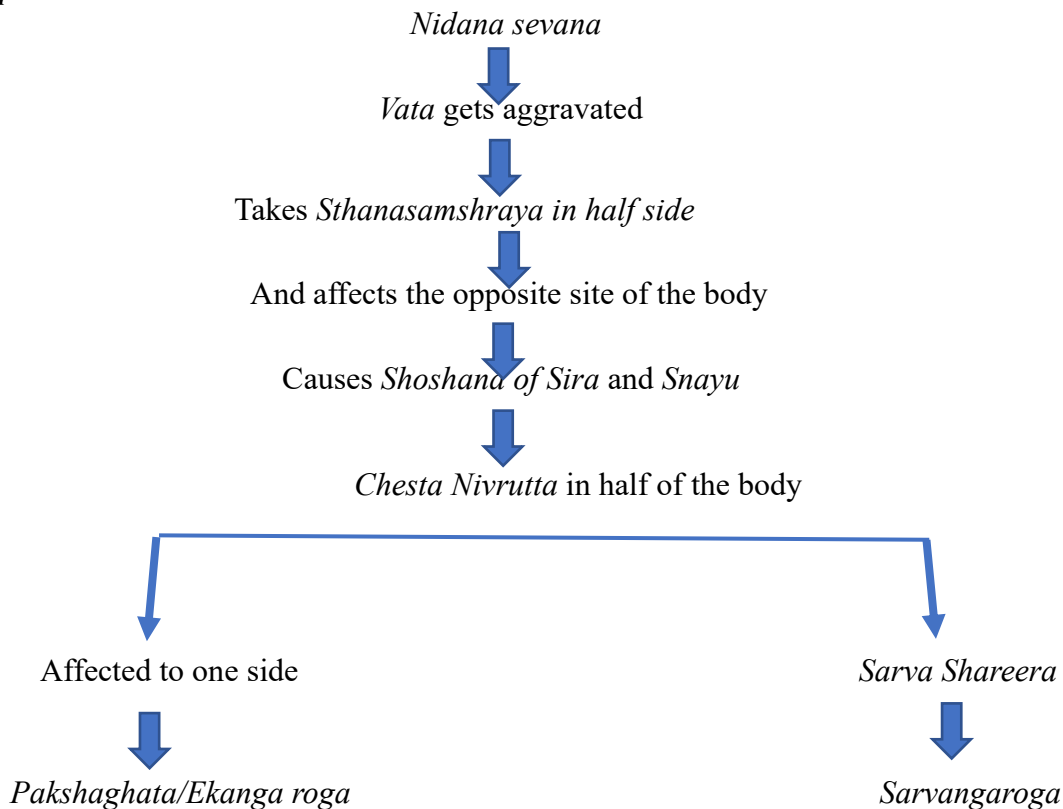
2. *Vata Kaphaja*

**Lakshana**<sup>32,33</sup>

*Vata Pittaja – Daha, Santapa, Murcha*

*Vata Kaphaja – Saithya, Shoatha, Gurutha*

**Samprapthi**<sup>34</sup>





### Sadya Asadyata<sup>35,36,37,38</sup>

- Sadya if patient is *Balavan*, absence of *Upadrava*, recent origin (*Nava*) with careful and proper treatment
- If it is *Vata* is associated with other disease

### Asadhya

- If involvement of only *Vata Dosha* [*Shuddha Vata*]
- Caused due to *Kshaya*
- In *Garbhini*, *Sutika*, *Bala*, *Vrudha*, *Ksheena*, in haemorrhagic individuals,
- Loss of sensation in the affected side<sup>39</sup>

### Pathya Ahara and Vihara<sup>40</sup>

#### Ahara

- *Mamsa rasa*, *Kshira*, *Snehayukta Ahara*
- Fruits and food substance which contain *Lavana* and *Snigdha Guna*

#### Vihara

- Gentle pressing of body with *Kukuma*, *Ela*, *Tagara*, *Patra*,
- Thick coverings made up of Silk, wool, Cotton
- *Nivata Pradesha* with adequate sunlight
- Soft bed for sleeping, Residing in underground cellar
- Exposure to heat and fire
- Following *Bramacharya*

### Apathya Ahara and Vihara<sup>41</sup>

#### Ahara

- *Chanaka*, *Kalaya*, *Nivara*, *Venu*, *Kurvanida*, *Churna of Shyamaka*, *Kodrava*, *Rajmasha*, *Mudga*, *Yava*, *Jambhu*, *Kaseru*, *Trunakam*, *Kranukam*, *Mrunala*, *Nishphava beeja*, *Talaphala asthi Majja*, *Shaluka*, *Tinduka*, *Shimbi*, *Udumbara*,
- *Sheeta Ambu*, *Virudha Anna*, *Shushka Pala*, *Kshoudra*, *Kahaya Tikta Katu Rasa*

#### Vihara

- *Jagarana*, *Vega dharana*, *Ativyayam*, *Ativyavaya*, *Atishayana*, *Athi chankramana*

### Manasika

- *Chinta*

### Chikitsa

- According to Charaka Samhita, the approach includes Charaka *Sneha Yukta Swedana* and *Virechana*<sup>42</sup>.
- Sushruta Samhita outlines a treatment regimen starting with *Snehana*, *Swedana* followed by *Mrudu Shodhana*, *Anuvasana* [with *Bala Taila*], *Asthapana Basti*, *Sirobasti*, *Anutaila Taila* for *Abhyanga*, *Salvana Upanaha* and Periodic *Shodhana* for 3 to 4 months [*Virechana*- after fortnight of *Vamana*, *Anuvasana Basti*- After a week of *Virechana*, *Niruha Basti*- after *Samyak Lakshana* of *Anuvasana Basti*]<sup>43</sup>
- According to Astanga Hrudaya and Astanga Sangraha treatment protocol includes *Snehana Swedana*, *Mrudu Virechana*, *Basti* [specially *Anuvasana Basti* with *Bala Taila*]<sup>44,45</sup>

### CONCLUSION

*Nidana Panchaka* is fundamental in understanding of illness, Providing essential insights into diagnosis, prognosis and treatment. All *Brihatrayi* and *Laghutrayis* offer detailed

explanations for *Lakshana*, *Samprathi*, *Sadya Asadyata Chikitsa* for *Pakshaghata* specific *Nidana* is not mentioned, generally *Vatavyadhi Samanya* *Nidana* which includes different domains such as *Aharaja Viharaja Manasika Nidana*. Due to the lack of specific *Purvarupa Lakshana* early diagnosis and prevention pose significant challenges. Treatment initiation should thus prioritize early intervention to mitigate complications. Based on the clinical presentation it can be analogous with cerebrovascular accident a leading cause of death among non-communicable diseases. cerebrovascular accidents remain a critical public health concern due to their debilitating impact and mortality risks. Advances in diagnostic techniques and treatment modalities continue to improve outcomes, yet challenges remain in addressing risk factors such as hypertension, diabetes, and lifestyle choices. Continued research into preventive strategies and rehabilitation efforts is imperative to reduce the global burden of cerebrovascular accidents and improving the quality of life for affected individuals.

### REFERENCE

1. Acharya JT, editor. *Charaka samhitha by agnivesha, Chikitsasthana; Vataoyadhichikitsa: Chapter 28, Verse 53-55. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.619.*
2. M. Graber, L. Baptiste, S. Mohr, C. Blanc-Labarre, G. DuPont, M. Giroud et al. *A review of psychological factors and stroke: A new public health problem. J.neurol.*2019 May 24;175(10):686-692.
3. Copland AP, Thapar A, Qureshi IM, Jenkins H, Davies AH. *The definition of stroke. J. R.Soc.Med.* 2017 Jan 13;110(1):9-12.
4. Dalal PM *Ischemic cerebrovascular diseases. In; Munjal PY, editor in chief, API textbook of medicine, 9th ed vol.2. Mumbai: The association of physicians of india; 2012.p.1401*
5. Dalal PM *Ischemic cerebrovascular diseases. In; Munjal PY, editor in chief, API textbook of medicine, 9th ed vol.2. Mumbai: The association of physicians of india; 2012.p.1401*
6. Cull RE, Will RG. *Disease of nervous system. IN; Edwards CRW, Bouicher IAD, Haslett C, Chilvers E.R, editors. Davidsons principle and practice of medicine, 17th ed. Britan: BPC Paulton books limited; 1995.p.1072*
7. Dalal PM *Ischemic cerebrovascular diseases. In; Munjal PY, editor in chief, API textbook of medicine, 9th ed vol.2. Mumbai: The association of physicians of india; 2012.p.1402*
8. Acharya JT, editor. *Charaka samhitha by agnivesha, Chikitsasthana; Vataoyadhichikitsa: Chapter 28, Verse 15-18. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.617.*
9. Sharma PV, *English translation on susruta samhitha. Vol 1. Sutrasthana; Vranaprashanamadhyaya: Chapter 21, Verse 19. Varanasi: Chaukamba Visvabharati office, 2014; p.231*
10. Murthy SKR, *English translation on Vagbhatas astanga hridayam. Vol 2. Nidanasthana; Sarvarogandanam: Chapter 1, Verse 14-15. Varanasi: Chaukamba Krishnadas Academy,2018; pg.8*
11. Murthy SKR, *English translation on Vagbhatas astanga Sangraha. Vol 2. Nidanasthana; Sarvarogandanam : Chapter 1, Verse 13. Varanasi: Chaukamba Orientalia,1999: p.144*
12. Murthy HC, *English translation on Madavanidana of sri madavakara.5th ed.part 1 poorvardha; Vataoyadhinidana*



- :Chapter 22, Verse 1-4 Varanasi: Chaukamba Sanskrit series office, 2019: p.237
13. Murthy SKR, English translation on Bhavapraksha of Bhavamishra. 3<sup>rd</sup> ed. part 2 Madhya and Uttara khand; Vataavyadhiadhikara :Chapter 24, Verse 1-3 Varanasi: Chaukamba Sanskrit series office, 2005: p.315
  14. Sharma PV, English translation on susruta samhitha. Vol 1. Sutrasthana; Shonitavarnaniyaadhyam: Chapter 14, Verse 30. Varanasi: Chaukamba Visvabharati office, 2014: p.150
  15. Acharya JT, editor. Charaka samhitha by agnivesha, Chikitsasthana; Vataavyadhichikitsa: Chapter 28, Verse 15-18. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.617.
  16. Acharya JT, editor. Charaka samhitha by agnivesha, Chikitsasthana; Vataavyadhichikitsa: Chapter 28, Verse 19. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.617.
  17. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 5 Varanasi: Chaukamba Sanskrit series office, 2019: p.239
  18. Acharya JT, editor. Charaka samhitha by agnivesha, Chikitsasthana; Vataavyadhichikitsa: Chapter 28, Verse 53-55. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.619.
  19. Sharma PV, English translation on susruta samhitha. Vol 2. Nidanasthana; Vataavyadhinidana: Chapter 1, Verse 61-62. Varanasi: Chaukamba Visvabharati office, 2014: p.13
  20. Murthy SKR, English translation on Vagbhatas astanga hridayam. Vol 2. Nidanasthana; Vataavyadhi Nidana: Chapter 15, Verse 40-41. Varanasi: Chaukamba Krishnadas Academy, 2018: p.155
  21. Murthy SKR, English translation on Vagbhatas astanga Sangraha. Vol 2. Nidanasthana; Vataavyadhinidana : Chapter 15, Verse 40-41. Varanasi: Chaukamba Orientalia, 1999: p.246
  22. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 39-40 Varanasi: Chaukamba Sanskrit series office, 2019: p.249
  23. Murthy SKR, English translation on Bhavapraksha of Bhavamishra. 3<sup>rd</sup> ed. part 2 Madhya and Uttara khand; Vataavyadhiadhikara :Chapter 24, Verse 204-205 Varanasi: Chaukamba Sanskrit series office, 2005: p.340
  24. Savorikar S.S, Sarangadhara-samhitha of sri sarangadharaacharya .1<sup>st</sup> ed. part Prathama khand; Rogagnana: Chapter 7, Varanasi: Chaukamba Sanskrit Prathisthan, 2019: p.302
  25. Patil VC, Rajeshwari NM. Susruta samhitha with English translation of text and dalhanas commentary with critical notes. Vol 2. Nidanasthana; Vataavyadhinidana: Chapter 1, Verse 62. Newdelhi: Chaukamba orientalia, 2018: p.13
  26. 26. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 39-40 Varanasi: Chaukamba Sanskrit series office, 2019: p.249-50
  27. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 39-40 Varanasi: Chaukamba Sanskrit series office, 2019: p.249-50
  28. Patil VC, Rajeshwari NM. Susruta samhitha with English translation of text and dalhanas commentary with critical notes. Vol 2. Nidanasthana; Vataavyadhinidana: Chapter 1, Verse 62. Newdelhi: Chaukamba orientalia, 2018: p.13
  29. Sharma PV, English translation on susruta samhitha. Vol 2. Nidanasthana; Vataavyadhinidana: Chapter 1, Verse 63. Varanasi: Chaukamba Visvabharati office, 2014: p.13
  30. Murthy SKR, English translation on Vagbhatas astanga hridayam. Vol 2. Nidanasthana; Vataavyadhi Nidana: Chapter 15, Verse 41. Varanasi: Chaukamba Krishnadas Academy, 2018: p.155
  31. Murthy SKR, English translation on Vagbhatas astanga Sangraha. Vol 2. Nidanasthana; Vataavyadhinidana : Chapter 15, Verse 43. Varanasi: Chaukamba Orientalia, 1999: p.246
  32. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 42-43 Varanasi: Chaukamba Sanskrit series office, 2019: p.250
  33. Murthy SKR, English translation on Bhavapraksha of Bhavamishra. 3<sup>rd</sup> ed. part 2 Madhya and Uttara khand; Vataavyadhiadhikara :Chapter 24, Verse 206 Varanasi: Chaukamba Sanskrit series office, 2005: p.340-341
  34. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 39-40 Varanasi: Chaukamba Sanskrit series office, 2019: p.249
  35. Acharya JT, editor. Charaka samhitha by agnivesha, Chikitsasthana; Vataavyadhichikitsa: Chapter 28, Verse 72-74. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.620.
  36. Sharma PV, English translation on susruta samhitha. Vol 2. Nidanasthana; Vataavyadhinidana: Chapter 1, Verse 60-62. Varanasi: Chaukamba Visvabharati office, 2014: p.13
  37. Murthy SKR, English translation on Vagbhatas astanga Sangraha. Vol 2. Nidanasthana; Vataavyadhinidana : Chapter 15, Verse 43. Varanasi: Chaukamba Orientalia, 1999: p.246
  38. Murthy HC, English translation on Madavanidana of sri madavakara. 5<sup>th</sup> ed. part 1 poorvardha; Vataavyadhinidana :Chapter 22, Verse 43 Varanasi: Chaukamba Sanskrit series office, 2019: p.250
  39. Sharma PV, English translation on susruta samhitha. Vol 2. Chikitsasthana; Mahavataavyadhichikitsa: Chapter 5, Verse 18. Varanasi: Chaukamba Visvabharati office, 2014: p.320-321
  40. Byadgi P.S. Parameswarappas Ayurvediya Vikriti-Vijnana and Roga Vijnana. New Delhi : Chaukhamba Publication; 2016. Vol 2. p.503
  41. Byadgi P.S. Parameswarappas Ayurvediya Vikriti-Vijnana and Roga Vijnana. New Delhi : Chaukhamba Publication; 2016. Vol 2. p.504
  42. Acharya JT, editor. Charaka samhitha by agnivesha, Chikitsasthana; Vataavyadhichikitsa: Chapter 28, Verse 100. Reprint edition 2021. Varanasi: Chaukhambha orientalia, 2021; p.621.
  43. Sharma PV, English translation on susruta samhitha. Vol 2. Chikitsasthana; Mahavataavyadhichikitsa: Chapter 5, Verse 18. Varanasi: Chaukamba Visvabharati office, 2014: p.320-321
  44. Murthy SKR, English translation on Vagbhatas astanga hridayam. Vol 2. Chikitsasthana; Vataavyadhichikitsa: Chapter 21, Verse 44. Varanasi: Chaukamba Krishnadas Academy, 2018: p.505
  45. Murthy SKR, English translation on Vagbhatas astanga Sangraha. Vol 2. Chikitsasthana; Vataavyadhichikitsa : Chapter 23, Verse 30. Varanasi: Chaukamba Orientalia, 1999: p.529



# KARNATAKA STARTUP ECOSYSTEM –A CONCEPTUAL STUDY

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Article DOI: <https://doi.org/10.36713/epra17658>

DOI No: 10.36713/epra17658

## ABSTRACT

Karnataka, a southern state in India, has emerged as a prominent hub for startups, driven by a vibrant ecosystem that fosters innovation and entrepreneurship. This article explores the components, growth, lifecycle, funding, and the role of Karnataka's state startup policy in shaping the entrepreneurial landscape. A comprehensive literature review, research methodology, objectives, and scope are provided to present a thorough understanding of the startup ecosystem in Karnataka.

## LITERATURE REVIEW

The literature on startup ecosystems emphasizes the importance of various components such as funding, mentorship, networking opportunities, and governmental support in fostering entrepreneurial growth. Studies by Saxenian (1994) and Feld (2012) highlight how regional ecosystems like Silicon Valley have thrived due to a supportive infrastructure. In the Indian context, NASSCOM (2018) reports and DIPP (2019) documents provide insights into the growth of the startup ecosystem, particularly in Karnataka, which has been pivotal in nurturing tech startups.

## RESEARCH METHODOLOGY

This study employs a mixed-methods approach, combining qualitative and quantitative research. Primary data is collected through surveys and interviews with startup entrepreneurs, investors, and policymakers in Karnataka. Secondary data is sourced from government reports, academic articles, and industry publications. The data is analyzed using statistical tools and thematic analysis to identify key trends and factors influencing the startup ecosystem.

## OBJECTIVES

1. To analyze the components of the startup ecosystem in Karnataka.
2. To assess the growth and development of startups in the region.
3. To understand the lifecycle and stages of startup growth.
4. To explore the sources and stages of funding for startups.
5. To evaluate the impact of Karnataka's state startup policy on entrepreneurship development.

## SCOPE

The scope of this study is limited to startups based in Karnataka, with a focus on the tech sector, which forms a significant part of the ecosystem. The research spans from the inception of the startup to its growth stages, providing a comprehensive overview of the entrepreneurial journey within the state.

## LIMITATIONS

1. The study is confined to Karnataka, which may limit the generalizability of the findings to other regions.
2. The rapidly changing nature of the startup ecosystem means that some data may quickly become outdated.
3. The focus on the tech sector may overlook the nuances of other sectors within the ecosystem.

The startup ecosystem in India is vibrant and diverse, encompassing a wide range of players that contribute to its growth and dynamism. Here are the key players in the Indian startup ecosystem:

### 1. Entrepreneurs

- **Founders and Co-founders:** Visionaries and innovators who create and lead startups across various sectors.

### 2. Investors

- **Angel Investors:** Prominent individuals like Ratan Tata, Rajan Anandan, and Sanjay Mehta who invest early-stage capital in startups.
- **Venture Capitalists (VCs):** Firms such as Sequoia Capital India, Accel, Nexus Venture Partners, and Kalaari Capital that provide significant funding to high-potential startups.





- **Private Equity Firms:** Companies like KKR, Blackstone, and Carlyle Group that invest in mature startups for expansion.
- **Crowdfunding Platforms:** Platforms like Ketto, Wishberry, and Catapoolt that enable startups to raise funds from a large number of people.
- **Corporate Ventures:** Investment arms of large corporations such as Infosys Innovation Fund, Reliance JioGenNext, and Tata Capital Innovations Fund.

- **Industry Experts:** Specialists with deep knowledge in fields like technology, healthcare, and finance offering guidance and mentorship.

These players collectively create a dynamic and supportive environment that drives the growth and success of startups in India.

### Growth of the Startup Ecosystem

Karnataka's startup ecosystem has witnessed exponential growth, driven by factors such as the presence of IT giants, a robust educational infrastructure, and proactive government policies. Bengaluru, the state capital, is often referred to as the "Silicon Valley of India," hosting a plethora of tech startups and innovation hubs.

### Lifecycle of Startups

1. **Ideation:** Conceptualizing the business idea and conducting market research.
2. **Seed Stage:** Developing a prototype and securing initial funding.
3. **Early Stage:** Launching the product, acquiring customers, and refining the business model.
4. **Growth Stage:** Scaling operations, expanding the customer base, and entering new markets.
5. **Maturity:** Stabilizing revenues, optimizing processes, and possibly planning an exit strategy.

### Stages of Startup Growth

1. **Startup:** Establishing the business and building the core team.
2. **Growth:** Expanding product offerings and market reach.
3. **Expansion:** Entering new markets and diversifying revenue streams.
4. **Maturity:** Consolidating market position and optimizing operations.

### Sources and Stages of Funding

1. **Seed Funding:** Typically provided by angel investors and early-stage venture capitalists.
2. **Series A:** Funding to scale the business, often from venture capital firms.
3. **Series B and Beyond:** Funds for expansion, usually involving larger VC firms and institutional investors.
4. **Debt Financing:** Loans and credit facilities for established startups.
5. **Public Offering:** Raising capital through IPOs, accessible to mature startups.

The Karnataka Startup Policy plays a crucial role in fostering the development of the startup ecosystem in Karnataka. Launched with the aim of making Karnataka a global startup hub, the policy offers a range of incentives, support structures, and initiatives designed to nurture innovation and entrepreneurship. Here are the key aspects and impacts of the Karnataka Startup Policy:

### 3. Incubators and Accelerators

- **Incubators:** Institutions like NSRCEL (IIM Bangalore), T-Hub (Hyderabad), and SINE (IIT Bombay) that provide resources, mentorship, and office space to early-stage startups.
- **Accelerators:** Programs such as Y Combinator India, Microsoft Accelerator, and Google Launchpad Accelerator that offer intensive support and funding to help startups scale.

### 4. Government and Regulatory Bodies

- **Startup India:** A flagship initiative of the Government of India that promotes entrepreneurship through various incentives, policies, and support programs.
- **Department for Promotion of Industry and Internal Trade (DPIIT):** Regulatory body responsible for promoting startups and easing business regulations.
- **State Government Initiatives:** Programs like Karnataka's Elevate 100, Kerala Startup Mission, and Maharashtra State Innovation Society that provide regional support to startups.

### 5. Educational and Research Institutions

- **Universities and Colleges:** Institutions like IITs, IIMs, and IISc that foster innovation and provide a talent pool for startups.
- **Research Centers:** Organizations such as the Indian Council of Agricultural Research (ICAR) and DRDO that partner with startups for technology development.

### 6. Support Service Providers

- **Legal Advisors:** Firms like Nishith Desai Associates and Khaitan & Co. offering legal services including intellectual property protection and compliance.
- **Accountants and Financial Advisors:** Companies like PwC India, EY India, and KPMG India providing accounting, financial planning, and tax services.
- **Consultants:** Firms such as McKinsey & Company, BCG, and Bain & Company offering strategic advice and operational support.

### 7. Mentors and Advisors

- **Experienced Entrepreneurs:** Successful entrepreneurs like Nandan Nilekani, Kunal Bahl, and Sachin Bansal who mentor new startups.



## Key Aspects of Karnataka Startup Policy

### 1. Funding and Financial Support

- **Startup Seed Fund:** Provides early-stage funding to startups to help them scale their operations.
- **Idea2POC (Proof of Concept) Fund:** Grants to startups to validate and develop their innovative ideas into viable products.
- **Angel Investment and Venture Capital Fund:** Incentives and support to attract angel investors and venture capitalists to invest in Karnataka-based startups.
- **Tax Incentives:** Various tax benefits and exemptions to reduce the financial burden on startups.

### 2. Incubation and Acceleration Support

- **Establishment of Incubators:** Support for setting up new incubators in collaboration with educational institutions, corporate, and industry bodies.
- **Support for Existing Incubators:** Financial and infrastructure support to existing incubators to expand their facilities and services.
- **Acceleration Programs:** Specialized acceleration programs to provide intensive mentorship, resources, and networking opportunities to high-potential startups.

### 3. Infrastructure Development

- **Startup Hubs:** Development of dedicated startup hubs and innovation clusters in major cities like Bengaluru, Mysuru, and Hubli to provide a conducive environment for startups.
- **Co-working Spaces:** Promotion of affordable co-working spaces to provide flexible and cost-effective office solutions for startups.
- **Innovation Labs:** Setting up innovation labs to provide startups with access to advanced technology and R&D facilities.

### 4. Skill Development and Talent Acquisition

- **Entrepreneurship Development Programs:** Training programs and workshops to foster entrepreneurial skills among students, professionals, and aspiring entrepreneurs.
- **Collaboration with Educational Institutions:** Partnerships with universities and colleges to integrate entrepreneurship education into the curriculum and promote student startups.
- **Talent Acquisition Support:** Initiatives to help startups attract and retain skilled talent through job fairs, networking events, and partnerships with recruitment agencies.

### 5. Ease of Doing Business

- **Simplified Regulatory Framework:** Streamlining of regulatory processes to reduce the bureaucratic burden on startups.

- **Single Window Clearance System:** A single window mechanism to provide startups with quick and hassle-free clearances and approvals.
- **Legal and IPR Support:** Assistance with legal and intellectual property rights (IPR) issues to help startups protect their innovations and navigate regulatory challenges.

### 6. Networking and Market Access

- **Startup Events and Conferences:** Organization of events, hackathons, and conferences to facilitate networking, knowledge sharing, and collaboration among startups, investors, and industry experts.
- **International Exposure:** Programs to help startups gain exposure to global markets through international delegations, partnerships, and participation in global events.
- **Corporate Collaboration:** Initiatives to foster collaboration between startups and large corporates for market access, co-development, and strategic partnerships.

## Impact of Karnataka Startup Policy

### 1. Increased Startup Activity

- The policy has led to a significant increase in the number of startups being established in Karnataka, particularly in Bengaluru, which is now recognized as a major global startup hub.

### 2. Enhanced Funding Opportunities

- The availability of various funding schemes and incentives has made it easier for startups to secure early-stage and growth capital, attracting both domestic and international investors to the state.

### 3. Development of Startup Infrastructure

- The establishment of startup hubs, incubators, and co-working spaces has provided startups with the necessary infrastructure and resources to grow and thrive.

### 4. Talent and Skill Development

- Collaboration with educational institutions and the focus on skill development programs have helped create a skilled workforce, contributing to the overall growth of the startup ecosystem.

### 5. Improved Ease of Doing Business

- The simplified regulatory framework and single window clearance system have made it easier for startups to navigate administrative processes, encouraging more entrepreneurs to start their ventures in Karnataka.

### 6. Stronger Ecosystem Collaboration

- The policy has fostered greater collaboration among startups, corporate, investors, and other stakeholders, creating a more cohesive and supportive ecosystem.

## CONCLUSION

Karnataka's startup ecosystem is a dynamic and rapidly evolving landscape, supported by a robust infrastructure and proactive



policies. The state's commitment to fostering innovation and entrepreneurship has led to the emergence of successful startups and has positioned Karnataka as a key player in the global startup arena. Continued focus on nurturing talent, enhancing funding opportunities, and streamlining regulatory processes will be crucial for sustaining this growth trajectory.

## REFERENCES

1. Saxenian, A. (1994). *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press.
2. Feld, B. (2012). *Startup Communities: Building an Entrepreneurial Ecosystem in Your City*. Wiley.
3. NASSCOM. (2018). *Indian Startup Ecosystem: Approaching Escape Velocity*. NASSCOM.
4. Department for Promotion of Industry and Internal Trade (DPIIT). (2019). *Annual Report*. Government of India.



# PHYSICS EDUCATION TECHNOLOGY (PhET) SIMULATION AS AID IN INSTRUCTION IN LEARNING CHEMISTRY: AN EXPERIMENTAL APPROACH

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Article DOI: <https://doi.org/10.36713/epra17674>

DOI No: 10.36713/epra17674

## ABSTRACT

The objective of this study was to evaluate the influence of the inclusion of Physics Educational Technology (PhET) Simulations as an aid in instruction in learning chemistry to the Grade 10 learners at Sinobong National High School, a public secondary school in Agusan del Sur. A quantitative study involving pretest-posttest quasi-experimental design was employed to validate the proposed hypotheses. There were 80 participants randomly assigned to the control and experimental groups. The instruments used for data collection were a validated 50-item pre-test/post-test adapted from the Grade 10 Teachers' Guide unified test in the K to 12 science curricula used by the secondary schools. In addition, the mean score and t-test statistical analysis were used to analyze the given data. The results showed a substantial difference between the experimental and control groups' post-test scores. The data support the claim that PhET Simulation significantly influences students' academic attainment compared to a traditional teaching strategy. The researcher suggested that teachers should involve Phet Simulation in their classroom instructions and learning process, and administrators should provide more professional development, workshops, and training to abreast the technological advancement of Phet in chemistry learning.

**KEYWORDS:** MAED, Teaching Science, PhET Simulation, traditional teaching strategy, academic attainment

## I. INTRODUCTION

The inadequate acquisition of science processing skills among students has become increasingly apparent in the widespread failure of students in public examinations (Cecila et al., 2020; Celikler, 2020). Chemistry is essential to every aspect of existence. It is the study of the qualities and content of matter, including its chemical reactions, structure, and related modifications (Nkiko, 2021). For most students, the insufficiently valuable exposure provided during chemistry instruction contributes to students' subpar performance. As a result, scholars have persistently pursued the quest for pedagogical approaches that can effectively address this practical limitation (Nkemakolam et al., 2018).

The University of Colorado Boulder developed a nonprofit, open educational resource called Physics Education Technology (PhET) simulations. This project aims to enhance the pedagogical approach worldwide through freely accessible simulations (Banda & Nzabahimana, 2021). This platform enables students to engage in scientific exploration, develop conceptual understanding, establish connections to real-world scenarios, perceive science as enjoyable, and take ownership of the learning experience (Banda & Nzabahimana, 2022).

In the Philippines, there is an increasing demand for technology, and it is exceedingly difficult for teachers to attract students' attention when lessons are not computer-related applications. Sometimes, students must easily engage well in

classroom conversations, leading to low academic achievement. The 21st Century Teacher should be adaptable to the changing industry (Paje et al., 2021).

In rural areas, the researcher courageously undertook quasi-experimental research with Grade 10 students of Sinobong National High School. This study could be a reference point for science teachers in developing quality education and suggests an opportunity for future studies to explore the potential benefits and effectiveness of integrating these simulations into the chemistry curriculum for Grade 10 students, thus the urgency to conduct the study.

## II. OBJECTIVES

This study aimed to determine that Physics Education Technology (PhET) simulation as an aid in Instruction in learning chemistry affects the academic performance of Grade 10 students. More specifically, this study aimed:

1. To describe the level of performance of Grade 10 students in science before using Phet simulation as aided Instruction in learning chemistry.
2. To describe the level of performance of Grade 10 students in science after using Phet simulation as aided Instruction in learning chemistry.
3. To find if there is a significant difference in pre-test and post-test scores of the controlled group (taught in the traditional method).





4. To assess the significant difference in pre-test and post-test scores of
5. the experimental group (taught using PhET simulation as computer-aided Instruction).
6. To ascertain the significant difference in the pre-test scores of the controlled and experimental groups.
7. To determine the significant difference in the post-test scores of the controlled and experimental groups.

the students are subjected to utilizing a computer laboratory for hands-on experiences. On the other hand, in the control group, a traditional method of teaching was used while the teacher refrained from any use of computer-aided instruction. However, a Self-Learning Module and Learning Activity were utilized for conventional teaching methods. Each of the groups was required to complete four teaching hours a week for three weeks consecutive to cover two learning competencies.

### III. METHODOLOGY

In this study, the quasi-experimental was used pre-tests and post-tests to compare the characteristics of the groups. The respondents of this study were the Grade 10 learners of the school year 2022-2023 of Sinobong National High School in the Municipality of Veruela, Agusan del Sur. The researcher randomly selected two sections (control group and experimental group) each consisting of 40 students. To determine the level of the performance of the sections a pretest was administered to assess participants before treatment to see if there were influences on students' performance. The results of the mean scores that there is no significant difference, suggesting that the level of performance in both in control group and the experimental group were at the same baseline.

After administering the treatment, the researchers conducted a post-test to measure the attributes or characteristics of participants assessed in both experimental and control groups. A 50-item test questionnaire was adopted and modified from the Pretest/Post-test section of the teacher's guide and unified test used by the science teachers in the K-12 curriculum. The researchers carefully identified and selected each question which was validated using a table of specifications of test items that cover a representative and balanced range of content and cognitive skills from a particular topic.

The Mean score was used to determine the achievement for Pretest and Post-test. Likewise, the t-test was used for the independent sample to determine whether there were significant differences in the performance in the pretest and post-test between the experimental and control groups.

The treatment used for the experimental group was PhET simulation as an intervention. During the delivery of lessons,

### IV. RESULTS

**Table 1. Level of Pre-test Scores in Science of the Control Group and the Experimental Group**

Pre-test	Mean Score	SD	Description
Controlled Group	9.90	4.04	Very low
Experimental Group	9.00	4.13	Very low

**Table 2. Level of Post-test Scores in Science of the Control Group and the Experimental Group**

Post-test	Mean Score	SD	Description
Control Group	29.71	7.08	Low
Experimental Group	33.29	6.88	Moderate

**Table 3. Significance of the Difference Between the Pre-test and the Post-test Scores in Science of the Control Group**

Control Group	Mean Score	SD	t-value	Probability Level	Decision @ $\alpha = 0.05$
Pre-test	9.90	4.04	24.33	0.001	Rejected
Post-test	29.71	7.08			

**Table 4. Significance of the Difference Between the Pre-test and Post-test Scores in Science of the Experimental Group**

Control Group	Mean Score	SD	t-value	Probability Level	Decision @ $\alpha = 0.05$
Pre-test	9.00	4.13	30.74	0.001	Rejected
Post-test	33.29	6.88			



Table 5. Significance of the Difference in the Pre-test Scores in Science Between the Control Group and the Experimental Group

Pre-test	Mean Score	SD	t-value	Probability Level	Decision @ $\alpha = 0.05$
Controlled Group	9.90	4.04	1.00	0.320	Not Rejected
Experimental Group	9.00	4.13			

Table 6. Significance of the Difference in the Post-test Scores in Science Between the Control Group and the Experimental Group

Pre-test	Mean Score	SD	t-value	Probability Level	Decision @ $\alpha = 0.05$
Controlled Group	29.71	7.08	2.33	0.023	Rejected
Experimental Group	33.29	6.88			

## V. DISCUSSION

Table 1 shows the pre-test results for the control and experimental groups. The control group's mean score in the pre-test is 9.90, with a standard deviation of 4.04 and a descriptive equivalent of very low. Similarly, the experimental group posted a very low descriptive equivalent, with a mean score of 9.90 and a standard deviation of 4.13. The results indicate that neither group's chemistry development was observed before using the Phet simulation.

This study's finding is justified by the fact that Chemistry is a discipline that implies a very complex set of knowledge that learners may sometimes find hard to cope with. These results corroborate the idea of Bryne (2020) pointed out that students frequently encountered challenges in middle school when studying chemistry.

Table 2 shows the results of the post-test of the control group and the experimental group. The control group obtained a mean score of 29.71 with a standard deviation of 7.08, indicating low achievement. The mean score obtained by the experimental group is 33.29, with a standard deviation of 6.88, which can also be described as moderate achievement. The results indicate that after using Phet simulation as a medium of instruction, the control and experimental groups' development in chemistry was observed to be low and moderate, respectively.

The results imply that the PhET simulation as a medium of instruction successfully improved the respondents' development in chemistry. This finding is parallel to Byrne's (2020) idea that PhET simulations have provided various benefits for students and teachers. The results consonance with the study of Nuraida et al., (2021) revealed the primary attribute of these resources was to promote independent exploration of physical phenomena among students.

Table 3 shows the difference between the control group's pre-test and post-test scores in science. The group obtained a mean score of 9.90 with a standard deviation of 4.04 in the pre-test. A mean score of 29.71 and a standard deviation of 7.08 are posted in the post-test. The t-test revealed that a t-value of 24.33

was obtained. The obtained probability level is 0.001, which is less than 0.05. This means there is a significant difference between the pre-test and post-test scores of the control group.

The findings corroborate the idea of Cayvaz et al., (2020), who posited that although most nations shifted the focus of their science curricula from the teacher to the student as the primary participant in the learning process, the level of scientific proficiency among middle school learners remains variable. The results are similar to the idea of Permatasari et al. (2022) suggested that understanding abstract chemistry concepts must be facilitated by incorporating diverse representations within the chemistry pedagogy and utilization of multiple representations.

Table 4 shows the difference between the experimental group's pre-test and post-test scores in science. The group posted a mean score of 9.00 with a standard deviation of 4.13 in the conducted test before the treatment was given. The group's mean score in the post-test is 33.29, with a standard deviation of 6.88. These results obtained a t-value of 30.74. Tested at a 0.05 significance level, the 0.001 probability level signifies that the null hypothesis is rejected.

These results parallel the conclusions of Brown et al. (2021), who concluded that computer simulations were a valuable resource for students as they facilitated establishing relationships, interpreting information, and establishing connections between various representations of a given object. The findings consonance with those of Prima et al. (2018), using PhET as a technological medium to facilitate the acquisition of scientific knowledge.

Table 5 shows the difference in the science pre-test scores between the control and experimental groups. In the pre-test, the control group posted a mean score of 9.90 and a standard deviation of 4.04. The experimental group also took the same pre-test, with a mean score of 9.00 and a standard deviation of 4.13. These results give a t-value of 1.00. The obtained probability level is 0.320. Since the obtained probability level is more significant than 0.05, the null hypothesis that there is



no difference in the pre-test scores in science between the control and experimental groups is not rejected.

The results corroborate the study of Cecilia et al., (2020) mentioned a pressing need for a paradigm shift in how science was conveyed to students. Science subject is concerned with knowledge of the matter, it should be taught via something other than the lecture technique but by using actual items acquired from the environment.

Table 6 shows the difference in the science post-test scores between the control and experimental groups. The control group (taught in the traditional method) posted a mean score of 29.71 with a standard deviation of 7.08. Meanwhile, the experimental group obtained a mean score of 33.29 with a standard deviation of 6.88. The computed t-value for these results is 2.33. With a probability level of 0.023, the null hypothesis that there is no significant difference between the post-test scores of the control group and the experimental groups' post-test scores is rejected.

The results resonate with the idea of Salame & Makki (2021) that PhET computer simulations have been widely used in science education to improve the curriculum. The findings are parallel to the idea of Bahtiar et al., 2022 Considering 21st-century learners were digital and freethinkers, the education standards emphasizing creative and critical problem-solving and decision-making prepared students to solve complex problems in a competitive and technology-intensive world. Parallel to the findings of Yuliati et al. (2018), PhET simulation is deemed significant in enhancing students' comprehension and enthusiasm toward studying as inferred from the issues.

## VI. CONCLUSION

Based on the results of the study, the following conclusions are drawn:

1. The level of performance of Grade 10 students in science before using Phet simulation as aided instruction in learning chemistry is very low.
2. The level of performance of Grade 10 students in science after using Phet simulation as aided instruction in learning chemistry is moderate.
3. There is a significant difference between the pre-test and post-test scores of the control group.
4. There is a significant difference between the pre-test and post-test scores of the experimental group.
5. There is no significant difference in the pre-test scores of the controlled and experimental groups.
6. There is a significant difference in the post-test scores of the controlled and experimental groups.

## VII. RECOMMENDATIONS

After profound consideration and considering the possible implications of the study's findings and conclusion, the researcher made several recommendations for achieving the optimum level of performance among Grade 10 students in Chemistry.

1. PhET simulations may include lesson planning to offer a dynamic tool for teachers to create well-structured lesson plans that align with the curriculum

and include a variety of teaching strategies, such as lectures, hands-on experiments, group discussions, and multimedia presentations.

2. Teachers may promote active learning strategies like problem-solving exercises, case studies, and laboratory experiments using PhET simulations. Encourage students to engage in discussions, pose questions, and establish connections between theoretical concepts and real-life examples.
3. Teachers may utilize visual aids, such as diagrams, charts, and models, to simplify complex concepts and make them more accessible to students. Incorporating technology tools like PhET interactive simulations, virtual labs, and educational websites to supplement classroom teaching can provide additional resources for self-study.
4. Teachers can use these PhET simulations as a foundation for additional activities such as science fairs, where students can demonstrate their findings, or as part of a field trip, where virtual experiments can complement real-world observations.
5. Teachers may continually update their knowledge and teaching strategies through professional development programs, workshops, and networking with other educators. Staying abreast of new developments in the field of chemistry will enhance their instructional skills and enable them to provide the best learning experiences for students.

## VII. COMPLIANCE WITH ETHICAL STANDARDS

The researcher followed ethical standards in conducting this study. The researcher also ensured that the respondents' participation in this study was voluntary. Likewise, the decisions about participation in this research were made from an informed position. It was made sure that this study adhered to the ethical standards outlined, including informed consent, risk of harm, anonymity, and confidentiality.

## VIII. ACKNOWLEDGMENT

The researcher would like to commend his deep appreciation for those who truly believed and played a significant role in accomplishing the successful completion of this study.

## IX. REFERENCES

1. Banda, H. J., & Nzabahimana, J. (2021, December 21). *Effect of integrating physics education technology simulations on students' conceptual understanding in physics: A review of literature*. *Physical Review Physics Education Research*, 17(2). <https://doi.org/10.1103/physrevphyseducres.17.023108>
2. Banda, H. J., & Nzabahimana, J. (2022, December 19). *The Impact of Physics Education Technology (PhET) Interactive Simulation-Based Learning on Motivation and Academic Achievement Among Malawian Physics Students*. *Journal of Science Education and Technology*, 32(1), 127-141. <https://doi.org/10.1007/s10956-022-10010-3>
3. Bahtiar, B., Ibrahim, I., & Maimun, M. (2022, September 30). *Analysis of Students' Scientific Literacy Skill in terms of Gender Using Science Teaching Materials Discovery Model*



- Assisted by PhET Simulation. *Jurnal Pendidikan IPA Indonesia*, 11(3), 371–386.  
<https://doi.org/10.15294/jpii.v11i3.37279>
4. Brown, C. E., Alrmuny, D., Williams, M. K., Whaley, B., & Hyslop, R. M. (2020, August 15). Visualizing molecular structures and shapes: a comparison of virtual reality, computer simulation, and traditional modeling. *Chemistry Teacher International*, 3(1), 69–80.  
<https://doi.org/10.1515/cti-2019-0009>
  5. Bryne, S. (2020, December 11). Effective Use of PHET Simulations in Middle School Science Classrooms. <http://hdl.handle.net/20.500.12648/4878>
  6. Cayvaz, A., Akcay, H., & Kapici, H.O. (2020). Comparison of simulation-based and textbook-based instructions on middle school students' achievement, inquiry skills, and attitude. *International Journal of Education in Mathematics, Science and Technology (IJEMST)*, 8(1), 34–43.
  7. Cecilia, O. N., Bernedette, C. U., Emmanuel, A. E., & Hope, A. N. (2020, January 31). Enhancing student's academic performance in Chemistry by using kitchen resources in Ikom, Calabar. *Educational Research and Reviews*, 15(1), 19–26. <https://doi.org/10.5897/err2019.3810>
  8. Çelikler, D. (2020, November 10). A comparison of the learning styles of chemistry students and chemistry education students in universities in Turkey. *African Educational Research Journal*, 8(4), 841–848. <https://doi.org/10.30918/aerj.84.20.186>
  9. Nkemakolam, O. E., Chinelo, O. F., & Jane, M. C. (2018). Effect of Computer Simulations on Secondary School Students' Academic Achievement in Chemistry in Anambra State. *Asian Journal of Education and Training*, 4(4), 284–289. <https://doi.org/10.20448/journal.522.2018.44.284.289>
  10. Nkiko, M. O. (2021, May 14). Interrogating the Teaching and Learning of Chemistry in Nigerian Private Universities: Matters Arising. *Journal of Education and Learning*, 10(3), 132. <https://doi.org/10.5539/jel.v10n3p132>
  11. Nuraida, O., Akbar, G. S., Farida, I., & Rahmatullah, S. (2021, April 1). Using PhET simulation to learn the concept of acid-base. *Journal of Physics: Conference Series*, 1869(1), 012020. <https://doi.org/10.1088/1742-6596/1869/1/012020>
  12. Paje, Y. M., Rogayan, D. V., & Dantic, M. J. P. (2021). Teachers' utilization of computer-based technology in science instruction. *International Journal of Technology in Education and Science (IJTES)*, 5(3), 427–446. <https://doi.org/10.46328/ijtes.261>
  13. Prima, E. C., Putri, A. R., & Rustaman, N. (2018, March 31). Learning solar systems using PhET simulation to improve students' understanding and motivation. *Journal of Science Learning*, 1(2), 60. <https://doi.org/10.17509/jsl.v1i2.10239>
  14. Permatasari, M. B., Rahayu, S., & Dasna, I. W. (2022, July 27). Chemistry Learning Using Multiple Representations: A Systematic Literature Review. *Journal of Science Learning*, 5(2), 334–341. <https://doi.org/10.17509/jsl.v5i2.42656>
  15. Salame, I. I., & Makki, J. (2021, May 30). Examining the Use of PhET Simulations on Students' Attitudes and Learning in General Chemistry II. *Interdisciplinary Journal of Environmental and Science Education*, 17(4), e2247. <https://doi.org/10.21601/ijese/10966>
  16. Yunzal, Jr., A. N., & Casinillo, L. F. (2020, August 19). Effect of Physics Education Technology (PhET) Simulations: Evidence from STEM Students' Performance. *Journal of Education Research and Evaluation*, 4(3), 221. <https://doi.org/10.23887/jere.v4i3.27450>
  17. Yuliati, L., Riantoni, C., & Mufti, N. (2018, October 3). Problem-Solving Skills on Direct Current Electricity through Inquiry-Based Learning with PhET Simulations. *International Journal of Instruction*, 11(4), 123–138. <https://doi.org/10.12973/iji.2018.1149a>





# CRYPTOCURRENCY AND STOCK MARKET RESEARCH: A BIBLIOMETRIC ANALYSIS

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Article DOI: <https://doi.org/10.36713/epra17632>

DOI No: 10.36713/epra17632

## ABSTRACT

Based on the 566 research publications that were obtained from the Scopus database, this study analyses the advancements and trends in cryptocurrency and stock market research. The results show that there was a gradual increase in academic interest in this field from 2013 to 2023. Several publications in this area were published after 2018. Together with publication trends, the citation trend improved. China, the United States, and India are the top three contributors. Following 2018, a lot of institutes started publishing literature in this area. Using bibliometric methods and techniques, it has been shown that this area is experiencing an expansion in research. This work provides a foundation for future research in this field and aids the academic community in identifying the progress of research in the fields of cryptocurrencies and stock markets.

**KEYWORDS:** Bibliometrics Analysis; Cryptocurrency; Bitcoin; Stock market; Financial market

## 1. INTRODUCTION

Cryptocurrency is the most ground-breaking and fascinating advancement in the area of digital payments. The popularity of cryptocurrencies has increased recently (Manahov & Urquhart, 2021). The cryptocurrency market has rapidly grown into significant component of the global financial system and a new asset class similar to stocks. Bitcoin was first introduced by Satoshi Nakamoto in a white paper titled "Bitcoin: A Peer-to-Peer Electronic Cash System" in 2008 (Zade et al., 2019). Blockchain-based P2P electronic payment system proposed by Nakamoto (2008) profoundly changed the nature of electronic payments. As Bitcoin- the first crypto-currency- being decentralised and not governed by any central bank, unlike other conventional currencies, it quickly acquired popularity and investors' attention. The popularity of bitcoin inspired other crypto-entrepreneurs to create their own currencies. Many altcoins emerged following the advent of bitcoin. Etheruem, Tether, Litecoin, Dash, Ripple, Cardano, etc. are important altcoins.

Scholars have paid close attention to the cryptocurrency market due to its rapid growth and popularity. At the moment, cryptocurrency research is primarily focused on disciplines such as computer science, economics, business, and finance. In the area of finance, many studies have been conducted on the volatility of cryptocurrencies (Ahmed, 2021; Attarzadeh & Balcilar, 2022; Benhamed et al., 2023; Bouri et al., 2019; Gopane, 2021; Leirvik, 2022; Yaya et al., 2021; Zhang et al., 2022). Cryptocurrencies are emerging as a new type of investment asset (Srinivasan et al., 2022), but in the academic community, there is still no definition that makes clear if Bitcoin is a currency or just an asset (Poyser, 2017). The majority of researchers agree that Bitcoin is merely a commodity now; nevertheless, a very few of them think it will

replace real currency in the forthcoming future. Some researchers believe that it resembles a speculative investment (Yermack, 2013). Studies were also done to comprehend the price determinants of cryptocurrencies. It may be determined by a variety of factors, including demand, supply, attractiveness, technological drivers, and macro-financial developments (Khursheed et al., 2020; Van Wijk, 2013; Kristoufek, 2013; Bouoiyour & Selmi, 2015). Behavioural finance perspective of cryptocurrency investors also studied by various academicians in recent times (Al-mansour, 2020; Fonseca et al., 2020; Gusev, 2018; Subramaniam & Chakraborty, 2020). Studies by Van Wijk (2013), Corbet (2018), Handika et al. (2019), Gil-Alana et al. (2020), Gozbasi et al. (2021), Lahiani et al. (2021), Hachicha (2021), Ha & Nham (2022), and Ghorbel et al. (2022) found differential dependency and independence between stock markets and the cryptocurrency market. Although there is much literature covering the many facets of cryptocurrencies, understanding of their effect on the financial market is relatively scattered.

This study examines the evolution of cryptocurrencies and financial market research using bibliometric techniques. Based on the available literature, this study examines the advancements and trends in stock market and cryptocurrency research. Bibliometric analysis is a comprehensive statistical, mathematical, and philological method that quantitatively analyses the trends and advancements in a particular research area. It is more comprehensive and efficient way to track and analyse the progress in a particular area of research. This method eliminates the errors and omissions in the traditional qualitative method. This method has theoretical and practical relevance in identifying research hotspots and themes (Yue et al., 2021).



The current bibliometric research attempts to track the trends in publications and citations in cryptocurrency and stock market research from 2013 to 2023 by assessing the most contributing authors, affiliations, journals, productive nations, network analysis and mapping of thematic evolution

To achieve the objectives of the study, The following research questions are addressed in this paper:

1. What are the publishing trends for cryptocurrency and stock market research?
2. Which of the countries, institutions, journals, and authors made significant contributions to cryptocurrencies and stock market research, and what are the significant studies?
3. What are the emerging themes in the domain of cryptocurrencies and stock market research?

A total of 566 samples (spanning the years 2013 to 2023) were chosen from the Scopus database to answer these research questions.

## 2. METHODOLOGY

### 2.1 Research Method

This study examines the evolution of cryptocurrencies and financial market research using bibliometric analysis. Bibliometric analysis is a statistical assessment of published research articles, books, papers, proceedings, etc., and it is an

efficient technique to gauge the impact of publications, authors, or affiliations in the scientific community. Bibliometric analysis enables quantitative examination of research trends and advancements in a specific field, done using comprehensive statistical, mathematical, and philological methods.

### 2.2 Database

This study analyses literature data obtained from the Scopus database on February 23, 2023. Scopus is an abstract and citation database that was launched in 2004. Scopus includes scholarly literature across a wide variety of disciplines. Scopus covers more than 25,000 active titles from 7,000 publishers- all rigorously vetted and chosen by an independent review board.

### 2.3 Search Terms and Inclusion/Exclusion Criteria

Keyword selection is important to obtain the most relevant literature samples. As the paper focuses on cryptocurrency and stock market research, two different groups of keywords are used as shown in Table 1. For this analysis, only journal articles were taken into account; book chapters and conference proceedings were excluded. Only the final articles are considered for the analysis; all other articles written in languages other than English are excluded. Finally, 566 papers from 2013 to 2023 were selected for this research on February 23, 2023.

**Table 1. Search Terms**

Keywords for "Cryptocurrency"	"Cryptocurrency" OR "Bitcoin" OR "Digital currency" OR "Virtual currency" OR "Ethereum" OR "Tether"
Keywords for "Stock market"	"Stock market" OR "Stock exchange" OR "Stock market indices" OR "Financial market" OR "Global financial market"

## 3. DATA ANALYSIS AND DISCUSSION

Bibliometric analysis was performed using several tools and softwares including MS Excel And Bilioshiny. Biblioshiny is the web interface for Bibliometrix. It aids scholars in making simple use of key features of Bibliometrix, like importing data, converting it into data frames, collecting data using dimensions, and data filtering. It also enables analytics and visualisations for various level metrics, including authors, sources, and clustering analysis.

### 3.1 Analysis of the Overall Trend in Publications and Citations

The final dataset included 566 articles published between 2013 and 2023 across 249 journals, indicating that cryptocurrency and stock market research is a relatively recent research trend. There were very few papers published in this domain prior to 2018. The academic papers about cryptocurrency and stock market firstly appeared in 2013. In 2014 there were no papers published in this domain. It is only after 2018 that the research trends indicate progress. After 2018, there was a major increase in research and publications in this domain. Table 2 shows the total number of papers published from 2013 to 2023. Most papers were published in 2022. The annual growth rate in research and publication is 40.97%.

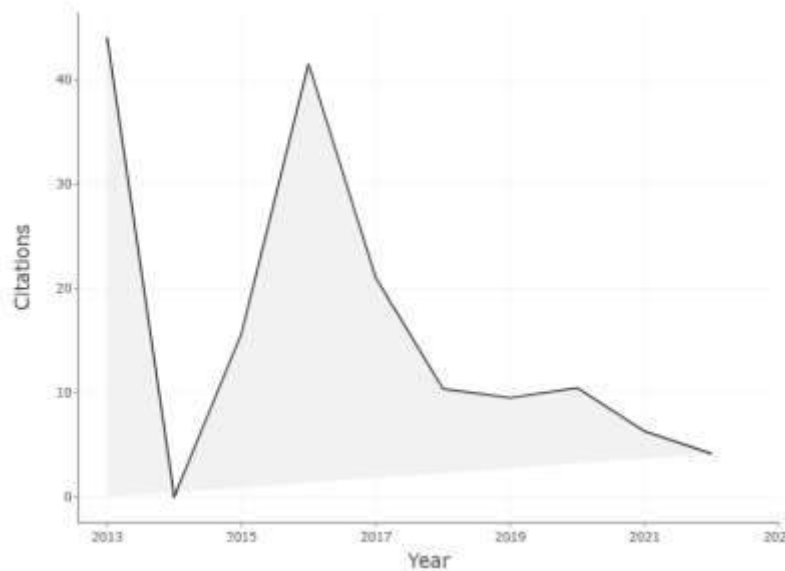
**Table 2. Annual Scientific Production**

Year	Articles
2013	1
2014	0
2015	6
2016	4
2017	5
2018	21
2019	62
2020	106
2021	142
2022	188
2023	31



Figure 1. shows the mean citations per year. Even though the number of publications has shown a significant increase after 2018, the average citation seems to be declining after a skyrocketing increase during the years 2015 and 2016. In terms

of publication, the most successful year was 2022, but in the case of average citations, the most successful year was 2016. After 2016, the mean citation gradually falls, reaching its lowest level in 2022 and 2023.



**Figure 1. Average Citation Per Year.**

### 3.2 Most Contributing Countries

Table 3 lists the top ten most productive countries, and figure 2 shows the countries' production over time. Around 50 articles were published throughout the study period in the top five nations on the list. The findings indicate that China, with 203 articles, has had an exceptional output, followed by the United

States, with 95 publications. India is in third place with 62 publications, but it is not included in the top cited countries. France, Tunisia, Brazil, and Poland are included in the top ten publishing countries, but in the case of citation, all of these countries are not in the top ten.

**Table 3. Top ten publishing countries**

Country	Total Publication
CHINA	203
USA	95
INDIA	62
UK	62
FRANCE	55
SPAIN	46
TUNISIA	45
BRAZIL	40
TURKEY	40
POLAND	39

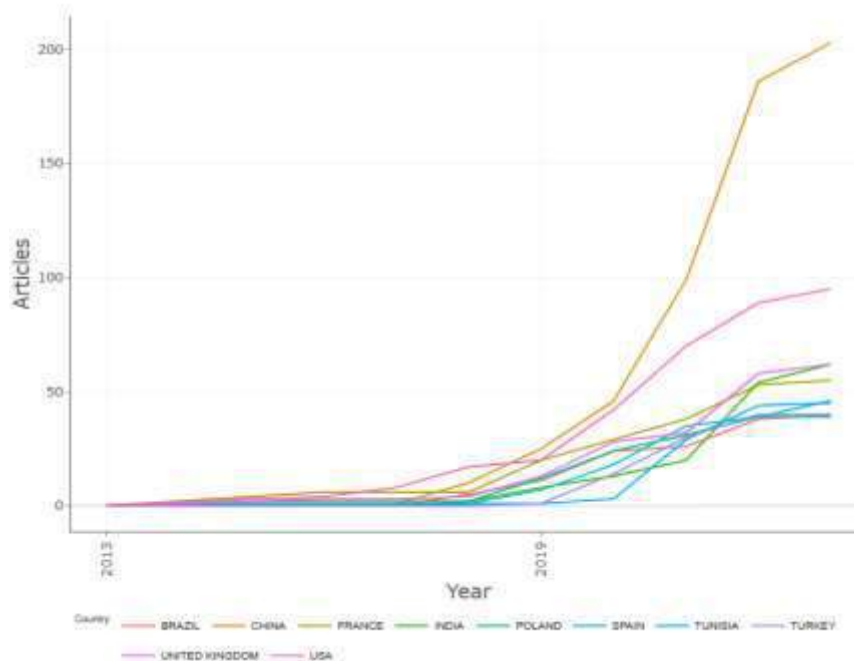


Figure 2. Countries' production over time

Table 4 shows the most-cited countries. China was one of the top publishing nations, but when it comes to citations, it is only in second place. Ireland received the most citations, despite not

being among the top 10 publishing nations, according to the data. Despite not producing many more articles, countries like Lebanon, the Czech Republic, Malaysia, and Korea are among the most-cited countries.

Table 4. Most Cited Countries

Country	TC	Average Article Citations
IRELAND	1236	95.08
CHINA	802	10.69
UNITED KINGDOM	658	34.63
LEBANON	623	155.75
CZECH REPUBLIC	481	120.25
USA	437	14.57
MALAYSIA	403	33.58
KOREA	396	19.80
SPAIN	357	23.80
TURKEY	342	22.80

### 3.3 Most Relevant Affiliations

The top 10 highly productive institutions are shown in Table 5. It is apparent that most of the institutions had more than eight publications, whereas the top six institutions had more than ten

publications. The University of Economics, Ho Chi Minh City, emerged as the most productive organisation with 15 publications, followed by Trinity College, Dublin, with 13 publications.

Table 5. Top Ten Highly Productive Institutions

Affiliation	Articles
UNIVERSITY OF ECONOMICS HO CHI MINH CITY	15
TRINITY COLLEGE DUBLIN	13
UNIVERSITY OF SFAX	11
DUBLIN CITY UNIVERSITY	10
NANJING UNIVERSITY OF INFORMATION SCIENCE AND TECHNOLOGY	10
UNIVERSITY OF WAIKATO	10
MONTPELLIER BUSINESS SCHOOL	9
CENTRAL SOUTH UNIVERSITY	8
CHARLES UNIVERSITY	8
POZNAN UNIVERSITY OF ECONOMICS AND BUSINESS	8





Figure 3 shows the affiliations' production over time. Since 2018, every institution has consistently published articles. During the period of 2013–2017, there were only a few publications from the institutions. Institutions started to

produce more research articles on this topic after 2018, which marked a significant growth in the research trend in this domain.

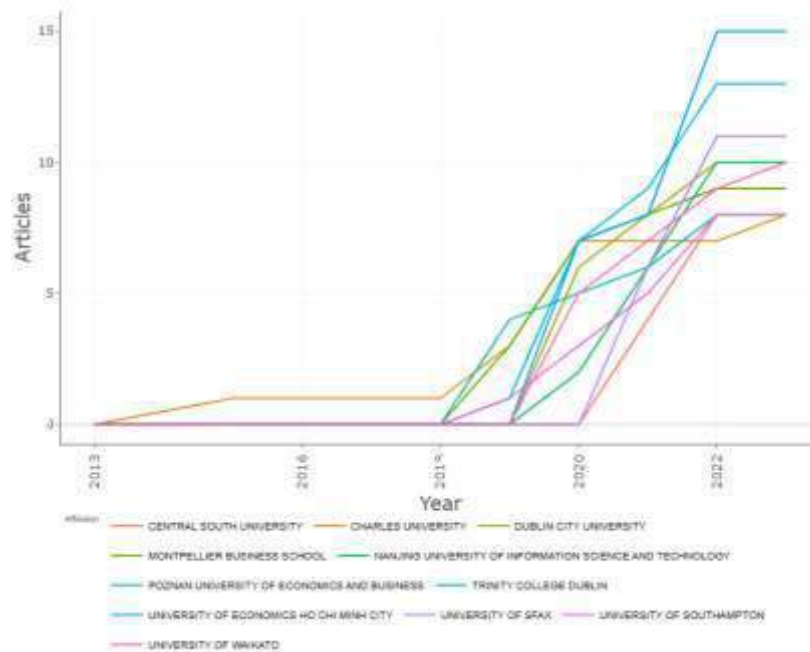


Figure 3. Affiliations' production over time

### 3.4 Most Relevant Authors

The top ten writers who have made a major contribution to the fields of bitcoin and stock market research are shown in Table 6, and the author impact is shown in Table 7. S. Corbet is the most significant author in terms of total publications, h index, g index, and m index. S. Corbet made a contribution by writing 12 research publications, and E. Bourie came in second with

eleven. 10 papers each were supplied by L. Kristoufek, B. Lucey, and L. Yarovaya. L. Kristoufek stands out among the top authors with 1723 total citations. and B. Lucey has 1028 citations. When citations are taken into account, S. Corbet and E. Bourie, who have the most articles published, come in third and fourth place, respectively.

Table 6. Top Ten Authors

Authors	NP	Articles Fractionalized
CORBET S	12	2.83
BOURIE E	11	2.82
KRISTOUFEK L	10	5.23
LUCEY B	10	2.63
YAROVAYA L	10	2.95
WANG Y	8	2.87
JERIBI A	6	2.25
MATKOVSKYY R	6	2.75
ROUBAUD D	6	1.40
SHAHZAD SJH	6	1.52

Table 7. Author Impact

Element	h_index	g_index	m_index	TC	NP	PY_start
CORBET S	11	12	2.75	849	12	2020
BOURIE E	10	11	2	949	11	2019
LUCEY B	10	10	2	1028	10	2019
KRISTOUFEK L	9	10	0.818	1723	10	2013
YAROVAYA L	9	10	2.25	302	10	2020
ROUBAUD D	6	6	1.2	834	6	2019
BEKIRO S	5	5	1	368	5	2019
LIVIERIS IE	5	5	1.25	107	5	2020
MATKOVSKYY R	5	6	1	128	6	2019
NAEEM MA	5	5	1.25	85	5	2020



Figure 4 shows the progression of the research publications by the most important authors. The cluster map's circles stand for the number of articles, and the colour stands for the volume of

citations obtained over the course of the year. This would demonstrate the production of the most significant publications in 2020.

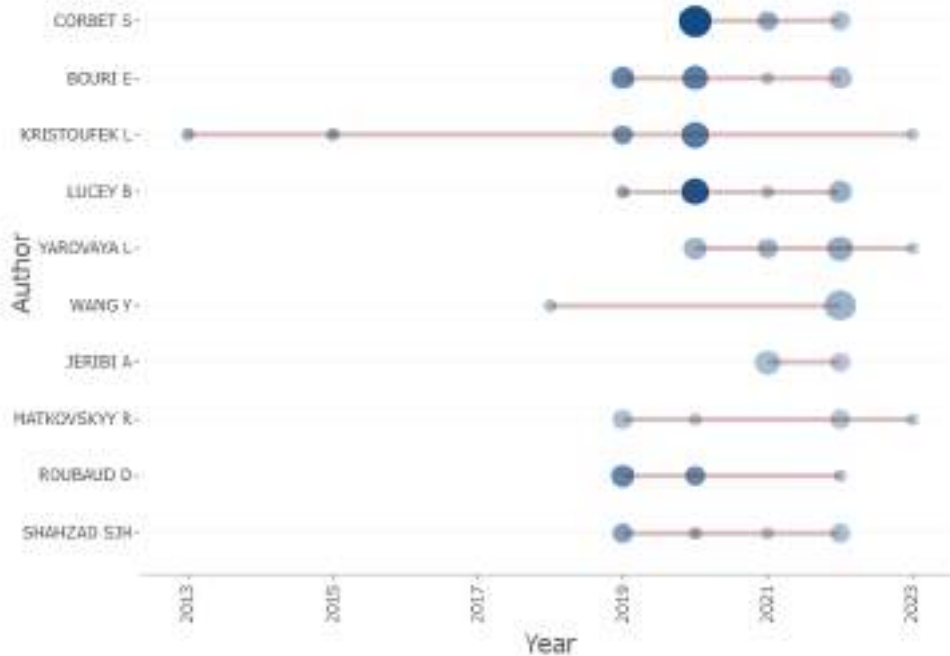


Figure 4. Top Authors' Production Over Time

### 3.5 Most Relevant Source

The top ten research journals for stock market and cryptocurrency research are shown in Table 8. It demonstrates that all major journals published more than ten papers. With 38

articles, the journal "Finance Research Letters" tops the table, followed by "Physica A: Statistical Mechanics and its Applications," which has 30 publications.

Table 8. Top Ten Journals

Sources	Articles
FINANCE RESEARCH LETTERS	38
PHYSICA A: STATISTICAL MECHANICS AND ITS APPLICATIONS	30
RESEARCH IN INTERNATIONAL BUSINESS AND FINANCE	18
RESOURCES POLICY	18
APPLIED ECONOMICS LETTERS	17
INTERNATIONAL REVIEW OF FINANCIAL ANALYSIS	15
APPLIED ECONOMICS	12
NORTH AMERICAN JOURNAL OF ECONOMICS AND FINANCE	12
QUARTERLY REVIEW OF ECONOMICS AND FINANCE	11
TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	11

### 3.6 Most Relevant Research Papers

Table 9 gives the details of most cited research papers. "Bitcoin, gold and the dollar- A GARCH volatility analysis" (Dyhrberg, 2016) published in Finance Research Letters is the most cited article, with 703 citations. This study investigates the potential of bitcoin as a financial asset. The asymmetric GARCH demonstrated that bitcoin may be advantageous for risk-averse investors in anticipation of market downturns and excellent for risk management. Since it may be classified as something between gold and the US dollar on a scale from pure medium of exchange advantages to pure store of value advantages, bitcoin has a position on the financial markets and in portfolio

management overall. "What are the main drivers of the bitcoin price? Evidence from wavelet coherence analysis" (Kristoufek, 2015) published in PLoS ONE is the second most cited article with a total citation of 467. This study looked at many factors that could affect Bitcoin price, including fundamental, speculative, and technical factors. It also looked at the possible impact of the Chinese market. Using a continuous wavelets framework to investigate the evolution of relationships in both the time and frequency domains, it is discovered that Bitcoin is a unique asset with characteristics of both a conventional financial asset and a speculative one.

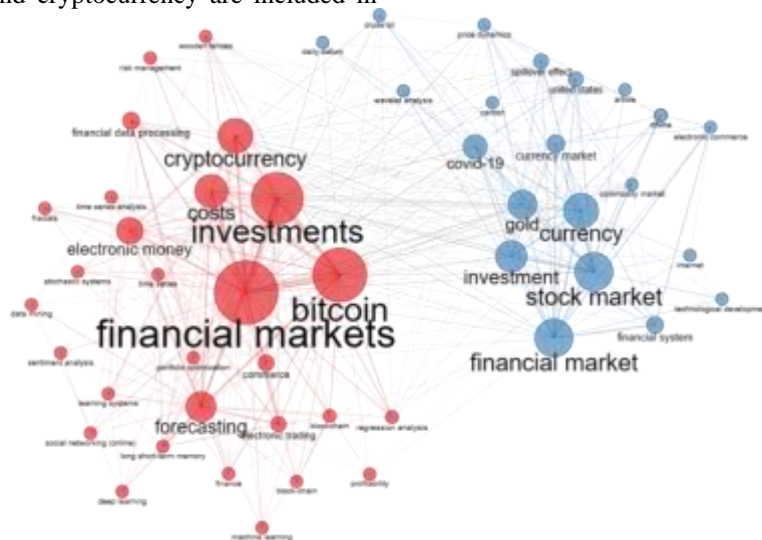
**Table 9. Top Ten Global Cited papers**

Title	Year	Author	Journal	Total Citations
Bitcoin, gold and the dollar - A GARCH volatility analysis	2016	A. H. Dyhrberg	Finance Research Letters	703
What are the main drivers of the bitcoin price? Evidence from wavelet coherence analysis	2015	L. Kristoufek	PLoS ONE	467
BitCoin meets Google Trends and Wikipedia: Quantifying the relationship between phenomena of the Internet era	2013	L. Kristoufek	Scientific Reports	440
Hedging capabilities of bitcoin. Is it the virtual gold?	2016	A. H. Dyhrberg	Finance Research Letters	434
The contagion effects of the COVID-19 pandemic: Evidence from gold and cryptocurrencies	2020	S. Corbet	Finance Research Letters	391
Bitcoin is not the New Gold – A comparison of volatility, correlation, and portfolio performance	2018	T. Klein	International Review of Financial Analysis	353
Coronavirus (COVID-19) — An epidemic or pandemic for financial markets	2020	M. Ali	Journal of Behavioral and Experimental Finance	347
Toward blockchain-based accounting and assurance	2017	J. Dai	Journal of Information Systems	278
Is Bitcoin a better safe-haven investment than gold and commodities?	2019	S. J. H. Shahzad	International Review of Financial Analysis	271
Portfolio diversification with virtual currency: Evidence from bitcoin	2019	K. Guesmi	International Review of Financial Analysis	269

**3.7 Network of keywords**

The keyword co-occurrence network in the research domain is depicted in Figure 5. Keywords like financial market, Bitcoin, investments, forecasting, and cryptocurrency are included in

the first cluster. The second cluster, which is highlighted in blue, includes important keywords like stock market, financial market, currency, investments, and so forth.



**Figure 5. Co-Occurrence Network**

### 3.8 Thematic Map

Figure 6 shows Thematic map showing clusters and the Keywords identified by the co-occurrence network. The centrality axis on the X-axis indicates how significant a theme is. The density, which represents the Y-axis and represents the theme's development, is a measure of the internal strength of a cluster network. The first quadrant accordingly identifies motor themes. Well-developed and significant themes for study field structure are motor themes. Investments, bitcoin, and financial markets are key terms in the motor theme. highly developed,

isolated themes with little significance are plotted in the second quadrant. Risk, psychology, gambling, blockchain, and electronic trading are coming under these niche themes. Emerging or declining themes, which are peripheral and poorly developed, are seen in the third quadrant. Financial markets, stock markets, and currencies are coming under the third quadrant. Basic and transversal themes, which are broad concepts that go across various fields of study, are found in the fourth quadrant.

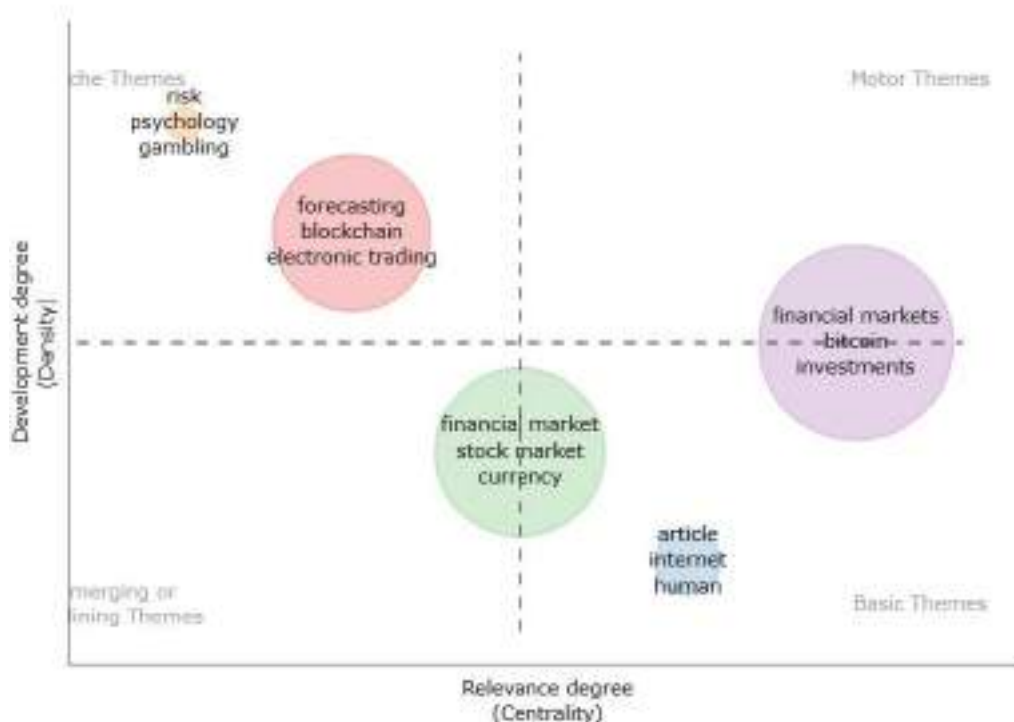


Figure 6. Thematic map of research trends

### 4. LIMITATIONS OF THE STUDY

In this study, literature samples were taken from a single database, i.e., Scopus. A future study can expand it to include samples from other databases like Web of Science for comparison and comprehensiveness. There may be omissions in the data due to the failure to use specific keywords. Future studies can expand the data samples by including additional keywords.

### 5. CONCLUSION

This paper's major objective was to look at how cryptocurrency and financial market research have progressed. This paper examines the developments and trends in stock market and cryptocurrency research based on the 566 research publications retrieved from the Scopus database. This study area's publication trend indicates an upward trend. After 2018, there were numerous papers published in this field. The citation trend improved in tandem with publication trends. The top three contributors are China, the United States, and India. After 2018, a number of institutions started to publish articles on this topic. The expanding research trend in this field has been demonstrated using a variety of bibliometric techniques and methods. This paper helps the academic community identify the

research progress in cryptocurrency and stock market research and ensures a basis for future research in this area. The study's findings help scholars comprehend the current limitations and scope of this domain of study. With the help of this study, researchers in the field of cryptocurrency and stock market can develop strategies that are specific to the subjects that are now trending. For the purpose of identifying research gaps and fresh perspectives, they can also identify the most significant publications, authors, and journals in this field. Identification of influential institutions and scholars in this field may be useful to researchers. Researchers will be benefited by crucial information on prominent and influential works that may be viewed as the cornerstone of this research field. This knowledge will be useful to upcoming researchers. Findings indicate that from 2013 to 2023, academic interest in this subject area gradually rose.

### REFERENCES

1. Ahmed, W. M. A. (2021). *Stock market reactions to upside and downside volatility of Bitcoin: A quantile analysis*. *North American Journal of Economics and Finance*, 57. <https://doi.org/10.1016/j.najef.2021.101379>
2. Al-mansour, B. Y. (2020). *Cryptocurrency Market*:





- Behavioral Finance Perspective\*. *Journal of Asian Finance, Economics and Business*, 7(12), 159–168.  
<https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.159>
3. Attarzadeh, A., & Balcilar, M. (2022). On the dynamic return and volatility connectedness of cryptocurrency, crude oil, clean energy, and stock markets: a time-varying analysis. *Environmental Science and Pollution Research*, 29(43), 65185–65196. <https://doi.org/10.1007/s11356-022-20115-2>
  4. Benhamed, A., Messai, A. S., & El Montasser, G. (2023). On the Determinants of Bitcoin Returns and Volatility: What We Get from Gets? *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15031761>
  5. Bouoiyour, J., & Selmi, R. (2015). What does Bitcoin look like? *Annals of Economics and Finance*, 16(2), 449–492.
  6. Bouri, E., Gil-Alana, L. A., Gupta, R., & Roubaud, D. (2019). Modelling long memory volatility in the Bitcoin market: Evidence of persistence and structural breaks. *International Journal of Finance and Economics*, 24(1), 412–426. <https://doi.org/10.1002/ijfe.1670>
  7. Corbet, S., Meegan, A., Larkin, C., Lucey, B., & Yarovaya, L. (2018). Exploring the dynamic relationships between cryptocurrencies and other financial assets. *Economics Letters*, 165, 28–34.  
<https://doi.org/10.1016/j.econlet.2018.01.004>
  8. Dylhrberg, A. H. (2016). Bitcoin, gold and the dollar - A GARCH volatility analysis. *Finance Research Letters*, 16, 85–92. <https://doi.org/10.1016/j.frl.2015.10.008>
  9. Fonseca, V., Pacheco, L., & Lobão, J. (2020). Psychological barriers in the cryptocurrency market. *Review of Behavioral Finance*, 12(2), 151–169. <https://doi.org/10.1108/RBF-03-2019-0041>
  10. Ghorbel, A., Frikha, W., & Manzli, Y. S. (2022). Testing for asymmetric non-linear short- and long-run relationships between crypto-currencies and stock markets. *Eurasian Economic Review*, 12(3), 387–425.  
<https://doi.org/10.1007/s40822-022-00206-8>
  11. Gil-Alana, L. A., Abakah, E. J. A., & Rojo, M. F. R. (2020). Cryptocurrencies and stock market indices. Are they related? *Research in International Business and Finance*, 51(July 2019), 101063.  
<https://doi.org/10.1016/j.ribaf.2019.101063>
  12. Gopane, T. J. (2021). An Assessment of Inter-market Volatility and Shock Dynamics of Bitcoin as a Digital Asset. *Lecture Notes in Business Information Processing*, 431 LNBIIP, 104–117. [https://doi.org/10.1007/978-3-030-92909-1\\_7](https://doi.org/10.1007/978-3-030-92909-1_7)
  13. Gozbasi, O., Altinoz, B., & Sahin, E. E. (2021). Is Bitcoin a Safe Haven? A Study on the Factors that Affect Bitcoin Prices. 11(4), 35–40.
  14. Gusev, A. A. (2018). Public opinions impacts on cryptocurrency valuation: A view from behavioral finance perspective. *Journal of Reviews on Global Economics*, 7(Special Is), 696–702. <https://doi.org/10.6000/1929-7092.2018.07.63>
  15. Ha, L. T., & Nham, N. T. H. (2022). An application of a TVP-VAR extended joint connected approach to explore connectedness between WTI crude oil, gold, stock and cryptocurrencies during the COVID-19 health crisis. *Technological Forecasting and Social Change*, 183. <https://doi.org/10.1016/j.techfore.2022.121909>
  16. Hachicha, A. H. F. (2021). Analysis of the bitcoin stock market indexes using comparative study of two models SV with MCMC algorithm. *Review of Quantitative Finance and Accounting*, 56(2), 647–673.  
<https://doi.org/10.1007/s11156-020-00905-w>
  17. Handika, R., Soepriyanto, G., & Havidz, S. A. H. (2019). Are cryptocurrencies contagious to Asian financial markets? *Research in International Business and Finance*, 50, 416–429. <https://doi.org/10.1016/j.ribaf.2019.06.007>
  18. Khursheed, A., Naeem, M., Ahmed, S., & Mustafa, F. (2020). Adaptive market hypothesis: An empirical analysis of time-varying market efficiency of cryptocurrencies. *Cogent Economics and Finance*, 8(1).  
<https://doi.org/10.1080/23322039.2020.1719574>
  19. Kristoufek, L. (2013). BitCoin meets Google Trends and Wikipedia: Quantifying the relationship between phenomena of the Internet era. *Scientific Reports*, 3(May). <https://doi.org/10.1038/srep03415>
  20. Kristoufek, L. (2015). What are the main drivers of the bitcoin price? Evidence from wavelet coherence analysis. *PLoS ONE*, 10(4), 1–15.  
<https://doi.org/10.1371/journal.pone.0123923>
  21. Lahiani, A., Jeribi, A., & Jlassi, N. B. (2021). Nonlinear tail dependence in cryptocurrency-stock market returns: The role of Bitcoin futures. *RESEARCH IN INTERNATIONAL BUSINESS AND FINANCE*, 56.  
<https://doi.org/10.1016/j.ribaf.2020.101351>
  22. Leirovik, T. (2022). Cryptocurrency returns and the volatility of liquidity. *Finance Research Letters*, 44.  
<https://doi.org/10.1016/j.frl.2021.102031>
  23. Manahov, V., & Urquhart, A. (2021). The efficiency of Bitcoin: A strongly typed genetic programming approach to smart electronic Bitcoin markets. *International Review of Financial Analysis*, 73.  
<https://doi.org/10.1016/j.irfa.2020.101629>
  24. Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System.
  25. Poyser, O. (2017). Exploring the determinants of Bitcoin's price: an application of Bayesian Structural Time Series. In *Ekp (Vol. 13, Issue 3)*.
  26. Srinivasan, P., Maity, B., & Kumar, K. K. (2022). Macro-Financial Parameters Influencing Bitcoin Prices: Evidence from Symmetric and Asymmetric ARDL Models. *Review of Economic Analysis*, 14(1), 143–175.  
<https://doi.org/10.15353/rea.v13i3.3585>
  27. Subramaniam, S., & Chakraborty, M. (2020). Investor Attention and Cryptocurrency Returns: Evidence from Quantile Causality Approach. *JOURNAL OF BEHAVIORAL FINANCE*, 21(1), 103–115.  
<https://doi.org/10.1080/15427560.2019.1629587>
  28. Van Wijk, D. (2013). What can be expected from the Bitcoin? *Erasmus Universiteit Rotterdam*, 20. [thesis.eur.nl](https://thesis.eur.nl)
  29. Yaya, O. S., Ogbonna, A. E., Mudida, R., & Abu, N. (2021). Market efficiency and volatility persistence of cryptocurrency during pre- and post-crash periods of Bitcoin: Evidence based on fractional integration. *International Journal of Finance and Economics*, 26(1), 1318–1335. <https://doi.org/10.1002/ijfe.1851>
  30. Yermack, D. (2013). Is Bitcoin a Real Currency? NBER WORKING PAPER SERIES.  
<http://www.nber.org/papers/w19747>
  31. Yue, Y., Li, X., Zhang, D., & Wang, S. (2021). How cryptocurrency affects economy? A network analysis using bibliometric methods. *International Review of Financial Analysis*, 77(71988101), 101869.  
<https://doi.org/10.1016/j.irfa.2021.101869>
  32. Zade, M., Myklebost, J., Tzscheuschler, P., & Wagner, U.



(2019). *Is bitcoin the only problem? A scenario model for the power demand of blockchains*. *Frontiers in Energy Research*, 7(MAR). <https://doi.org/10.3389/fenrg.2019.00021>

33. Zhang, Y., He, M., Wen, D., & Wang, Y. (2022). *Forecasting Bitcoin volatility: A new insight from the threshold regression model*. *Journal of Forecasting*, 41(3), 633–652. <https://doi.org/10.1002/for.2822>



# EXPERIENCES OF THE LOCAL TOURISTS ON FESTIVALS IN TAGUM CITY: A PHENOMENOLOGICAL STUDY

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## ABSTRACT

The purpose of this phenomenological study was to explore the personal experiences and perceptions of local tourists on festivals in Tagum City. Moreover, the primary objective of this study was to provide valuable insights to the event organizer, tourism department, and local government unit of Tagum City. The study conducted within Tagum City, highlighted twelve (12) attendees ages eighteen years old and above, a resident of Tagum City who had an experience attending among the festivals in Tagum City. Among twelve (12) participants, six (6) went through in-depth interviews, while the remaining six (6) were subjected to focus group discussion. The data were analyzed through thematic analysis. Results showed that the experiences of the local tourists were the following: desiring an improved festival operation; experiencing varied emotions; facing festival challenges; witnessing memorable moments; establishing festival networks; and attending to specific popular festivals in the locality. Furthermore, the results for the contribution of the local experiences to developed Tagum City's Tourism Industry were the following: develop good services and facilities, establish destination branding, gain support and promotion for festivals, and strengthen collaboration among different entities. Moreover, these were the results for the recommendations of the local tourists for the improvement of Tagum City's festivals: boost festival services and organization, add more festival entertainments, enhance security and traffic management, strengthen promotional advertising, heighten exposure of local products and practices, and include other known festival activities. In nutshell, results will act as a basis for enhancing the overall quality of festivals and formulating creative strategies that will increase the level of satisfaction among festival attendees.

**KEYWORDS:** local tourists, festival, event organizer, phenomenological study, thematic analysis, Tagum City, Philippines.

## INTRODUCTION

A festival is a temporary gathering of people for a particular cultural, social, or religious event. It may be in the form of street fairs, concerts, cuisine festivals, and more. As such, it allows individuals to interact, communicate, and learn about various cultures and customs, fostering pride and identity in the community. Moreover, festivals effectively stimulate economic development or regeneration opportunities and encourage social cohesion through cultural activities that frequently draw on local culture and history (Mair & Duffy 2018). However, local tourists might encounter challenges that will change their perceptions and experiences in attending such festivals.

On the other hand, the Tazaungdaing festival in Myanmar is culturally and religiously significant, drawing both domestic and international tourists. However, residents of Yangon, the main economic hub, are unhappy due to continuous loud noises from amplified chants and appeals, which clash with electronic music, Burmese rap, and social gatherings, causing local discontent (Arab News, 2018). On top of that, during the Panagbenga Festival in Baguio City, significant traffic congestion arises due to increased tourist arrivals, exacerbated by the city's limited, winding roads. Moreover, the festival leads to a surge in waste, putting excessive pressure on the municipality's waste management system (Dunuan, 2018). On the other hand, Tagum City frequently celebrates monthly

festivals, which, according to the mayor's spouse, leads to an increase in visitor numbers and subsequently causes hotels in the city to reach full occupancy. However, as per the Mayor of the City, there is a pressing requirement for hotels and hotel rooms due to a succession of forthcoming festivals (Sunnexdesk, 2023).

## PURPOSE OF THE STUDY

The purpose of this phenomenological study was to explore the personal experiences and perceptions of local residents on festivals in Tagum City. Moreover, the primary objective of this study was to provide valuable insights to the event organizer, tourism department, and local government unit of Tagum City. This information will act as a basis for enhancing the overall quality of festivals and formulating creative strategies that will increase the level of satisfaction among festival attendees. At this stage of the study, experiences and perceptions of local residents in Tagum City in relation to festivals refers to exploring the multifaceted ways in which festivals shape and are shaped by the perspectives of the people living in Tagum City.

## RESEARCH QUESTIONS

1. What are the festival experiences of local tourists in Tagum City?



- How do these experiences contribute to the development of Tagum City's tourism industry?
- What are the recommendations of the local residents to improve the festivals in Tagum City?

### THEORETICAL LENS

This study was anchored on the conceptual Attributional Model of Visitor Event Experience developed by Ayob et al. (2013), Arnold's (1960) theory of emotion cited by Zhang & Deng, 2022, and the Cultural Ecology Theory by Julian Steward (1955) cited by JoeZimmermann, 2010.

Attributional Model of Visitor Event Experience was used in the study to investigate the particular aspects of festivals that influenced the general sense of fulfillment of participants and their future plans to return. Further, this study utilized Arnold's theory to assess local visitors' cognitive processes during their festival attendance. Specifically, it focused on evaluating essential sensory information, including visual stimuli, sounds, scent sensations, and the overall atmosphere of the festival. Lastly, Cultural Ecology Theory as a framework to understand the influence of the environment on the festivals in Tagum City, as well as the impact of people's ecological surroundings on their experiences, opinions, and suggestions related to these festivals. This idea gave the research a more comprehensive understanding of the cultural dynamics inside the festival setting.

### RESULTS

Table 1

Major Themes and Core Ideas on the Festival Experiences of Local Tourists in Tagum City

Major Themes	Core Ideas
75Feeling a Sense of Fun and Excitement	<ul style="list-style-type: none"> <li>feeling a sense of amusement</li> <li>feeling of excitement due to different food offered by local vendors</li> </ul>
Witnessing Talents and Performances	<ul style="list-style-type: none"> <li>witnessing performance of famous bands outside the locality</li> <li>giving value on dance competitions</li> </ul>

#### Feeling a Sense of Fun and Excitement

In support of this theme, IDI-02 said that they feel a sense of amusement:

*It is very fun as they offer different activities and competitions. Each festival is distinct, and they are all quite fun.*  
 In fact, this was supported by IDI-06 accentuated the feeling of excitement due to different food offered by local vendors:

*My whole experience at festivals was fantastic. During that period, I was particularly interested in the variety of food available from local vendors*

### RESEARCH DESIGN

This study utilized a qualitative research design employing a phenomenological approach. Qualitative research was employed as a means of investigating and gaining a deeper understanding of real-world issues in the study. The experiences, perceptions, and behaviors of the participants were collected through qualitative research methods.

### RESEARCH PARTICIPANTS

As for the participants, Guest et al. (2006), in qualitative studies employing intentional sampling, found it typically sufficient to conduct 12 interviews to achieve data saturation. Furthermore, for this study, purposeful sampling was employed, which is also referred to as purposive and selected sampling, as a tool to discover participants who possessed the ability to provide comprehensive and deep insights into the phenomenon under investigation (Statistics Solutions, 2019). Among twelve (12) participants, six (6) underwent in-depth interviews, while the remaining six (6) were subjected to focus group discussion.

### DATA ANALYSIS

In the end, we produced a comprehensive narrative or report that delved into the fundamental issues. In this phase, it was necessary to systematically arrange the research findings coherently and rationally while employing relevant quotations or data samples to substantiate each identified subject. The forthcoming analysis aimed to provide a compelling and understandable synopsis of the patterns and findings derived from the thematic analysis.

#### Witnessing Talents and Performances

In the same way, IDI-01stated witnessing performance of famous bands outside the locality.

*They also invited prominent bands from outside the city to perform*

IDI-03 whole-heartedly said that they witness giving value on dance competitions:

*It is the competitions. I appreciate the Indayog festival most especially that they value dance performers.*





Table 2

**Major Themes and Core Ideas on the Participants' Experiences as Contributions to the Development of Tagum City's Tourism Industry**

Major Themes	Core Ideas
Develop Good Services and Facilities	<ul style="list-style-type: none"> <li>observing infrastructure development, marketing, and sustainable tourism</li> <li>exploring different activities and a thriving food hub through government programs</li> </ul>
Strengthen Collaboration Among Different Entities	<ul style="list-style-type: none"> <li>collaborating with exhibitors, government, business owners, and other food product firms</li> <li>working with social media influencers to promote the city</li> </ul>

**Develop Good Services and Facilities**

IDI-01 elaborated observing infrastructure development, marketing, and sustainable tourism:

*Witnessing infrastructure development, marketing strategies, and ensuring the sustainability of tourism initiatives.* Moreover, IDI-06 mentioned that they exploring different activities and a thriving food hub through government programs:

*The activities and the food hub being offered by the government provide opportunities.*

**Strengthen Collaboration Among Different Entities**

IDI-06 shared collaborating with exhibitors, government, business owners, and other food product firms:

*Exhibitors who partnered with the government, proprietors, in a range of food products, and other business ventures.*

IDI-01 also added that working with social media influencers to promote the city

*Campaign on social media or collaborations with travel blogs and assistance from travel influencers.*

Table 3

**Major Themes and Core Ideas on the Recommendations of the Local Tourists to Improve Festivals in Tagum City**

Major Themes	Core Ideas
Boost Festival Services and Organization	<ul style="list-style-type: none"> <li>recommend more entertaining activities</li> <li>allocate a more spacious venue</li> </ul>
Strengthen Promotional Advertising	<ul style="list-style-type: none"> <li>Ensure proper awareness of activities</li> <li>participate in marketing and promotional videos</li> </ul>

**Boost Festival Services and Organization**

IDI-01 recommend more entertaining activities

*I suggest adding more entertaining and enjoyable activities for people to watch or participate in.*

Furthermore, IDI-06 suggested to allocate a more spacious venue

*The space of the venue was my suggestion*

**Strengthen Promotional Advertising**

FGD-05 suggested to ensure proper awareness of activities:

*Adding of the promotional advertisement for the festival to further entice people.*

IDI-01 also suggested to participate in marketing and promotional videos:

*Posting on social media, but in a creative manner. I would suggest providing a video that would excite people about the said event.)*

attendees of the Andanças and La Sierra festivals acknowledged that staff members provided a sense of security and self-assurance, are always available to assist, and interact amiably with attendees.

**Witnessing Talents and Performances**

A study from Koreman (2023), revealed that Oldambt's festivals also aid in the establishment of networks outside of the Oldambt region. For instance, the Festival Hongerige Wolf fosters social ties between locals and tourists from other countries. In addition to exploring contemporary art and music, visitors are eager to interact with individuals from many backgrounds.

**Participants' Experiences as Contributions to the Development of Tagum City's Tourism Industry**  
**Develop Good Services and Facilities**

In an article published by Rahmani et al. (2020), the expansion observed in the tourism sector can be attributed to advancements in technology, the emergence of fresh markets, and the adoption of novel organizational structures. It is imperative to prioritize innovation within the tourism sector over other industries due to its heightened susceptibility to even minor shifts in political, social, economic, and technological realms.

**DISCUSSION**

**Festival Experiences of Local Tourists in Tagum City**  
**Feeling a sense of amusement**

This proves the study of Lee and Kwon (2021), that in the context of food and wine festivals, guests' motivations and involvement were positively correlated with their satisfaction with tangible and intangible services, which may encourage them to return to the event. Further, this study was consistent with the study of Amorim et al. (2020) which highlighted those



### Strengthen Collaboration Among Different Entities

In an article by Motivation Sphere (2024), festivals give local business owners a chance to collaborate and be creative. Festivals frequently include marketplaces or vendor fairs where companies can display their goods or services. Entrepreneurs can network, establish relationships, and share ideas thanks to this exposure, which may result in future collaborations and business growth. Furthermore, according to a study by Hjalager & Kwiatkowski (2018), in festival partnerships, the focus is on the manner and degree of integration of commercial interests. It takes work to put on a festival. It demands an effective organizational structure and most of the time, a collaborative operational mode and begins far in advance of the actual event.

### Recommendations of the Local Residents to Improve the Festivals in Tagum City

#### Boost Festival Services and Organization

Qui et al. (2021), utilize various communication channels such as social media, email newsletters, and mobile apps to keep attendees informed about event schedules, lineup changes, and important announcements. This author argue that their study fills a void by addressing various aspects of music festival marketing, including types of marketing strategies, social media platforms, consumer behaviors, and motivation theories like push-pull models. They aim to provide insights into consumer behavior, particularly regarding decisions about attending festivals. The study highlights the significant influence of social media on motivating festival attendance and its role in fostering ongoing communication between organizers and attendees, extending beyond the event itself.

#### Strengthen Promotional Advertising

According to the study of Ojionu et al. (2021), found that employing a strategic ambiguity tagline significantly captures consumers' attention. Additionally, the study revealed substantial impacts of consumers' attitudes toward tagline ads, perceptions of tagline ads, and the brand's motivations behind using tagline ads on consumer attention when they encounter such advertisements. These findings underscore the effectiveness of utilizing strategic ambiguity in taglines to attract consumer attention. Moreover, in research conducted by

### IMPLICATIONS FOR TOURISM PRACTICE

This qualitative study's conclusions highlight the multifaceted impact of festivals on Tagum City, emphasizing their role in cultural expression, social cohesion, and community engagement. To integrate these insights into tourism practices, Tagum City can focus on enhancing festival experiences by implementing suggestions such as diversifying entertainment options, improving venue infrastructure, leveraging social media for promotion, ensuring security measures, and embracing diverse cultural representation. By incorporating these recommendations into tourism initiatives, Tagum City can cultivate a more vibrant and inclusive festival environment, attracting both local and international visitors, and thereby bolstering its position as a dynamic tourist destination.

#### Recommendation for Further Research

It has been observed that this study's primary goal was successfully attained, which was to explore the experiences and

perceptions of local residents on festivals in Tagum City, as well as to provide valuable insights to the event organizer, tourism department, and local government unit of Tagum City. It was demonstrated by the fact that the undertaker's key concepts were sufficient to offer details and an explanation for the same phenomena.

Nevertheless, it ought to be mentioned that this study was not the sum total of all the researchers that were assigned to look into the aforementioned area of study. This implies, as researchers, we honestly acknowledged that the results of our study were only descriptive and could not be applied to a larger population. This was due to the fact that we only looked for experiences, emotions, and opinions of IDI and FGD participants who were present for the phenomenon under study.

Within this segment, it was advised that additional researchers conduct this research study in their own contexts. Moreover, this might be accomplished by interviewing a bigger group of people to determine any parallels with the data that was extracted. It is also recommended carrying out additional research about local tourists' experiences dealing with the poor circumstances attending festivals. It needs to be fully focused on in order to comprehend the experiences of the local tourists on festivals in Tagum City.

### REFERENCES

1. Amorim, D., Caballero, J. L. J., & Almeida, P. (2020). *The impact of performing arts festivals on tourism development: Analysis of participants' motivation, quality, satisfaction and loyalty*.
2. Ayob, N., Wahid, N. A., & Omar, A. (2013). *Attributional Model of visitors' event experience in festivals and special events*
3. Guest G., Bunce, A., & Johnson, L. (2006). *How many participants do I need? A guide to sample estimation*
4. Hjalager, A. M., & Kwiatkowski, G. (2018, October 6). *Entrepreneurial implications, prospects and dilemmas in rural festivals*
5. JoeZimmermann (2010, October 18). *Theory + anthropology [licensed for non-commercial use only] / Cultural ecology*
6. Koreman, M. C. J. (2023, April 20). *Reinventing a rural area: A case study into cultural festivals in Oldambt, the Netherlands*
7. Lee, W., & Kwon, H. (2021). *The influence of personal involvement on festival attendees' revisit intention: food and wine attendees' perspective. sustainability, 13(14), 7727. doi.org/10.3390/su13147727*
8. Motivation Sphere (2024). *Celebrate and engage: The role of festivals and cultural events in community bonding*
9. Ojionu, C. E. N., Adzharuddin, N. A., Waheed, M., & Khir, A. M. (2021, December 19). *Impact of strategic ambiguity tagline on billboard advertising on consumers attention. Doi.org/10.30935/ojcm/11432*
10. Qiu, L., I, A., Lee, T. J., & Kim, J. S. (2021). *How sustainable social media advertising affect visitors' decision to attend a festival event? sustainability, 13(17), 9710. doi.org/10.3390/su13179710*
11. Rahmani, F., Zangoei, S., & Rahnama, A. (2020). *Identifying and prioritizing innovative opportunities for tourism investment in Mashhad city*



12. *Statistics Solutions. (2019). Qualitative sampling techniques - statistics solutions.*
13. Zhang, S.-N., & Deng, F. (2022, September 20). *Innovation and authenticity: constructing tourists' subjective well-being in festival tourism. Frontiers in psychology, 13.* Doi.org/10.3389/fpsyg.2022.950024



# PAGSUSURI SA MGA REGISTER NG WIKA NG MGA MAGSASAKA NG SILAGO

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## ABSTRACT

The aim of this research is to ascertain the linguistic registers used by the farmers in Silago, Southern Leyte, Philippines. Developmental research, or development, is the methodology employed. This study has thirty respondents. Languages that were registered were determined using a questionnaire. Based on the analysis of the study, it was discovered that the farmers of Silago, Southern Leyte, Philippines are contains many registered words. There are three categories of registered languages of farmers. Gardening, fishing and animal husbandry. In horticulture, it is categorized into planting rice, vegetables, root crops, bananas, coconuts, corn, sweet potatoes, tools and cooking. The second category is fishing and the livestock category covers food, activities and other items. The register language of farmers has two types of morphemes. They are the non-free morpheme (suffix) and the free morpheme (root word). Words can be classified as simple, compound, and repetitive. There are three speech predominate. The adjective, verb, and noun. The registered language of the farmers has its own distinct linguistic structure. It is recommended that more research be done on the phonological and morphological forms in order to properly characterize the features of the Silago, Southern Leyte, Philippines, language. If the subject is register, teachers should base their instruction on local words like the generated output.

**KEYWORDS:** category; free morpheme; gardening structure; independent morpheme; non-free morpheme; word structure

## 1.0 RASYONALE NG PAG-AARAL

May kasabihan sa Ingles "*Variety is the spice of life.*" Ibig sabihin, ang pagkakaroon ng pagkakaiba-iba sa wika ay hindi makasasama. Maaari itong tingnan bilang isang proseso ng pag-unlad at pagyabong, isang magandang pangyayari sa pagpapayaman sa wika. Maraming salita ang nagkakaiba-iba ng kahulugan ayon sa larangang pinaggamitan. Natutukoy lamang ang kahulugan nito kung malalaman ang larangang pinaggamitan nito. Nagagamit ito sa iba't ibang aspekto ng pamumuhay ng tao; pang-ekonomiya, panrelihiyon, pampulitika, pang-edukasyon at panlipunan. Ang wika'y nawawala at namamatay kung nauubos o umuunti ang minorityang pangkat na gumagamit ng nasabing wika ngunit patuloy naman itong lumalaganap, umuunlad at nagbabago kasabay ng pag-unlad ng majorityang pangkat na gumagamit nito.

Ang lalawigan ng Timog Leyte ay napapalooban ng iba't ibang uri ng pamumuhay. Ayon sa statistic, 45% sa mga Southern Leyteño ay mga magsasaka. Sa bawat pamumuhay ay may mga rehistradong (register) salita. Ang mananaliksik bilang guro sa wika at bilang pagtugon sa programa ng K to 12 kurikulum na linangin ng mga mag-aaral ang kinagisnan wika kaya itinadhana ang pagtuturo ng Mother Tongue sa pribado at pampublikong paaralan, maging sa adhikain ng United Nations Educational, Scientific and Cultural Organizational o UNESCO na itampok sa pagtuturo sa loob ng silid-aralan ang pamanang kultura, naudyok ang mananaliksik na bumuo ng isang pag-aaral na may kaugnayan sa rehistradong wika ng mga magsasaka. Batid ng lahat na ang tao ay gumagawa para mabuhay at sa kanyang paggawa, gamit niya ang *wikang* higit na makatutulong sa kanya upang siya ay lubos na maunawaan tungo sa pagtugon sa kanyang mga pangangailangan. Ang wika ay isang pangangailangan sa pakikipagtalastasan upang ganap na maisakatuparan ang paghahanapbuhay. Gayundin ang paggamit ng wika upang magkaunawaan at mapabilis ang gawain. Isa sa mga varyasyon ng wika ay ang tinatawag na register.

Ang rehistradong (register) wika ay tumutukoy sa mga varayting kaugnay ng panlipunang papel na ginagampanan ng tagapagsalita sa oras ng pagpapahayag (Borong at Silawan, 2022). Ang register ay itinuturing na kabilang sa pansamantalang varayti ng wika ay kaugnay sa sitwasyon na ginagamit mode at estilo. Ang varayti ng wika tulad ng register ay isa sa mga kompetensing matatagpuan sa *Alternative Delivery Mode* sa asignaturang Komunikasyon at Pananaliksik Tungo sa Wika at Kulturang Pilipino na matatagpuan sa Modyul 3 na nasa unang kwarter.

Ang mananaliksik bilang tagapaghatid ng kaalaman sa mga kabataan, responsibilidad na ituro ang mga kompetensing nakatalaga sa DepEd. Bilang tugon sa kompetensing ito at sa ilalim ng adhikain ng UNESCO, nabuo ang pag-aaral na ito. Batid nating lahat na ang Leyteñong binisaja ay may mga katawagang nagkakaiba ang kahulugan depende kung sa anong kontekstong sosyal siya napabilang.





Tulad halimbawa ng salitang *bija*. Ito ay nangangahulugang *naiwan*, sa mga negosyante nangangahulugan itong *mababa ang kalidad o pangit*, at sa mga sabungero nangangahulugan itong *dehado o kaunti lamang ang pera*. Ganoon din ang salitang *abay*. Ito ay may kahulugang *kasali sa entourage ng kasal*, binigyan din ito ng kahulugan sa iba na *tawagan ng magkaibigan* at binigyan din ito ng kahulugan sa iba na *nakisabay sa pusta ng manok*. Ang mga halimbawang ito ay nagpapakita lamang na may katawagan o wika na may partikular na kahulugan. Ang pahayag na ito ang nakapag-udyok sa mananaliksik na bumuo ng isang pag-aaral tungkol sa pagkilala sa mga rehistradong wika ng mga magsasaka sa piling lugar ng bayan ng Silago.

Nakasaad sa *Endangered Language Program* ng UNESCO (2014) na kapag nawala ang mga wikang ito, posibleng mawala ang yaman ng kultura at kaalaman ng mga ninuno. Maaari ring makalimutan ang pamana ng mga katutubo dahil sinasabi na ang kultura at wika ay hindi mapaghihiwalay o hindi maaaring paghiwalayin. Kung mangyari mang mawala ang isang wika, ang kultural na espirituwalidad ay maaari ring manganib at maglaho.

Nahikayat din ang mananaliksik na ipagpatuloy ang pag-aaral na ito upang makatulong sa adhikain ng Kagawaran ng Edukasyon sa ilalim ng programa ng UNESCO na itampok sa mga pag-aaral ang kultura at pamana sa loob ng silid-aralan upang buhayin ang mga karanasan ng mga mag-aaral at guro at makapag-ambag sa pagpapanatiling buhay ng pamana na ito para sa kasalukuyan at sa hinaharap na mga henerasyon. Sa pamamagitan ng pag-aaral na ito, nawa'y ang mga katutubo at hindi katutubong nagsasalita ay makipagtulungan sa lokal na pamahalaan ng Silago upang mapanatili ang wika ng mga magsasaka gayundin ang kultura ng nasabing lugar. Maaaring malinang sa mga bagong henerasyon ngayon ang interes at kagustuhang matutong magsalita at umunawa sa wika ng mga magsasaka lalo na sa elementarya kung saan mayroon silang asignaturang Mother Tongue. Inaasahan din sa pag-aaral na ito na makapagbibigay ng motibasyon at ideya sa lokal na pamahalaan sa bayan ng Silago na gumawa at magpatupad pa ng mga gawain at programang tunay na lilingang sa nasabing wika, hindi lamang para sa mga taal na gumagamit ng nasabing wika kundi maging para sa mga dayuhang piniling permanente ng manatili sa nasabing lugar. Ang pag-aaral ding ito ay makatulong ng malaki sa pagpapabuti, pagpapayabong at pagpapayaman ng wika ng mga magsasaka, sa mga tuntunin ng pagsulong, pangangalaga at pagpapaunlad nito at maging sa aktibong pakikilahok ng mga taga- Silago sa gawaing ito.

### Layunin ng Pag-aaral

Layunin ng pag-aaral na ito na masuri ang mga register ng wika ng mga magsasaka ng taga-Silago, Southern Leyte. Sinagot ng pag-aaral na ito ang mga sumusunod:

1. Natukoy ang mga register na salitang ginagamit ng mga magsasaka at kahulugan nito ayon sa:
  - 1.1 paghahalaman;
  - 1.2 pangingsda;
  - 1.3 paghahayupan;
2. Nailahad ang estruktura ng wika sa mga register na salita na ginamit ng mga magsasaka batay sa:
  - 2.1 uri ng morpema;
  - 2.2 kayarian ng salita; at
  - 2.3 bahagi ng pananalita.

## 2.0 TEORITIKAL-KONSEPTUWAL NA BALANGKAS NG PAG-AARAL

Nakasalig ang pag-aaral na ito sa Halliday's Theory of Language (1974) kung saan binanggit sa pag-aaral ni Almurashi (2016) ang paniniwala ni Halliday na ang rehistro ng wika ay isang variation ayon sa gamit. Ito ay barayti ng wika na nauugnay sa iba't ibang gamit sa magkaibang sitwasyon.

Kaugnay sa teorya ni Halliday (1974) ipinaliwig sa Innate teorya ni Chomsky (1957) na sinipi sa pag-aaral nina Hulin at Na (2014) na inilarawan dito ang isang nilalang na may likas na kakayahang matutuhan ang isang wika. Ang tao ay mayroong isang kaalamang representasyon sa isip nito na siyang magiging katuwang upang maunawaan ang isang bagay at salitang wika na gamit ng sino man. Ang kakayahan sa pagkatuto ng wika ay kasama na mula sa pagkasilang at likas itong umuunlad sa pakikipag-interaksyon ng bata sa kanyang kapaligiran. Ang pananaw na ito ang nagpapahayag na ang wika ay napakaloob at nabibigyang-hugis ng sosyo-kultural na kaligiran kung saan ito nabubuo. Ito ay mabibigyang-kahulugan lamang kapag may interaksyong nagaganap sa kapaligiran.

Ang teoryang ni Halliday (1973) na binanggit ni Almurashi (2016) sa kanyang pag-aaral ang magsisilbing gabay sa ginawang pag-aaral na ito. Pagkatapos nilikom ang mga datos partikular ang mga register na wika ng mga magsasaka, hangad ng mananaliksik na ang bawat salita sa tiyak na larangang nabanggit ay matutuhan ng mga bata.



Figura 1: Informatikong Diagram ng Pag-aaral



Ang kakayahan sa pagkatuto ng wika ay kasama na mula sa pagkasilang at likas itong umuunlad sa pakikipag-interaskyon ng bata sa kanyang kapaligiran. Ang wika ay may iba't ibang barayti. Ito ay sanhi ng pagkakaiba ng uri ng lipunan na ating ginagalawan, heograpiya, antas ng edukasyon, okupasyon, edad, kasarian at uri ng pangkat etniko na ating kinabibilangan. Dahil sa pagkakaroon ng heterogenous na wika tayo ay nagkaroon ng iba't ibang baryasyon nito, at dito nag-ugat ang mga variety ng wika, ayon sa pagkakaiba ng mga indibidwal. Ipinahiwatig lamang dito na kailangang alagaan ang pag-unlad ng isang wika dahil ayon kina Pantorilla, De Lara, at Ijan (2020) ang pagkatuto ng wika ay bunga ng pangagaya, paulit-ulit na pagsasanay hanggang magkaroon ng sapat na kaalaman sa tamang anyo nito. Samakatuwid hindi maikakaila ang pagkakaroon ng varayti ng wika.

Ang mga register na salita ng mga magsasaka na nakalap ay binigyang kahulugan ng mananaliksik, kinategorya, sinuri ang estruktura nito at isinalin sa wikang Filipino. Mula sa nalikom na salita ay bumuo ang mananaliksik ng isang Glosaryo-Dokumentasyon sa mga Rehistradong Salita ng mga Magsasaka ng Silago na magagamit bilang lundayan sa pagtuturo ng mga guro upang mapahalagahan at maibahagi sa mga mag-aaral ang wika ng mga magsasaka at pamanang kulturang mayroong ang bayan ng Silago.

### 3.0 METODOLOHIYA

#### *Desinyo ng Pananaliksik*

Ang disenyong *developmental* ang pamaraang ginamit upang maisakatuparan ang pag-aaral na ito. Sinipi sa pag-aaral nina Cordenete at Macaldao (2020) na ang disenyong pagpapaunlad ay isang disenyo ng pananaliksik na kung saan bumuo ng panibagong produkto na magagamit sa pangangailangan ng kasalukuyang suliranin. Angkop ang disenyong ito upang maipakita ang varayti ng wika ng mga magsasaka ng Silago sa pamamagitan ng nabuong glosaryo-dokumentasyon ng mga rehistradong salita.

#### *Lugar ng Pananaliksik*

Ang probinsiya ng *Southern Leyte* ay napabilang sa Rehiyon VIII (Eastern Visayas). Binubuo ng 173,480 *hectares* na may labinwalong (18) bayan at isang lungsod. Isa sa mga maunlad na bayan ng lalawigan ng Southern Leyte ay ang bayan ng Silago. Ang bayang ito ay matatagpuan sa hilagang-silangang bahagi ng probinsiya ng Southern Leyte na nakaharap sa karagatang Pasipiko. Matagpuan ang Silago sa 10°31'59.99" hilagang latitude at 125°09'60.00" sa silangang longitude. Ang munisipalidad ng Silago ay isang ikalimang (5) klase ng bayan sa lalawigan ng Katimugang Leyte ng Pilipinas. Sa kasalukuyan, mayroon itong labinlimang (15) barangay.

#### *Kalahok ng Pag-aaral*

Ang mga kalahok ng pag-aaral na ito ay mga taong may pamumuhay na pagsasaka, ito may paghahalaman, paghahayupan o pangingsida. Mula sa iba't ibang barangay ng Silago ang kinuhang mga kalahok gamit ang *stratified sampling* kung saan mga magsasakang naghahalaman, naghahayupan at pangingsida ang binigyang diin sa pag-aaral na ito sa tulong ng key informant. Pinili ng mananaliksik ng tatlong (30) magsasaka. Nakipag-ugnayan din ang mananaliksik sa mga eksperto sa larangan ng agrikultura sa bayan ng Silago, ang lupon ng lokal na mga magsasaka sa departamento ng agrikultura. Tatlong (3) lokal na magsasaka na may malawak na kaalaman sa larangan ng agrikultura upang pagtibayin at bigyang bisa ang katumpakan ng pagpapakahulugan ng mananaliksik, pagkategorya sa mga nalikom na salita, at maging ang pagtutumbas sa wikang Filipino sa nalikom na mga rehistradong salita ng mga magsasaka. Sumangguni rin ang mananaliksik ng tatlong (3) gurong dalubhasa sa wikang Filipino upang sinuri ang estruktura ng wika. Ang mga eksperto sa larangan ng agrikultura at mga gurong dalubhasa sa wikang Filipino ang siyang nagsilbing ebaluwaytor sa ginawang paglalapat ng kahulugan ng mananaliksik sa nalikom na mga rehistradong salita ng mga magsasaka, pagbibigay ng katumbas na katawagan sa Filipino at ang kaayusan sa estruktura ng wika ayon sa pagkakabuo ng salita partikular sa uri ng morpema, kayarian ng salita at bahagi ng pananalita.

#### *Instrumento ng Pag-aaral*

Talatanungan ang instrumentong ginamit para sa pag-aaral na ito. Mga tanong tungkol sa estado ng kanilang pamumuhay, mga proseso at mga paraan ng pagsasaka, mga kagamitang ginamit, at iba pang tanong na may kinalaman sa kanilang pamumuhay. Ang mga salitang nakuha mula sa mga kalahok ang ginamit bilang instrumento sa pag-aaral na ito. Sinipi ang mga salitang nakalap, binigyang kahulugan, ikinategorya at tinumbasan sa wikang Filipino upang mabuo ang glosaryo bilang awtput ng pag-aaral. Sinuri rin ang estruktura ng wika sa mga rehistradong salitang ginamit ng mga magsasaka ng Silago.

#### *Pamamaraan ng Paglikom ng Datos*

Pagkatapos naaprubahan ang pag-aaral na ito, humingi agad ng pahintulot ang mananaliksik sa alkalde, at sa mga punong barangay na gawing kalahok ang ilang mga magsasaka sa kanilang lugar. Pagkatapos payagan ang mananaliksik, kumuha ng *key informant* ang mananaliksik para tumulong sa paggabay kung sino ang gawing kalahok. Ipinaliwanag ng mananaliksik sa mga kalahok ang hangarin ng mananaliksik. Ginawa ang interbyu ng mananaliksik sa mga kalahok sa kanilang mga bakanteng oras. Bukod sa *fieldnotes* na ginamit isang *video* at *recorder* din ang ginamit sa panahong ginawa ang pakikipanayam. Ginamit ng mananaliksik ang sariling gawang *open-*



ended questionnaire upang makuha ang mga rehistradong salita ng mga magsasaka. Pagkatapos nalikom ang mga register na wika ng mga magsasaka nilapatan ito ng kahulugan, ikinategorya, isinalin sa wikang Filipino at sinuri ang estruktura nito.

#### 4.0 RESULTA NG PAG-AARAL

Sa kabanatang ito ay inilalahad at binigyang kahulugan ang mga rehistradong (register) salita ng mga magsasaka ng Silago, Southern Leyte, Philippines. Sa bahaging ito ang bawat bilang ng suliranin ay may kaakibat na mga paliwanag.

#### Mga Register na Salitang Ginamit ng mga Magsasaka at ang Kahulugan

Ang Talahanayan 1 ay naglalahad sa mga nakalap na mga salita ukol sa mga register na salita na ginagamit ng mga magsasaka ng taga-Silago.

**Talahanayan 1: Mga Register na Salitang Ginagamit ng mga Magsasaka**

Kategorya	Mga Salita	Kahulugan
<b>Paghahalaman</b>		
<i>Palayan</i>		
	awong	Lupang hindi masinagan ng araw dulot ng may maraming kahoy o ilalim ng niyugan
	banika	Uri ng lupa o kinalalagyan kung saan ang putik o lupa ay may mababang antas o lapad.
	baol	Sakahan na walang tubig.
	binutok	Ang bungkos ng binhi na handa ng itanim.
	bus-ok	Matatabang tangkay.
	buswak	Nag-uumpisa ng mamulaklak ang palay.
	gitiban	Bahagi ng tangkay kung saan lumalabas ang bulaklak o bunga ng palay.
	hasuk	Maliliit na butas para sa pagtatanim sa banika.
	hawbo	Lugar na may sobrang dami ng putik kaya't malalim.
	himsog	Halamang may maayos na paglago.
	lug-as	Ang proseso ng pag-ani o pagkuha ng mga buga, prutas o halaman, mula sa taniman.
	lungag	Maliliit na butas para sa pagtatanim sa banika.
	omaw	Lupa na hindi na nilulugaran ng anumang tanim o produksyon sa kasalukuyan dahil hindi produktibo.
	pilapil	Pader na ginagamit sa paghahati-hati ng palayan upang mapanatili ang tamang antas ng tubig sa bawat bahagi ng sakahan.
	pilipit	Ang panahon ng pagtatanim kung saan ang mga bunga ay nagsisimula nang lumitaw at lumaki sa mga sanga nito.
	putngay	Tangkay na sumusuporta sa mga bunga ng palay.
	tipasi	Palay na hindi na nakukuha ang balat.
	uhay	Tangkay ng palay.
	uhot	Mga tuyong sanga o tangkay ng palay na naiwan matapos ang pag-aani ng palay. Karaniwang ginagamit bilang pataba sa lupa.
	un-un	Butil ng palay na maliit o kunti lang ang laman.
	ursa	Ang halaman ng palay ay nagdudulot ng maraming bunga o butil, na nagreresulta sa isang magandang ani.
<i>Gulay</i>		
Ampalaya	kanat	Tumutukoy sa mga o umuusad na mga halaman na karaniwang umaakyat sa ibang mga estruktura o mga halaman para magkaroon ng suporta at lumago.
	labong	Matatabang tanim.
	lawngun	Batang halaman na itinatanim sa lupa bilang simula ng paglaki at pag-unlad nito.
Batong	awngan	Pinagkapitan ng sitaw.
	palawngonon	Binhi ng sitaw.
	simelya	Pangunahing sangkap sa pagtatanim ng mga halamang gulay, prutas at iba pang pananim sa agrikultura.
Kalabasa	agan-anon	Lupang para sa kalabasa.
	tisok	Paraan ng pagtatanim ng binhi o punla ng kalabasa.
<i>Root crops</i>		
Gabi	labo	Maganda klase sa gabi na masarap kainin.
	namikang	Maganda ang tubo.
	pughad	Magandang klase sa gabi na masarap kainin.
Kamote	bagon	Mahabang bahagi ng halaman ng kamote na nag-uugnay sa mga dahon nito sa pangunahing katawan o ugat ng halaman.



	gamutun	Laman ng kamote na parang may hibla.
	katimpa	Malaki ang bunga ng kamote.
	katuka	Uri ng kamote na may matabang lasa at kulay-berde o pula ang balat at laman.
	manghimuno	Pag-ani ng kamote.
<b>Saging</b>		
	bajud	Malapit ng mahinog.
	bugtok	Tawag sa sakit ng bunga ng saging kaya't hindi maganda ang bunga nito.
	kabaangan	Malapit ng mahinog.
	kigi	Hakbang kung saan inaani ang mga sanga ng abaka upang makakuha ng mga hibla na gagamitin sa paggawa ng iba't ibang produkto.
	paldo	Malalaking bungkos ng hibla.
	tinagak	Maliliit na lubid.
<b>Niyog</b>		
	botbot	Matatagpuan sa loob ng niyog kapag ito ay matanda na, na masarap kainin.
	buwa	Matatagpuan sa loob ng niyog kapag ito ay matanda na, na masarap kainin.
	hagad	Uri ng niyog na mayroon ng tuyo at malutong na laman at mahirap kudkudin dahil hiwalay ang laman nito sa bao.
	hag-oton	Uri ng niyog na mayroon ng tuyo at malutong na laman at mahirap kudkudin dahil hiwalay ang laman nito sa bao.
	resekada	Kopra na lutung-luto kaya bumababa ang bigat ng timbang nito.
	tapahan	Pinaglutan ng niyog o kopra.
<b>Mais</b>		
	agungal	Pinagdikitan ng laman ng mais.
	lobo	Pagkuha ng laman ng mais mula sa pinagdikitan nito o agungal, pagkuha ng butil sa tangkay.
	lunuson	Isilid muna sa lalagyan ng ilang araw bago lutuin.
	pakaw	Pinagdikitan ng laman ng mais.
<b>Panahon</b>		
	dom	Hindi makita ang buwan.
	huwaw	Yugto ng taon na tumutukoy sa tag-araw, karaniwan mainit ang panahon at mas maraming tag-araw kaysa sa tag-ulan.
	tubas	Panahon ng taon kung saan mayroong kaunti o walang ulan, kaya't karaniwang mainit at tuyo ang klima.
<b>Pagluluto</b>		
	anhuy	Nilulutong malapit ng nasusunog.
	tapa	Pagluto ng niyog.
	turak	Pagluto ng kamote at kamoteng kahoy.
<b>Pangingisda</b>		
	awong	Lalapit ang isda lalo na't gumagamit ng ilaw.
	budlas	Palaisdaan na walang laman.
	bunsod	Pantuluyan o pantrap ng isda.
	bunwag	Mga batang isda na kalalabas lamang mula sa kanilang mga itlog at nasa maagang yugto ng kanilang pag-unlad.
	duas	Lugar o bahagi ng isang teritoryo na direktso o malapit sa sikat ng araw.
	kiti-kiti	Yugto sa buhay ng lamok na bumubuo sa tubig bago sila maging mga lamok.
	pahubas	Pangunahing hakbang sa pangingisda kung saan ang tubig ay tinatanggal mula sa palaisdaan upang mapadali ang pagkuha ng mga isda at iba pang nilalaman ng palaisdaan.
	pamasol	Pangunguha ng isda gamit ang pasol at taga.
	pasol	Gamit sa pangunguha ng isda.
	sarap	Proseso ng panghuhuli sa mga maliliit na isda, insekto, o iba pang mga organism na hindi dapat makapasok sa loob ng palaisdaan gamit ang lambat na gawa sa tela na may napakaliit na butas.
	soog	Mabilis at matindi ang daloy ng tubig sa isang lugar.
	taga	Panghuli ng isda na nasa pasol.
	toy	Nasa mata na ng lambat ang isda.
<b>Paghahayupan</b>		
<i>Pag-aalaga ng hayop at iba pang katawagan</i>		
	anajun	Inang baboy na ilang beses ng nanganak.
	anajunun	
	ihid	Pangalan sa mga biik na pinakamaliit.





	inga	Boses o tunog ng baka.
	inunlan	Isang organong kahugis ng peras na nasa loob ng puson ng babae na naglalaman at nagbibigay ng sustansiya sa umuunlad na namumuong sanggol.
	landay	Tawag sa inang baboy na hindi na manganganak dahil sa katandaan.
	nati	Maliit na kalabaw o bagong anak na kalabaw.
<b>Pagkain ng Hayop</b>		
	lamaw	Tumutukoy sa mga tira-tirang pagkain na naiwan at iniipon upang ipakain sa mga hayop tulad ng baboy.

Sa mga nakalap na mga rehistradong salita ng mga magsasaka lumalabas na may tatlong kategorya. Ito ay ang paghahalaman, pangingsda at paghahayupan. Ikinategorya ito ng mananaliksik batay sa paggamit ng mga magsasaka sa nakalap na mga register na salita upang mas madali itong maintindihan ng mananaliksik at ng mga babasa ng pananaliksik. Ang pagkakategoryang ito ng mananaliksik ay ipinasuri at ipinawasto sa tatlong (3) eksperto sa larangan ng agrikultura na nagtatrabaho mismo sa departamento ng agrikultura sa bayan ng Silago.

Sang-ayon sa pagsusuri at pagwawasto ng tatlong eksperto sa larangan ng agrikultura, 75% sa mga salitang nalikom ng mananaliksik ay kabilang sa kategorya ng paghahalaman. Habang 9% naman ang kabilang sa kategoryang pangingsda at ang nalalabing 16% ay mga register na mga salita sa kategoryang paghahayupan. Sa unang (1) kategorya kung saan ito ay ang paghahalaman/pagtatanim, kinakategorya ito ng mananaliksik batay sa pagtatanim ng palay, gulay, root crops, mais, niyog, lamas, mga kagamitan, panahon, sakit sa mga tanim/halaman at mga gawain/trabaho. Sa pangalawang (2) kategorya naman, ay ang pangingsda at sa pangatlo (3) at panghuling kategorya na paghahayupan ay kinategorya naman ng mananaliksik batay sa mga alagang hayop at pagkain.



Figura 2: Kategorya ng mga Rehistradong Salita

Ang resultang ipinakita sa Talahanayan 1 na iba't ibang wika o rehistro ng mga wikain sa magsasaka ay nagsisilbing tugon sa programa ng K to 12 kurikulum ang pagpapatupad ng Mother Tongue. Laging ipinaalala sa programa na isa mga layunin ng MTB-MLE ay ang pagtanggik ng kinagisnang wika. Ang mga salitang nakatala ay mga kinagisnang wika ng mga taga-Silago partikular sa mga magsasaka. Ang mga salitang ito ay magagamit bilang pagbabatayan o sanggunian sa pagtuturo ng Mother Tongue lalo na sa mga guro ng Silago.

Natuklasan sa resulta na ang mga salitang nangingibabaw ay ang mga salita ng mga magsasaka sa paghahalaman o pagtatanim. Ito ay pinatunayan sa inilalahad sa talahanayan na maraming mga salitang nakatala sa kategorya ng paghahalaman/pagtatanim. Nangangahulugan lamang na ang pangunahing pamumuhay ng mga taga-Silago ay ang pagtatanim.

Isa sa mga natuklasan ng mananaliksik na marami sa mga rehistradong salita na tanging ang ama o inang magsasaka lamang ang lubos na nakaunawa sa mga salitang ito. Iilan lamang sa mga mag-aaral na anak ng magsasaka ang lubos na nakaunawa sa mga rehistradong salita. Ito ay napatunayan ng mananaliksik pagkatapos nakalap ang mga katawagan. Ilan sa mga salitang ito ay ginamit ng mananaliksik sa kanyang klase bilang halimbawa sa paksa tungkol sa kayarian ng mga salita. Tulad ng salitang timgas, hagdaw, omaw, namikang, resikada, dognas, asud, at iba pa. Marami sa mga mag-aaral ay hindi pamilyar sa mga terminong ito. Kahit ang mananaliksik ay naging dayuhan sa ilang mga terminong nakalap.

Pinatunayan lamang na ang bawat pamumuhay ay may kanya-kanyang katangian ng wika na nagbigay pagkakilanlan. Tulad ng mga rehistradong wika sa mga magsasaka, marami sa kanilang mga katawagan na ang mga magsasaka lamang ang nakaunawa. Patunay nito habang ginawa ng mananaliksik ang interbyu sa mga kalahok marami sa kanilang mga terminolohiya na hindi naunawaan ng mananaliksik tulad sa kategorya ng **paghahalaman**, sa **palay** ang *dabong* na nangangahulugang hindi pa handa para sa anihan o pag-aani dahil sa kakulangan ng tamang paglaki, sa **gulay** ang *awngan* na ibig sabihin nito ay pinagkapitan ng sitaw, ang *kahuyun* na kabilang sa paglalarawan ng **root crops na kamoteng-kahoy** na nangangahulugang hindi maganda ang bunga dulot ng sobrang taba ng lupa kaya't may mga ugat-ugat na ito, ang *pagkama* na siyang katawagan sa pag-aayos ng mga niyog bago lutuin, sa **mais** ang *agungal* na ibig sabihin ay ang pinagdikitang ng laman ng mais, ang *dognas* na napapaloob sa **lamas**, na nangangahulugang patay na ang tanim, wala ng dahon ang luya kung kaya't maaari ng anihin, sa **kagamitan** ay ang *alho/awho* na siyang ginagamit sa pagdurug ng mga sangkap, ang halimbawa sa kategorya ng pag-**ani** na *kigi* na ibig sabihin ay katawagan sa pag-ani sa mga abaka, sa **panahon** ay ang *huwaw* na tumutukoy sa yugto ng taon na tag-araw, ang *anhuy* sa kategoryang **pagluluto** na ibig sabihin ay nilulutong malapit ng masunog, sa kategoryang **gawain/trabaho** ay ang *bukad* na tumutukoy sa pagkuha o pag-ani sa mga hinog na palay at para naman sa kategoryang **sakit sa mga tanim/halaman** ay ang *pijangaw* na tumutukoy sa insektong nakasisira sa tubo ng palay. Samantalang sa kategoryang **pangingsda** naman ay ang *limas/limason* na tumutukoy sa pangunahing hakbang sa pangingsda kung saan ang tubig ay



inaalis mula sa palaisdaan upang mapadali ang pagkuha ng mga isda at iba pang nilalaman ng palaisdaan. At sa kategoryang **paghahayupan** naman ay ang *anajun* na ibig sabihin ay inang baboy na ilang beses ng nanganak at sa kategorya ng paghahayupan naman na **pagkain** ay ang *lamaw* na tumutukoy sa mga tira-tirang pagkain na naiwan at ipinapakain sa baboy o iba pang alagang hayop. Ilan sa mga katawagang nabanggit ay bago sa pandinig ng mananaliksik. Nagpapahiwatig ito na ang mga terminong ginamit ng mga magsasaka na hindi karaniwang ginamit sa araw-araw na pakikipagtalastasan na ito ang dahilan kung bakit marami sa mga kabataang taga-Silago ay hindi nila alam ang mga kahulugan nito. Kaya naman habang ginagawa ng mananaliksik ang pakikipanayam sa mga piling respondante ng pag-aaral, hindi maiwasang lumabas o gumamit ng ibang katanungan ang mananaliksik bilang pandagdag sa mga inihandang katanungan upang higit na maarok ang kahulugan ng mga nalikom na salita. Halimbawa na lamang rito ay ang ibinigay na salitang *banika* at *hawbo* na tumutukoy sa katangian ng palayan. Dahil sa ito ay bago sa pandinig ng mananaliksik kaya't hindi naiwasan ng mananaliksik na magbigay ng dagdag na katanungang may kaugnayan sa nasabing mga salita. Nagpasintabi ang mananaliksik kung maaari bang ipaliwanag ang mga salitang ito at ang ginawa ng mga kalahok ay gumawa sila ng pangungusap gamit ang salitang *banika* at *hawbo*. Maging sa mga salitang para sa kategoryang pangingsda na *duas*, para sa mananaliksik ito ay nangangahulugang madumi subalit ng hingan ng mananaliksik ang mga respondante ng pagpapakahulugan at halimbawang pangungusap, ito ay tumutukoy sa bahagi ng palaisdaan na mainit. Sa kategorya naman ng paghahayupan, ang halimbawang salita ay ang *turiyo* kung saan tinanong muli ng mananaliksik ang kalahok kung anong kahulugan nito, tumutukoy ito sa lalaking kalabaw. Gamit ang open-ended questionnaire na inihanda ng mananaliksik at iba pang mga karagdagang katanungan nalikom ng mananaliksik ang mga register na salita ng mga magsasaka at kahulugan nito.

Sa mga inilahad, ipinakita lamang dito na napakalaki ng ginagampanan ng wika sa pang-araw-araw na buhay ng tao. Dahil nagsisilbi itong batas ng mga tao na bahagi sa pamumuhay nila. Batas dahil kinakailangan gamitin ng mga magsasaka ang tamang terminolohiya para magkaunawaan. Napansin na nagkakaroon ng mga katawagan ang mga magsasaka na maaaring sila lamang ang makaunawa. Sa resultang ipinakita angkop ang pahayag ni Delos Reyes (2017) na nagsabing ang paggamit ng heterogenous na wika ay dahil sa magkakaibang mga indibidwal at grupo na may magkakaibang katawagan. Naniniwala sina Silawan at Borong (2022) na ang isang payak na mga katawagan o terminolohiya ay minsan nagiging dahilan ng hindi pagkakaunawaan dahil sa hindi pagkakaaintindihan sa mga katawagang ginamit. Ipinahiwatig lang dito na mahirap unawain ang mga salita hangga't hindi nauunawaan ang mga kahulugan nito. Naniwala ang mananaliksik sa ipinahayag ng mga mananaliksik dahil personal itong narinig sa kanyang mga mag-aaral habang ibinahagi ang ilang mga nakalap na salita. Marami sa mga mag-aaral na iba-iba ang pagbibigay kahulugan tulad halimbawa ng salitang *pagkama* na nangangahulugan nang paghanda/pagsasaayos ng mga niyog bago lutuin. May ilang mga mag-aaral ang nagbigay kahulugan na ito ay *higaan*, ang iba naman ay nagsabing *pagdidikit ng husto sa mga paa sa lupa habang ito ay naglalakad sa isang maputik na lugar para hindi madulas*. Napansin na pawang mali ang kanilang ibinigay na kahulugan dahil iba ang kanilang pagkaunawa sa halimbawang salitang ibinigay ng mananaliksik.

Tinanong ng mananaliksik sa kanyang mga mag-aaral ang tungkol sa mga salitang ibinigay o nalikom mula sa pakikipanayam sa mga piling magsasaka ng Silago. Marami ang nagsabing ang mga salitang nakatala ay hindi komon at bago sa kanilang pandinig. Ang pahayag ng mga mag-aaral ay may kaugnayan sa tanong nina Tobesa, Andes, Castro, Del Rosario, at Mendoza (2019) na nagsabing sa pang-araw-araw na pakikisalamuha sa iba't ibang uri ng tao sa lipunang may tumalima ba sa inyong isip kung bakit ito ang tawag ng isang bagay, trabaho, kagamitan, at iba pang katawagan? Idinagdag pa nila na ang pagsasaka ay isang propesyon na tila hindi nabibigyang ng tamang dangal kasabay rin nito ang pagwawalang bahala sa mga rehistro ng wika. Ang pahayag ni Tobesa, Andes, Castro, Del Rosario, at Mendoza (2019) ay sinuportahan nina Torilla, De Lara, at Ijan (2020) na nagsabing ang dahilan kung bakit marami sa mga kabataan ang walang pagmamalasakit sa mga register na wika lalo na sa magsasaka dahil iba ang mundong kanilang ginagalawan. Ito ay sinuportahan ni Camar (2020) na hindi masisisi kung bakit marami sa mga kabataang Pilipino ang walang pakialam sa mga wika ng mga mangingsda at magsasaka sapagkat iba ang kanilang lipunang ginagalawan at maaaring ang mga salitang ito ay walang kabuluhan para sa kanila. Naniniwala naman ang mananaliksik sa pahayag ni Camar (2020) dahil iba ang kinagigiliwang wika ng mga kabataan ngayon na nagbibigay sa kanila ng kawilihan. Mga wikang Gen Z ang nakatatak sa isipan ng mga kabataan sa kasalukuyan.

Sa mga salita na naitala, nagpapahiwatig ito na may mga katawagan o terminolohiya na register lamang sa mga magsasaka. Ibig sabihin may mga salitang nakaugat sa tao batay sa kanyang kinabibilangan. Ang mga salitang makikita sa talahanayan ay isang malaking tulong sa kaalaman ng mga mag-aaral dahil karaniwan sa mga mag-aaral ng Silago ay pagsasaka o magsasaka ang kanilang mga magulang. Pero marami sa kanila ay hindi alam ang mga register na salitang ito. Napagtanto ng mananaliksik na hindi maipagkaila kung bakit ang register na salita ay itinuring na mahalagang alamin bilang barayti ng wika. Ipinakita rito na ang wika ng magsasaka ay tulad ng ibang wika na may kakaibang katangian.

### **Estruktura ng Wika sa mga Register na Salita na Ginamit ng mga Magsasaka**

Sa bahaging ito inilahad ang estruktura ng mga register na wika na nakalap na ginamit mula sa mga magsasaka. Inilarawan sa Talahanayan 2 ang uri ng mga morpema, kayarian ng salita at bahagi ng pananalita napabilang ang mga salitang nakalap.



Batay sa isinagawang pagsusuri ng tatlong (3) gurong dalubhasa sa wikang Filipino na siyang sinangguni ng mananaliksik upang tasahin ang estruktura ng wika ng mga register na salita ng mga magsasaka na nalikom, sa bahaging ito kinilala ng mananaliksik ang uri ng morpema, kayarian ng salita at bahagi ng pananalita sa mga nakalap na register na wika ng mga magsasaka. Mula sa mga register na salitang nalikom, pumili ang mananaliksik ng ilang salitang siyang pinagbatayan sa ginawang pagsusuri ng tatlong gurong dalubhasa sa wikang Filipino. Malinaw na ipinakita sa Talahanayan 2 na ang mga register na wika ng magsasaka ay may mga salita na napabilang sa malayang morpema (salitang-ugat).

**Talahanayan 2: Estruktura ng Wika sa mga Register na Salita na Ginamit ng mga Magsasaka Ayon sa Paghahalaman, Pangingsida at Paghahayupan**

Register na wika ng mga Magsasaka	Uri ng Morpema		Kayarian ng Salita	Bahagi ng Pananalita
	Malayang Morpema (Salitang-ugat)	Non-Independent morpheme (Paglalapi)		
<b>Paghahalaman</b>				
anhuy	anhuy	-	payak	pang-uri
bakat	bakat	-	payak	pangngalan
bakbak	bakbak	-	payak	pang-uri
banika	banika	-	payak	pang-uri
basakan	basak	- an	maylapi	pangngalan
pagbukad	bukad	-pag	maylapi	panganlan
butok-butok	butok	-	inuulit	pang-uri
gamutun	gamot	- un	maylapi	pang-uri
gantangan	gantang	-an	maylapi	pangngalan
giok	giok	-	payak	pandiwa
gitiban	gitib	-an	maylapi	pandiwa
giukon	giuk	- on	maylapi	pandiwa
libon	libon	-	payak	pang-uri
limbahon	limbahon	-	payak	pang-uri
lindog	lindog	-	payak	pangngalan
linghud	linghud	-	payak	pang-uri
lingtunganay	lingtunganay	-	payak	pang-uri
manghimuno	himuno	mang-	maylapi	pandiwa
manuba	tuba	ma-	maylapi	pandiwa
pagkama	kama	pag-	maylapi	pangngalan
pahoy-pahoy	pahoy	-	payak	pangngalan
paldo	paldo	-	payak	pangngalan
pijangaw	pijangaw	-	payak	pangngalan
pughad	pughad	-	payak	pang-uri
sabsab	sabsab	-	payak	pandiwa
sapsap	sapsap	-	payak	pandiwa
tagod	tagod	-	payak	pangngalan
taguran	tagud	-an	maylapi	pangngalan
tahop	tahop	-	payak	pangngalan
tahupon	tahop	-on	maylapi	pang-uri
tamhung	tamhung	-	payak	pang-uri
taphanan	taphan	- an	maylapi	pang-uri
undanon	unod/unon	-an-	maylapi	pang-uri
<b>Pangingsida</b>				
budlas	budlas	-	payak	pang-uri
bunwag	bunwag	-	payak	pangngalan
duas	duas	-	payak	pang-uri
kiti-kiti	kiti-kiti	-	payak	pangngalan
*limas	limas	-	payak	pang-uri



*limasun	limas	-un	maylapi	pandiwa
*lutaw	lutaw	-	payak	pang-uri
*palutaw	lutaw	pa-	maylapi	pangngalan
pahubas	hubas	pa-	maylapi	pang-uri
sarap	sarap	-	payak	pangalan
*anajun/anayun	anay	- un	maylapi	pang- uri/pangngalan
*anajunun	anay	-un, un	maylapi	pang-uri
buyugun	buyug	-un	maylapi	pang-uri
halhal	halhal	-	payak	pang-uri
inunlan	inunlan	-	payak	pangngalan
nati	nati	-	payak	pangngalan
toro	toro	-	payak	pangngalan

Makikita sa talahanayan na ang wika ng mga magsasaka ay nahahati sa **malayang morpema** na tinatawag na *salitang-ugat* at *di-malayang morpema* o *paglalapi*. May mga salitang maaring bigkasing mag-isa at di laging nakadikit sa iba pang morpema. May mga morpema ring tinatawag na di-malaya dahil laging nakakabit sa ibang morpema. Tinatawag na 'affix' o panlapi ang mga morpemang nakakabit sa malayang morpema.

Nakikitaan na tatlong **kayarian ng salita** ang mga nakalap na salita. Ito ay ang *payak*, *maylapi* at *inuulit*. Mula sa piling register na salita ng mga magsasaka na siyang pinasuri ng mananaliksik sa mga gurong dalubhasa sa wikang Filipino, napag-alamang marami sa mga salitang ito ay payak na may bilang na pitumpu't apat (44) na salita mula sa pinagsamang tatlong kategorya, ang paghahalaman, pangngingisda at paghahayupan, sumunod ang maylapi, kung saan dalawampu't tatlong (23) salita sa mga ito ay ginagamitan ng panlapi, at ang panghuli ay ang salitang inuulit, kung saan dalawa (2) lamang sa mga piling salita ang inuulit sa ilalim ng kategorya ng paghahalaman.



Figura 3: Kayarian ng Salita

Pangngalan, pandiwa at pang-uri naman ang nangingibabaw na bahagi na pananalitang kinabibilangan ng mga salitang nakalap. Kabilang sa bahagi ng pananalita na pang-uri ang tatlong piling salita (31) na mga salitang sinuri ng mga gurong dalubhasa sa wikang Filipino mula pa rin sa tatlong kategorya gamit ang mga salitang makikita sa talahanayan, sumunod ang pangngalan bilang bahagi ng pananalita na mayroong bilang na dalawampu't pito (27), labing-isa (11) naman sa mga piling salita na ito ay pandiwa.

Napag-alamang mayroong mga salita na iba man ang katawagang ginamit ng mga magsasaka sa pakikipagtalastasan, pareho naman ang salitang-ugat nito. Subalit kahit na pareho ang salitang ugat na matatagpuan sa dalawa o tatlong register na salita ng magsasaka, kakikitaan pa rin ito ng pagbabago na nagreresulta sa pagbabagong kahulugan at gamit nito. Maging ang bahagi ng pananalita nito ay nababago, nangangahulugang naiiba ang gamit ng nasabing salita kapag ginamit sa pangungusap.

Halimbawa na lamang dito ay ang salitang *anajun/anayun* at *anajunun*. Malinaw na ipinakita sa talahanayan ang salitang *anajun/anayun* at *anajunun* na naiiba ang anyo sa bahagi ng pananalita at kahulugan kapag ginamit sa pangungusap dahil sa impluwensiya ng panlapi. Ang register na salitang ito ng mga magsasaka ay binubuo ng malayang morpema (salitang-ugat) na *anay* at di-malayang morpema (paglalapi) na *-un*. Sa salitang *anajun/anayun*, ang panlaping *-un* ay napabilang sa panlaping makangalan dahil naging pangngalan ang salitang *anajun* kapag ginamit sa pangungusap. Halimbawa, hinanda namin ang aming *anajun* para sa susunod nitong panganganak. Para naman sa salitang *anajunun*, na binubuo pa rin ng katulad na malayang morpema (salitang-ugat) na *anay* at panlaping *-un* na kabilang sa panlaping maka-uri dahil ang salitang *anajunun* ay nagiging pang-uri kapag ginamit sa pangungusap. Halimbawa, nagtira si Mang Jerome ng isang biik para gawing *anajunun*. Dagdag pang halimbawa na nagpapakita ng pagbabago sa bahagi ng pananalita at kahulugan nito sa pangungusap ay ang mga salitang *lutaw* at *palutaw* na parehong mayroong malayang morpema



Figura 4: Bahagi ng Pananalita



(salitang-ugat) na *lutaw*. Ang salitang lutaw na purong malayang morpema (salitang-ugat) ay kabilang sa panlaping makauri sapagkat ito ay naglalarawan sa mga pagkaing ibinigay sa palaisdaan. Halimbawang pangungusap ay, *lutaw* ang karamihan sa mga pagkaing ibinigay nila. Samantalang ang register na salitang *palutaw* na may malayang morpema (salitang-ugat) na lutaw at di-malayang morpema (paglalapi) na *pa-* ay kabilang sa panlaping makangalan sapagkat ang tungkulin nito sa pangungusap ay nagiging paksa. Halimbaw, marami sa mga pagkaing ibinigay nila ay *palutaw*

Ang register na salita ng mga magsasaka na may salitang-ugat na mukad/bukad ay nag-iiba ang anyo sa bahagi ng pananalita dahil sa di-malayang morpemang ginamit. Naging pandiwa ang salitang *mamukad* dahil sa paggamit ng panlaping *ma-*. Halimbawa, marami ang sumama sa bukid upang tumulong *mamukad* ng kamoteng-kahoy. Ang salitang *pagbukad* ay pangngalan dahil sa panlaping *pag-* na nangangahulugang nag-umpisa ng mamunga ang palay. Halimbawa, ang *pagbukad* ay karaniwan nangyayari sa ikatlong buwan matapos itanim. Habang ang salitang *bukarunun* ay naging pang-uri dahil ikinabit ang salitang ugat na *bukad* sa di-malayang morpema na *-unun*. Ang *bukarunun* ay nangangahulugang pagkuha. Pero dahil sa ito ay ikinabit sa di-malayang morpema na *-unun* kaya ang kahulugan nito kapag ginamit sa pangungusap ay nababago. Halimbawa, ang mga pinatuyong palay ay *bukarunun* na. Malinaw na ipinahayag na ang di-malayang morpema ay hindi lamang nakapagbabago sa bahagi ng pananalita sapagkat may malaki rin itong ginagampanan sa pagbabago ng kahulugan ng salita. Tulad halimbawa ng salitang *mamukad* na nangangahulugan sa English “to harvest”, ang *pagbukad* sa English na “sprout” at ang *bukarunun* na nangangahulugan naman sa English na “to get”.

Natuklasan na ang panlaping *pag-* at *-an* ay mga panlaping makangalan. Masasabing magkaiba ang tuntunin sa paggamit ng panlapi sa bernakular na katawagan at sa Filipino. Ito ay pinatunayan sa resultang ito. Ayon kay Borong (2019), ang panlaping *ma* ay panlaping makauri. Dahil ito ay nangangahulugan o nagsasaad ng pagkakaroon ng isinasaad ng salitang-ugat. Sa halimbawang ipinakita sa talahanayan ang panlaping *ma-* ay mga panlaping makadiwa dahil ito ay nangangahulugan na *himuun/gihimu* (gagawin pa o ginawa na). At ang panlaping *-un* ay panlaping makauri. Natuklasan na ang panlaping *-un* ay maging pandiwa depende sa paggamit sa diin o bigkas at sa paggamit ng pangungusap. Tulad halimbawa ng pangungusap na ito. *Giukon pa ang nakapundong humay*. Ang salitang *giukon* ay may dalawang kahulugan at dalawang paraan ng pagbigkas. Ang unang kahulugan ay naglalarawan na may laman o may butil pa ng palay ang mga nakatapok na humay. Ang *giukon* sa pangungusap na ito ay nasa pang-uri, kung saan ang pagbigkas ng salita ay /gi:u.kon/ kung saan ang diin ay nasa ponemang *gi*. Ang pangalawang kahulugan ay gagawin ang pagkuha ng mga butil ng palay gamit ang mga paa at ang pagbigkas nito ay /gi.u.kon/ kung saan ang diin ay nasa ponemang *u*.

Ang panlaping makangalan ay mga panlaping ikinakabit sa salitang-ugat upang makabuo ng pangngalan. Samantala ang panlaping makadiwa ay mga panlaping ikinakabit sa salitang-ugat upang mabuo ang pandiwa. Ito ay idinadagdag sa unahan, gitna o hulihan ng salita. Ang mga halimbawa nito ay um, ma, na, han, hin, in, mag, an, pag, isa, am. Ang panlaping makauri naman ay mga panlaping ikakabit sa salitang-ugat upang makabuo ng mga pang-uri. Ginagamit ito sa paglalarawan na nangangahulugan ng pagkamayroon.

Sa aklat nina Amat, Balunsay, Calibayan, Borong, et al., (2023), ipinaliwanag na ang panlaping makangalan ay mga panlaping ikinabit sa malayang morpema at ito ay ginagamit sa pagbuo ng salita upang maging pangngalan. Ang panlaping *pag-*, *ka-*, *-an*, *han-*, *pag-*, *mag-*, *hin-*, *-in* at *ka-*. Natuklasan sa *pag-aaral* na ito ay na ang panlaping *pag-* at *-an* kapag ikinabit sa salitang-ugat ay naging pangngalan. Mapapansin na ang panlaping *pag-* at *-an* ay panlaping makangalan din sa Filipino.

Ang mga register na salita ay hindi na maaring baguhin dahil ito ang nagpapatatak sa kanilang propesyon. Habang isinagawa ang pananaliksik na ito sinubukan ng mananaliksik na tanungin ang mga kabataan na anak ng mga magsasaka ang mga katawagan. Marami sa mga mag-aaral ay naging matumal ang kanilang mga kasagutan dahil kasabay sa pag-usad ng buhay ng mga modernong wika ay hindi pinahalalagan ng mga kabataan ang katawagan ng kanilang mga magulang.

Ayon ni Nato (2017) ang mga register na wika sa isang partikular na trabaho ay umuusbong o mapanatili kung maraming magmamalaskit sa mga wikang ito. Ang *pag-aaral* ng mga rehistradong wika ay maituturing na pagpapausbong sa mga paksang pangwika sa kadahilanang pumapaloob ito sa konteksto ng lokalisasyon kung saan nabibigyang-puwang ang kalahalagan ng mga lokal na wika. Mababatid na ang mga wikain ng mga magsasaka ay maituturing na pekulyar para sa mga bagong henerasyon. Isa ito sa mga napapanahon *pag-aaral* na makatutulong sa kadalasang suliranin sa pagtuturo ng Mother Tongue. Nangangahulugan lamang na ang mga nakatalang resulta sa bawat talahanayan ay makabuluhan lalo na sa mga guro at mga mag-aaral dahil ang register na wika ay isa sa mga paksang binigyang diin sa hayskul.

Sa kabuuan, mapapansin na may mga panlapi sa wika ng Silago na makangalan, makadiwa at makauri na hindi naman panlaping makangalan, makadiwa at makauri sa Filipino. Ito ay nagpapahiwatig lamang na ang bawat katawagan o wikang ginamit ng isang partikular na mamamayan ay may kanya-kanyang katangian. Ito ay pinatunayan sa resultang ito na magkataliwas ang tuntunin sa ginagampanan ng panlapi sa pagkakabit sa salitang-ugat sa Filipino at sa register na wika ng mga magsasaka sa Silago.





## 5.0 KONKLUSYON AT REKOMENDASYON

Sadyang napakarami ng barayti ng wika na umusbong at ginagamit ng bawat indibidwal sa bawat komunidad. May mga permanenteng wika, may kusa namang nawawala sa sirkulasyon sa pagdaan ng panahon. Magkakaiba man, ang mahalaga ay ang dulot nitong pinagbuting grupo ng isang partikular na gumagamit nito. Ang register na wika ng mga magsasaka ay may kanya-kanyang barayti na kung saan may kakaibang katangian sa estruktura ng wika. Patunay rito ay ang mga register na salita ng mga magsasaka na nababago ang bahagi ng pananalita dahil sa impluwensiya ng panlapi kaya naman nababago rin ang gamit nito sa pangungusap. Bunga sa isinagawang pag-aaral ay inirerekomenda ng mananaliksik na magkakaroon ng ibayong pag-aaral na nakatuon sa pagsusuri sa anyong ponolohikal at morpolohikal upang mas mailalarawan ang katangian ng wika ng Silago, Timogang Leyte, Philippines at pag-aaralan din ang mga register na wika sa ibang parte ng Timogang Leyte upang maihambing din ang mga wika na kanilang ginagamit.

## 6.0 MGA SANGGUNIAN

1. Almurashi, W. A. (2016). *An introduction to Halliday's systemic functional linguistics*. *Journal for the study of English Linguistics*, 4(1), 70-80.
2. Amat, B., Balunsay, J., Calibayan, M., Borong, N., et al. (2023). *Estruktura ng wikang Filipino*. St. Andrew Publishing House, Quezon City.
3. Borong, N. (2019). *Morphological variations of the dialects in Western and Southern Leyte*. *Journal of Educational and Human Resource Development (JEHRD)*, 7, pp. 41-52, <https://doi.org/10.61569/4r8ssg26>
4. Cordenete, J. at Macaldao, M. (2020). *Pagbuo at balidasyon ng interaktibong modyul sa pagtuturo ng Florante at Laura*. *PSU Multidisciplinary Research Journal*, 3(1). <https://www.psurj.org/online/index.php/mrj/article/view/139>
5. Halliday, M. (1974). *Language and social man*. London: Longman for the schools council. *Schools Council Programme in Linguistics and English Teaching*, 2 (3).
6. Hulin, R. at Na, X. (2014). *A study of Chomsky's universal grammar in school language acquisition*. *International Journal on Studies in English Language and Literature*, 2 (12), pp. 1-7.
7. Nato, R. (2017). *Register bilang varyti ng wika*. Nakuha mula sa <https://www.slideshare.net/RochelleNato/register-bilang-varayti-ng-wika>
8. Pantorilla, C., De Lara, M. at Ijan, M. (2020). *Ugnayan ng wika at ideolohiya: Ang paglalarawan sa rehistro ng mga magsasaka sa Bulacan*. <https://www.scribd.com/presentation/451349728/MAGSASAKA-SA-BULACAN>
9. Silawan, F. at Borong, N. (2022). *Register ng wika sa mga mangisda*. *International Multilingual Journal of Science and Technology (IMJST)*, 7(11). <http://www.imjst.org/wp-content/uploads/2022/11/IMJSTP29120789.pdf>
10. Tobesa, D., Andes, S., Castro, M., Del Rosario, K. at Mendoza, A. (2019). *Lupera: Isang unti unting pagkawala ng kultura at rehistro ng pagsasaka*. *Di-nailathalang tesis*, Bulacan State University, Malolos, Bulacan
11. UNESCO. (2014). *Endangered languages*. Retrieved from <http://www.unesco.org/new/en/culture/themes/endangered-languages>
12. UNESCO. "Education in a Multilingual World." *Unesco.org*. 2003. Web. 2 Mayo 2010. <http://unesdoc.unesco.org/images/0012/001297/129728e.pdf>



# NEUROENDOCRINE REGULATION FROM AN AYURVEDIC PERSPECTIVE: INTEGRATING ANCIENT WISDOM WITH MODERN SCIENCE

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## ABSTRACT

The neuroendocrine system's intricate interactions between the nervous and endocrine systems are fundamental to maintaining homeostasis. Ayurveda, the ancient Indian medical system, provides a holistic perspective on health, emphasizing the balance of three primary doshas: Vata, Pitta, and Kapha. This article explores the correlations between Ayurvedic principles and modern neuroendocrine concepts, highlighting how Ayurveda's holistic approach complements contemporary scientific understanding. Vata's association with movement and communication parallels the nervous system, while Pitta's link to metabolism mirrors endocrine functions. Kapha's role in structure and cohesion aligns with the body's maintenance systems. Ayurvedic practices such as diet, herbal remedies, and lifestyle interventions support neuroendocrine health by promoting hormonal balance and stress resilience. Key practices include the use of adaptogenic herbs, balanced diets tailored to dosha types, and stress management techniques such as meditation and Pranayama. Recent scientific research validates many Ayurvedic methods, demonstrating their effectiveness in modulating stress responses and improving hormonal balance. By integrating ancient Ayurvedic wisdom with modern scientific insights, a comprehensive approach to neuroendocrine regulation can be achieved, fostering overall health and well-being.

**KEY WORDS** - Neuroendocrine regulation, Doshas, Holistic health, Adaptogenic herbs

## INTRODUCTION

The neuroendocrine system, which encompasses the complex interactions between the nervous and endocrine systems, plays a crucial role in maintaining homeostasis in the human body.<sup>01</sup> In contemporary biomedical science, understanding neuroendocrine regulation involves studying the intricate feedback mechanisms between the brain and various endocrine glands. Ayurveda, the ancient Indian system of medicine, offers a unique perspective on this regulation through its holistic approach to health and wellness. This article explores how Ayurvedic principles correlate with modern neuroendocrine concepts, providing a comprehensive view that integrates ancient wisdom with modern science.

### Aim of Study

The aim of this study is to explore the correlations between Ayurvedic principles and modern neuroendocrine concepts, demonstrating how Ayurveda's holistic approach to health and wellness can complement contemporary scientific understanding, and to highlight the potential benefits of integrating ancient wisdom with modern medical practices for improved neuroendocrine regulation.

### Materials and Methods

#### What is Neuroendocrine Regulation<sup>02</sup>

Neuroendocrine regulation is a complex and vital aspect of human physiology, encompassing the intricate communication between the nervous system and the endocrine system. Understanding this process involves delving into the detailed mechanisms by which nerve cells (neurons) and endocrine glands interact to regulate various physiological functions in the body.

#### 1. Interconnection of Systems

- The nervous system consists of the brain, spinal cord, and peripheral nerves, which transmit electrical impulses to communicate information rapidly throughout the body.
- The endocrine system comprises glands such as the hypothalamus, pituitary gland, thyroid gland, adrenal glands, pancreas, and reproductive glands, which secrete hormones into the bloodstream to exert effects on target cells or organs.
- Neuroendocrine interactions occur at multiple levels, including direct innervation of endocrine glands by nerves and the release of neurohormones (hormones produced by neurons) into the bloodstream.

#### 2. Key Components

- The hypothalamus, located in the brain, serves as a master regulator of neuroendocrine function. It produces releasing and inhibiting hormones that control the secretion of hormones from the pituitary gland.
- The pituitary gland, often referred to as the "master gland," is divided into the anterior and posterior lobes. The anterior pituitary releases several hormones that regulate other endocrine glands, while the posterior pituitary stores and releases hormones produced by the hypothalamus.
- Hormones secreted by the pituitary gland regulate the activity of peripheral endocrine glands, such

as the thyroid gland, adrenal glands, and gonads (testes and ovaries).

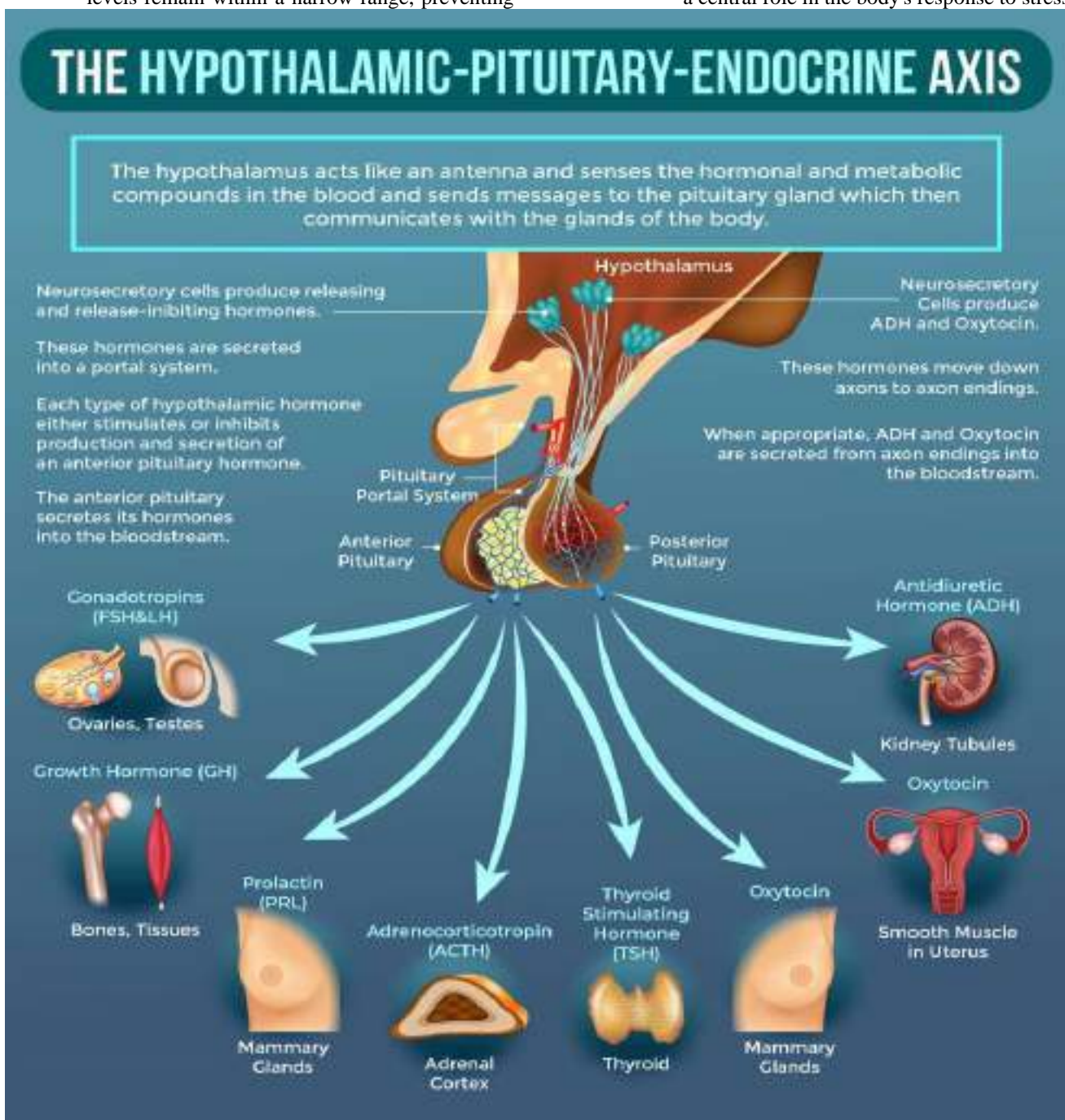
### 3. Feedback Mechanisms

- Neuroendocrine regulation often involves intricate feedback loops that help maintain hormonal balance. For example, the hypothalamus releases hormones that stimulate or inhibit the secretion of pituitary hormones. In turn, hormones produced by peripheral glands can feed back to the hypothalamus and pituitary to regulate their activity.
- Feedback mechanisms ensure that hormone levels remain within a narrow range, preventing

excessive secretion or suppression of hormone production.

### 4. Physiological Functions

- Neuroendocrine signaling regulates a wide range of physiological processes, including metabolism, growth and development, stress response, reproduction, and immune function.
- For example, hormones produced by the hypothalamus and pituitary gland regulate thyroid hormone production, which influences metabolic rate and energy balance. Similarly, the hypothalamic-pituitary-adrenal (HPA) axis plays a central role in the body's response to stress.





## 5. Clinical Implications

- Dysregulation of the neuroendocrine system can lead to various disorders. For instance, dysfunction of the hypothalamus or pituitary gland can result in hormonal imbalances, such as growth hormone deficiency or diabetes insipidus.
- Disorders of peripheral endocrine glands, such as the thyroid or adrenal glands, can also disrupt neuroendocrine regulation and lead to conditions like hypothyroidism, hyperthyroidism, or Addison's disease.
- Understanding neuroendocrine mechanisms is essential for diagnosing and managing these disorders, often requiring a multidisciplinary approach involving endocrinologists, neurologists, and other healthcare professionals.

In essence, neuroendocrine regulation involves the dynamic interplay between the nervous and endocrine systems to maintain physiological equilibrium and adapt to internal and external challenges. An in-depth understanding of these interactions is crucial for comprehending human health and the pathophysiology of endocrine disorders.

## Neuroendocrine Regulation

Neuroendocrine regulation orchestrates the intricate communication between the nervous and endocrine systems, governing essential physiological processes. At its core lies the hypothalamus-pituitary axis, where the hypothalamus, a region in the brain, secretes hormones that either stimulate or inhibit the release of pituitary gland hormones. These pituitary hormones, in turn, act on peripheral endocrine glands throughout the body, regulating their secretion of hormones. This cascade of events forms feedback loops that maintain hormonal balance and ensure optimal bodily function.<sup>03</sup>

Neuroendocrine regulation impacts various aspects of human health, including metabolism, growth and development, stress response, reproduction, and immune function. For example, the hypothalamic-pituitary-adrenal (HPA) axis governs the body's response to stress by releasing cortisol, a hormone that mobilizes energy resources to cope with the stressor. Similarly, the hypothalamic-pituitary-thyroid axis regulates metabolism and energy expenditure through the production of thyroid hormones.

Dysregulation of neuroendocrine signaling can lead to a myriad of disorders, ranging from metabolic conditions like diabetes to reproductive disorders and hormonal imbalances. Understanding the intricacies of neuroendocrine regulation is essential for diagnosing and managing these disorders effectively, contributing to overall health and well-being.<sup>04</sup>

## Role of Neuroendocrine Regulation<sup>05</sup>

The role of neuroendocrine regulation is multifaceted and integral to maintaining homeostasis and orchestrating various physiological processes in the body. Here are some key roles:

### 1. Maintaining Hormonal Balance

- Neuroendocrine regulation ensures that hormone levels remain within optimal ranges through intricate feedback mechanisms. This balance is crucial for regulating metabolism,

growth, development, mood, and reproduction.

### 2. Stress Response

- The neuroendocrine system plays a pivotal role in the body's response to stress. The hypothalamus-pituitary-adrenal (HPA) axis responds to stressors by releasing cortisol, which mobilizes energy reserves and modulates immune function to help the body cope with stress.

### 3. Reproduction

- Neuroendocrine signaling regulates reproductive processes in both males and females. Gonadotropin-releasing hormone (GnRH) from the hypothalamus stimulates the release of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) from the pituitary gland, which are essential for regulating ovarian and testicular function.

### 4. Metabolism

- Hormones such as insulin, glucagon, thyroid hormones, and cortisol regulate metabolic processes, including glucose metabolism, lipid metabolism, and energy expenditure. Neuroendocrine signals from the hypothalamus help coordinate these metabolic processes to maintain energy balance.

### 5. Development and Growth

- Growth hormone (GH) secreted by the pituitary gland plays a key role in growth, development, and tissue repair. Neuroendocrine regulation ensures the appropriate secretion of GH during various stages of development.

### 6. Immune Function

- Neuroendocrine signaling can modulate immune function by regulating the production and activity of immune cells and cytokines. Hormones such as cortisol and catecholamines exert immunomodulatory effects, helping to regulate inflammation and immune responses.

Overall, neuroendocrine regulation is essential for coordinating the body's responses to internal and external stimuli, maintaining physiological equilibrium, and supporting overall health and well-being. Dysregulation of neuroendocrine signaling can lead to a wide range of disorders, highlighting the critical role of this system in human health.

## Mechanism and Pathophysiology of Neuroendocrine Regulation<sup>06</sup>

The mechanism and pathophysiology of neuroendocrine regulation involve intricate processes that govern the communication between the nervous system and the endocrine system:

### 1. Mechanism

#### ○ Hypothalamus-Pituitary Axis

- The hypothalamus, a region in the brain, secretes releasing and





inhibiting hormones that travel through the bloodstream to the pituitary gland.

- These hypothalamic hormones stimulate or inhibit the release of pituitary hormones into the bloodstream.

#### ○ Peripheral Endocrine Glands

- Pituitary hormones act on peripheral endocrine glands, such as the thyroid, adrenal glands, and gonads.
- Hormones released by these glands exert their effects on target tissues or organs throughout the body, regulating various physiological processes.

#### ○ Feedback Mechanisms

- Hormones produced by peripheral endocrine glands can feedback to the hypothalamus and pituitary gland to regulate their activity.
- This feedback loop helps maintain hormonal balance and ensure appropriate responses to changing physiological conditions.

## 2. Pathophysiology

#### ○ Hypothalamic Dysfunction

- Dysfunction of the hypothalamus can lead to abnormal secretion of hypothalamic hormones, disrupting the regulation of pituitary gland function.
- Conditions such as tumors, trauma, or vascular lesions affecting the hypothalamus can result in hormonal imbalances.

#### ○ Pituitary Disorders

- Pituitary tumors, either benign or malignant, can disrupt pituitary hormone secretion.
- Depending on the location and type of tumor, excessive or deficient secretion of pituitary hormones can occur, leading to conditions such as hyperpituitarism or hypopituitarism.

#### ○ Peripheral Endocrine Gland Dysfunction

- Disorders of peripheral endocrine glands, such as the thyroid, adrenal glands, and gonads, can result from various etiologies, including autoimmune diseases, tumors, infections, or genetic factors.
- Examples include hypothyroidism, hyperthyroidism, Addison's disease, and polycystic ovary syndrome (PCOS).

#### ○ Feedback Disruption

- Disruption of feedback mechanisms can lead to persistent hormonal imbalances.
- For instance, primary adrenal insufficiency (Addison's disease) leads to decreased cortisol production, resulting in elevated adrenocorticotropic hormone (ACTH) levels due to loss of negative feedback.

Understanding the mechanisms and pathophysiology of neuroendocrine regulation is crucial for diagnosing and managing disorders that arise from dysregulation of this system. Treatment approaches often involve hormone replacement therapy, surgical intervention, and pharmacological management to restore hormonal balance and address the underlying causes of dysfunction.

## Correlations Between Neuroendocrine Regulation and Ayurveda

Ayurveda, the ancient Indian system of medicine, offers a holistic approach to health that encompasses physical, mental, and spiritual well-being. It is based on the balance of three fundamental bioenergies or doshas: Vata, Pitta, and Kapha. Each dosha is associated with specific physiological and psychological functions. Neuroendocrine regulation, from an Ayurvedic perspective, can be correlated with the balance of these doshas, as well as the health of various dhatus (tissues) and srotas (channels).

### 1. Vata Dosha<sup>08,09</sup>

- **Function:** Vata dosha is responsible for movement, communication, and nervous system function.
- **Neuroendocrine Correlation:** Vata's role in movement and communication can be linked to the function of the nervous system and the release of neurohormones that regulate endocrine function. Vata imbalance may lead to disorders involving the nervous system and neurotransmitter regulation.

### 2. Pitta Dosha<sup>10,11</sup>

- **Function:** Pitta dosha governs metabolism, transformation, and digestion.
- **Neuroendocrine Correlation:** Pitta's role in metabolism and transformation can be correlated with hormonal regulation, particularly thyroid and adrenal function. Pitta imbalance may result in metabolic disorders, inflammation, and issues related to stress response.

### 3. Kapha Dosha<sup>12,13</sup>

- **Function:** Kapha dosha is associated with structure, stability, and lubrication.
- **Neuroendocrine Correlation:** Kapha's role in structure and stability can be linked to growth, development, and the body's ability to maintain homeostasis. Kapha imbalance may contribute to conditions involving growth hormone regulation, tissue maintenance, and fluid balance.





### Ayurveda's Holistic Approach to Neuroendocrine Health

Ayurveda emphasizes the importance of a balanced lifestyle, diet, and mental state for maintaining neuroendocrine health. Here are some key Ayurvedic principles that align with neuroendocrine regulation:

1. **Dinacharya (Daily Routine)**<sup>14</sup>
  - Establishing a regular daily routine helps balance the doshas and maintain hormonal rhythm. Practices such as waking up early, regular meal times, and adequate sleep are essential for neuroendocrine health.
2. **Ahara (Diet)**<sup>15</sup>
  - A balanced diet tailored to one's dosha type supports optimal digestion and metabolism, which are crucial for hormonal balance. Specific foods and herbs are recommended to balance each dosha and support endocrine function.
3. **Rasayana (Rejuvenation Therapy)**<sup>16</sup>
  - Rasayana therapies involve the use of rejuvenating herbs and practices to enhance vitality and longevity. These therapies support the health of dhatus (tissues) and can help regulate neuroendocrine function.
4. **Meditation and Yoga**
  - Meditation and yoga practices promote mental and emotional balance, reducing stress and supporting the health of the neuroendocrine system. These practices can modulate the HPA axis and improve overall hormonal balance.
5. **Herbal Remedies**
  - Ayurvedic herbs such as Ashwagandha, Shatavari, and Brahmi are known for their adaptogenic properties, helping to balance the body's stress response and support endocrine function.

By integrating Ayurvedic principles with modern neuroendocrine concepts, a comprehensive approach to health can be achieved, promoting overall well-being and addressing the root causes of neuroendocrine disorders.

### Discussion

The integration of Ayurveda and modern neuroendocrine concepts offers a holistic approach to understanding and managing neuroendocrine regulation. While modern science provides detailed mechanisms and pathophysiology, Ayurveda emphasizes the importance of balance and harmony in maintaining health. Combining these perspectives can lead to more comprehensive and effective healthcare strategies.

### Conclusion

Ayurveda's holistic principles provide valuable insights into maintaining neuroendocrine health, complementing modern scientific understanding. By integrating ancient wisdom with contemporary medical practices, a more holistic approach to health and wellness can be achieved, promoting balance and well-being in the neuroendocrine system.

### REFERENCES

1. *Neuroendocrine System - an overview* | ScienceDirect Topics [Internet]. [www.sciencedirect.com](https://www.sciencedirect.com/topics/medicine-and-dentistry/neuroendocrine-system). Available from: <https://www.sciencedirect.com/topics/medicine-and-dentistry/neuroendocrine-system>
2. *Neuroendocrine System - Knowledge and References* [Internet]. Taylor & Francis. [cited 2024 Jun 2]. Available from: <https://taylorandfrancis.com/knowledge/medicine-and-healthcare/endocrinology/neuroendocrine-system/#:~:text=The%20neuroendocrine%20system%20used%20to>
3. Sheng JA, Bales NJ, Myers SA, Bautista AI, Roueifar M, Hale TM, Handa RJ. *The Hypothalamic-Pituitary-Adrenal Axis: Development, Programming Actions of Hormones, and Maternal-Fetal Interactions*. *Front Behav Neurosci*. 2021 Jan 13;14:601939. doi: 10.3389/fnbeh.2020.601939. PMID: 33519393; PMCID: PMC7838595.
4. Smith SM, Vale WW. *The role of the hypothalamic-pituitary-adrenal axis in neuroendocrine responses to stress*. *Dialogues Clin Neurosci*. 2006;8(4):383-95. doi: 10.31887/DCNS.2006.8.4/ssmith. PMID: 17290797; PMCID: PMC3181830.
5. Affinati AH, Myers MG. *Neuroendocrine Control of Body Energy Homeostasis* [Internet]. Feingold KR, Anawalt B, Boyce A, Chrousos G, de Herder WW, Dhatariya K, et al., editors. *PubMed*. South Dartmouth (MA): MDText.com, Inc.; 2000. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK570658/>
6. Steffens AB, Strubbe JH, Balkan B, Scheurink JW. *Neuroendocrine mechanisms involved in regulation of body weight, food intake and metabolism*. *Neurosci Biobehav Rev*. 1990 Fall;14(3):305-13. doi:10.1016/s0149-7634(05)80040-5. PMID: 2234609.
7. Shahid Z, Singh G. *Physiology, Hypothalamus* [Internet]. *Nih.gov. StatPearls Publishing*; 2018. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK535380/>
8. Charaka. *Charaka Samhita, Sutrasthana, Chapter 12, Verses 8-15*. Varanasi: Chaukhambha Orientalia; 2013.
9. Charaka. *Charaka Samhita, Vimanasthana, Chapter 6, Verses 13-17*. Varanasi: Chaukhambha Orientalia; 2013.
10. Charaka. *Charaka Samhita, Sutrasthana, Chapter 12, Verses 11-20*. Varanasi: Chaukhambha Orientalia; 2013.
11. Charaka. *Charaka Samhita, Vimanasthana, Chapter 6, Verses 8-12*. Varanasi: Chaukhambha Orientalia; 2013.
12. Charaka. *Charaka Samhita, Sutrasthana, Chapter 12, Verses 14-22*. Varanasi: Chaukhambha Orientalia; 2013.
13. Charaka. *Charaka Samhita, Vimanasthana, Chapter 6, Verses 18-22*. Varanasi: Chaukhambha Orientalia; 2013.
14. Charaka. *Charaka Samhita, Sutrasthana, Chapter 5, Verses 12-24*. In: Sharma RK, Dash B, editors. *Varanasi: Chaukhambha Orientalia*; 2013.
15. Charaka. *Charaka Samhita, Sutrasthana, Chapter 25, Verses 1-15*. Varanasi: Chaukhambha Orientalia; 2013.
16. Charaka. *Charaka Samhita, Sutrasthana, Chapter 1, Verses 1-30*. Varanasi: Chaukhambha Orientalia; 2013.



# RELATIONSHIP BETWEEN SUBSTANCE ABUSE COUNSELING AND BEHAVIOURAL ADJUSTMENTS AMONG UNIVERSITY STUDENTS IN UASIN GISHU COUNTY, KENYA

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Article DOI: <https://doi.org/10.36713/epra17677>

DOI No: 10.36713/epra17677

## ABSTRACT

The study aimed at investigating the relationship between substance abuse counseling and behavioural adjustments among university students in Uasin Gishu County. The study was anchored on Social Learning Theory by Albert Bandura (Bandura, 1977). The study used mixed method and phenomenological design. The target population comprised of 85,000 students and 10 counselors drawn from six universities in Uasin Gishu County. Simple random sampling was used to draw a sample of 323 students while purposive sampling was used to select four counselors and three universities. This study used questionnaires and in-depth interviews guide to collect data. Qualitative data were transcribed and analyzed through themes derived from the research questions. Quantitative data was analyzed using SPSS version 26.0 and presented into frequencies, percentages, mean and standard deviations. To test the hypotheses, the researcher used ANOVA to determine whether there is a relationship that exists between the variables. From the findings it was established that substance abuse counseling ( $F(21, 178) = 3.089, p = 0.00$ ) significantly influenced behavioural adjustments of students. The findings of the study may be useful to the community, institutions of higher learning and the society. The study recommended that there was need for dedicated efforts aimed at assessing the types of psychological counseling interventions available, their accessibility, and the level of awareness among students in Uasin Gishu County universities.

**KEY WORDS:** Substance abuse counseling, behavioural adjustments, psychological counseling interventions, phenomenological design

## INTRODUCTION

The need to investigate psychological counseling interventions on behavioural adjustments in this study has been necessitated by a significant increase of psychological problems among students in universities (Commission of University Education, 2023). Throughout the year's human beings have found comfort in sharing their problems or telling their story to others. The application of psychological counseling surrounds a range of culturally-sensitive practices that help people improve their well-being, cause relieve to distress and maladjustment, resolve crises, and enhance their ability to function better in their lives (APA, 2024). Psychological intervention is defined as a relationship aimed at promoting a better adaptation of the individual to a given situation and thereby optimizing his or her personal resources in relation to autonomy, self-knowledge and self-help. In other words, psychological intervention aims to produce a personal change leading to higher functional results. In the context of primary health care, psychological intervention is characterized by a set of competencies that involve those related to the individual intervention as well as those related to the areas of health promotion and disease prevention, long-term care, humanization, quality, research and training (Ricou et al., 2019).

In the United States of America, the rate of substance abuse rose among those aged 18 to 25 years, with many of them being new users (McCance-Katz, 2017). In Africa studies conducted in universities in Nigeria, Uganda, Ethiopia and South Africa have found that the prevalence of alcohol and substance use ranged between 27.5% and 62%. The prevalence of substance use among undergraduate students in one university in Nigeria was reported at 27.5%. The United Nations Office on Drugs and Crimes (UNODC) 2018 report on substance use in Nigeria put the overall past-year prevalence at 14.3 million (14.4%) (Nwanna, et al., 2018). While use is reported across all age groups, the highest use was among the 25 to 39-year-olds and cannabis was the most used substance, with an average initiation age of 19 years; amphetamines and ecstasy use among young people was also reported. Prescription opioids, mostly tramadol, morphine, and codeine, were also in high use; others included alcohol and tobacco use (World Drug Report, 2018). Substance abuse counseling interventions in this study focused on uplifting low self-esteem, changing recreational activities, financial independence and positive self-concept. The current study addressed the challenges as experienced among university students. The findings highlight the crucial role that psychological counseling interventions play in helping university students manage the challenges they encounter.



The high prevalence rate of such behaviours among Iranian students has also been reported. A study conducted in 2017 among Iranian university students showed that among all 13.5% smoked cigarette, 7.8% drank alcohol, 4.9% had drug abuse and 7.8% had unprotected sex (Zamanian et al., 2018). These results indicate the greater need for preventive interventions of risky behaviours among students in universities through psychological counseling services. The study therefore responds to this need of preventive interventions through psychological counseling.

Studies have indeed shown rising levels of anxiety and depression amongst students in universities compared to pre-university (Barrable, et al., 2018). Students engage in risky health-related behaviours that influence their current and future health status. Patterns of multiple health risk behaviour among university students and the association with mental health high-risk students reported significantly higher levels of stress than typical students (Murphy et al., 2019). Another study on students' aggression and its relevance to personal, family and social factors by Mahmood and Kakamad (2018) indicated that aggression for in-dorm students was higher than those students who lived out of dorm. These findings justify that students usually live in stressful conditions and far from their home. There was a significant variation noted in students' anti-social behaviour due to school related challenges as revealed by a study on the causes of students' antisocial behaviour (Khaliq & Rasool, 2020). Substance use, abuse and risky sexual behaviour and its consequences among students showed that substance use and consequently abuse among students is moderately high and there is a potential for this vice increasing further (Mangeni & Mbutia, 2018).

The prevalence rate of some risky behaviours is reported to be high among university students who constitute a large part of the young population (Shekari et al., 2020). In order to prevent the adverse consequences and impairments associated with antisocial behaviour, targeted prevention and early intervention strategies for children and adolescents under risk are required. Understanding the factors related to the development of antisocial behaviour can help to inform experts planning prevention and intervention (Otto et al., 2021). This necessitates carrying out research to identify methods of aiding university students in overcoming these problems, in order to accomplish their academic goals for the collective benefit of everyone. Due to the enduring adverse effects, the study of risk-taking behaviour and other forms of anti-social behaviour has emerged as a significant area of research concerning young people. Universities have witnessed violent protests and destruction of property including those of the community, risky sexual behaviour that has ended in many female students becoming pregnant and careless drinking by students in the villages surrounding the universities, suicide, murder and academic stress (Kaggwa et al, 2022). All these types of behaviours have been of concern to parents, lecturers, counselors, the Ministry of Education and other stakeholders. Similarly, another study in Iran indicated that, risky behaviours

is reported to be high among universities who constitute a large part of the young population.

Substance abuse among students in universities in Kenya is currently a major public health concern (Mangeni & Mbutia, 2018). Drugs such as tobacco and alcohol are now widely and easily available in the universities. Students in universities therefore form the main locus of substance abuse, with more than 40% of students already affected. Research in Kenya indicated that 84% of students in the universities are involved in drugs (NACADA, 2012). There are chains of shocking youth-related crime often provoking ugly thoughts about the state of young people.

Studies carried out in Uasin Gishu County demonstrated that the prevalence of substance use and other risky behaviours among college and university students in Eldoret is high and causes significant physical and psychosocial problems in this population. A large proportion of those using alcohol reported serious adverse effects, raising the necessity of targeted interventions to reduce the risk of subsequent substance dependence and other deleterious consequences (NACADA, 2021). Hence, this research was necessary to elucidate the difficulties encountered by university students in Uasin Gishu County. The high levels of stress experienced by students as a result of the demanding nature of their It is against this backdrop, that the current study was conducted to explore the influence of psychological counseling interventions on behavioural adjustments among university students in Uasin Gishu County.

## OBJECTIVE

To establish the relationship between substance abuse counseling and behavioural adjustments among university students in Uasin Gishu County.

## RESEARCH HYPOTHESIS

There is no significant relationship between substance abuse counseling and behavioural adjustments among university students in Uasin Gishu County.

## METHODOLOGY

Mixed method design was used by the researcher to triangulate the methods by directly comparing and contrasting quantitative statistical results with qualitative findings for corroboration and validation purposes. In the study, the two phases (quantitative and qualitative) allowed for collection of data from students and counselors. Secondly, mixed methods were used in order to complement, seek elaboration, illustrate and enhance results from one component with another in order to extend the breadth of findings. In the quantitative strand, cross-sectional survey design was adopted for this study. In the qualitative strand, a phenomenological design was used in the study to describe and interpret the experiences of participants with the aim of understanding the experiences as perceived by the respondents (Creswell, 2011). The study was carried out in Uasin Gishu County. The study population comprised of 85,000 students, 6 universities and 10 counselors. Purposive sampling was chosen



for the selection of four counselors spreading across three selected universities in Uasin Gishu County. The researcher adopted simple random sampling procedure to select the students from the sampled public and private universities. The sample size was determined using the fisher formula. The following sample size formula for infinite population is used to arrive at a representative number of respondents (Godden, 2004):

$$SS = \frac{Z^2 \times p(1-p)}{M^2}$$

Where:

SS= Sample Size for infinite population (more than 50,000)

Z = Z value (e.g. 1.96 for 95% confidence level)

P = population proportion (expressed as decimal) (assumed to be 0.3 (30%) since this would provide the maximum sample size).

M = Margin of Error at 5% (0.05)

After substitution, n = 323

The study employed questionnaires for students and in-depth interview guide for counselors. The data was analyzed using

both qualitative and quantitative data analysis processes. Qualitative data was transcribed and analyzed through themes, for quantitative data analysis. Data was presented by use of tables. The researcher also employed inferential statistics in analyzing quantitative data. Analysis of variance (ANOVA) was used to test the hypotheses. The type of relationship between independent and dependent variables was determined by running scatter plots to determine whether the relationship was linear or non-linear. Specifically, the researcher was interested in establishing whether substance abuse counseling had any relationship with behavioural adjustments among students.

## RESULTS AND DISCUSSION

The participants were requested to indicate the frequency at which they have partaken in the intake of substances that exceed the permitted limits for legitimate medical use. The responses were determined on a 5- point Likert rating scale as follows: 5- Always, 4- Often, 3- Sometimes, 2- Once and 1- Never. The results are reported in Table 1.

**Table 1**  
*Substance Abuse Counseling and Behavioural Adjustments* (n=200)

Statements	Never	Once	Several Times	Often	Always	Mean	SD
I have stopped using drugs other than those required for medical reasons after counseling	8 (4.0%)	9 (4.5%)	118 (59%)	42 (21.0%)	23 (11.5%)	1.34	0.83
I stopped smoking after counseling	4 (2.0%)	164 (82.0%)	3 (1.5%)	16 (8.0%)	13 (6.5%)	1.36	0.88
I avoided the use of illicit drugs after counseling	4 (2.0%)	165 (82.5%)	5 (2.5%)	11 (5.5%)	15 (7.5%)	1.20	0.70
I stopped engaging in illegal activities in order to obtain drug	3 (1.5%)	180 (90.0%)	3 (1.5%)	9 (4.5%)	5 (2.5%)	1.18	0.67
Following counseling for substance use, I have not experienced medical complications such as memory loss, hepatitis, convulsions, or bleeding.	3 (1.5%)	91 (182%)	3 (1.5%)	9 (4.5%)	3 (1.5%)	1.25	0.79
I have successfully navigated through the withdrawal symptoms associated with cessation from heavy drug use or alcohol consumption.	5 (2.5%)	176 (88.0%)	3 (1.5%)	11 (5.5%)	5 (2.5%)	1.20	0.62
After counseling I stopped receiving treatment as an outpatient for problems related to drug abuse.	2 (1.0%)	176 (88.0%)	2 (1.0%)	15 (7.5%)	5 (2.5%)	1.36	0.87
Following counseling, you have not lost friends due to drug use.	5 (2.5%)	160 (80.0%)	5 (2.5%)	23 (11.5%)	7 (3.5%)	1.68	1.21
Following counseling, I no longer feel bad about your past drug abuse.	5 (2.5%)	172 (86.0%)	3 (1.5%)	14 (7.0%)	6 (3.0%)	1.28	0.81
I have sought help for a drug problem from someone.	2 (1.0%)	176 (88.0%)	2 (1.0%)	14 (7.0%)	6 (3.0%)	1.19	0.62
I have participated in a treatment program specifically for drug use.	176 (88.0%)	14 (7.0%)	5 (2.5%)	3 (1.5%)	2 (1.0%)	1.21	0.65

Results on if the students have stopped using substances other than those required for medical reason after counseling 118 (59%), reported to oftenly used non-medical drugs indicating

that most university students partake drug for non-medical motives on a regular basis. Multiple research investigations have elucidated the influence of substance use on the





behavioural adaptations, scholastic achievements, and general welfare of college students. The utilization of substances has been found to be correlated with a heightened likelihood of experiencing academic underachievement, mental health challenges, and interpersonal challenges (Arria et al., 2018). In contrast, previous studies have demonstrated the efficacy of psychological counseling interventions in mitigating substance misuse and fostering favorable behavioural modifications within the university student population.

Majority of the university students (82.5%) students stated refraining from the consumption of illegal substances show that university students do not partake in frequent use of illicit substances. However, the use of illegal substances, regardless of the degree, can have substantial consequences on the physical health, academic performance, and behavioural adjustments of kids. In line with the study results for the negative consequences of illicit drug use on the physical health, mental well-being, and academic achievement of those enrolled in higher education institutions Arria (2018); (Pedersen et al., 2017).

The results show that most of the students 180 students (90.0%), reported refraining from engaging in those unlawful activities to obtain drugs is not widespread positive association between involvement in illicit behaviours for obtaining drugs and the presence of more serious substance use disorders and legal ramifications Salom et al., (2019). Regarding whether students stopped having medical problems as a result of substance use counseling (e.g., memory loss, hepatitis, convulsions, bleeding, etc.), a total of 182 (91%) of the sample, said that they had no prior experience of substance-related medical difficulties. The results agree with previous research which shows potential association between substance use and various medical conditions, including cognitive impairments, hepatic disorders such as hepatitis, seizures, and other detrimental health outcomes, which contradicts the findings of the aforementioned studies El-Gabalawy et al. (2016); (Hasin et al., 2018).

Participants were requested to indicate the frequency with which they had encountered withdrawal symptoms, encompassing both bodily and psychological distress, during their attempts to decrease or cease the consumption of drugs or alcohol. A total of 176 students (88.0%), said that they had not encountered any withdrawal symptoms, 11 students, accounting for 5.5% of the sample, indicated that they had encountered withdrawal symptoms on a single occasion. Moreover, 5 (2.5%) had withdrawal symptoms multiple times, 2.5% of university students acknowledged frequently having withdrawal symptoms due to excessive drug or alcohol consumption. The results suggest that university students in Uasin Gishu County do not frequently encounter withdrawal symptoms as a consequence of excessive drug or alcohol consumption. Nevertheless, the presence of even a limited cohort of adolescents exhibiting withdrawal symptoms is a subject of apprehension, since it could potentially signify problematic substance abuse involving drugs or alcohol.

Previous research has demonstrated the effectiveness of counseling therapies that prioritize motivational enhancement, coping skills training, and relapse prevention in managing substance dependency and withdrawal symptoms among university students (Magill et al., 2014).

Students requiring treatment as outpatient for problems related to drug abuse after counseling was also reviewed with 176 (88.0%), stating that they had not had outpatient therapy for drug-related concerns. Furthermore, 15 (7.5%) indicated that they had received outpatient treatment on a single occasion, whereas 5 (2.5%) reported having had outpatient treatment multiple times. According to the data, less than 1.0% of university students reported receiving outpatient treatment for drug usage on a frequent basis, as shown by the responses of the participants. Previous research has demonstrated that counseling interventions incorporating psychological training and support for treatment-seeking have yielded favorable outcomes in terms of promoting help-seeking behaviours among individuals grappling with substance misuse problems (Kelly et al., 2017).

The question on loss of friends because of use of drugs after counseling, a prevailing majority 160 (80.0%) had not experienced the loss of friendships as a consequence of their drug consumption. Twenty-three (11.5%) indicated experiencing the loss of friends on a single occasion, 7 (3.5%) of the sample, encountering many instances of losing friends, 5 (2.5%), reported experiencing a frequent or consistent loss of friendships as a result of their engagement in drug consumption. The social well-being of university students may be adversely affected by the loss of friendships resulting from drug usage. Experiencing isolation, loneliness, and diminished social support can have negative implications for individuals' behavioural adaptations and psychological welfare. Numerous studies have provided evidence indicating that the misuse of substances can result in the deterioration of interpersonal connections, including the dissolution of friendships (Lövdén et al., 2020). Individuals who encounter these social repercussions may face an increased likelihood of experiencing supplementary behavioural and emotional difficulties. Counseling therapies that target the enhancement of social skills and the provision of peer support have exhibited potential in ameliorating the negative consequences of substance abuse on interpersonal connections and behavioural adaptations Dager et al., (2014); (Wills et al., 2017).

Following counseling, students no longer felt bad about past drug abuse 139 (69.5%) stated that they never feel bad about their drug use, 21 (10.5%) reported feeling bad once, 19 (9.5%) stated they feel bad several times. Only a few students 7 (3.5%) reported feeling bad about their drug abuse often while a small percentage 14 (7.0%) of university students conveyed that they felt bad about their drug abuse always. Addressing emotional regulation and individual differences in emotional experiences can be essential components of counseling interventions aiming to influence behavioural adjustments and reduce substance abuse among university students. By recognizing the emotional



impact of drug abuse, counseling programs can offer tailored support and foster positive change towards healthier behaviours. From the interviews conducted in particular, Counselor 3 stated:

Right now, I have two students who we discovered using drugs, one of them has been referred to another psychiatrist because it was an extreme case that I could not handle. Even though he is highly resistive, I'm working carefully with the second one and seeing some progress.

All the three counselors reported drug abuse. Counselor 1 stated that there were instances of drug use among students. Suicidal thoughts and mood swings were reported by the three counselors:

Low self-esteem, eating disorder symptoms, and phobia were also mentioned as problems. For example, one student was skipping meals. When it was brought to my attention and I sat down with him to chat, he stated he was not going to pick food since the queue for food was so long, according to counselor 1. I have noticed certain students displaying eating disorder signs.

The results of this study are consistent with the WHO report from 2020, which placed suicide as the third leading cause of mortality among the youth worldwide. According to a study done in Germany by Schulte-Körne(2016), students who attend university also encounter some mental health issues. The results of the current investigation are supported by these two studies. Regarding students seeking counseling for a drug-related issue

Table 14 portrays that majority of the students 172 (86.0%) indicated that they had never sought assistance for a drug-related issue, 14 (7.0%), reported seeking treatment for such a problem on a single occasion. Six (3.0%) had actively sought assistance for a drug-related issue on multiple occasions, five (2.5%) of university students said that they consistently sought assistance for a drug-related issue, as denoted by the response option "Always." A minute fraction of the participants, specifically 3 (1.5%), indicated that they frequently sought assistance. The research indicates that a significant proportion of university students exhibit a lack of proactive behaviour in seeking assistance for their drug-related issues, hence implying the presence of potential obstacles to engaging in help-seeking behaviours. The scholarly literature emphasizes the significance of early intervention and the reduction of barriers to seeking help in the context of substance misuse treatment (Maclean &Saloner, 2019). Lastly, finding on whether the students have ever been involved in a treatment program specifically related to drug use, majority of them 176 (88.0%) have never been involved in a treatment program related to drug use. This indicates that a significant proportion of the surveyed individuals have not encountered the need for or sought out such programs. The high percentage of respondents who have never been involved in drug-related treatment programs suggests that preventive measures, education, and awareness campaigns may be having a positive impact in reducing the need for formal treatment among the majority of the surveyed population.

ANOVA test was used to test the significance of this relationship at 0.05, significance level as recorded in Table 2.

**Table 2. Analysis of Variance on the Influence of Substance Abuse Counseling on Behavioural Adjustments**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8722.126	21	415.339	3.089	.000
Within Groups	23934.594	178	134.464		
Total	32656.720	199			

a. Dependent Variable: Behavioural Adjustment

b. Predictors: (Constant), Substance Abuse Counseling

The Analysis of Variance (ANOVA) examining the impact of substance abuse counseling on behavioural adjustments evident. The calculated F-statistic of 3.089, along with a p-value of 0.000 (which is less than the usual 0.05), leads us to reject the idea that substance abuse counseling has no effect on behavioural adjustments ( $F(21, 178) = 3.089, p < .05$ ). In simpler

terms, it means that substance abuse counseling significantly influences how behaviours change.

The study used scatter plot too to support the study finding that substance abuse affects students' behavioural adjustments is as shown in Figure 1.

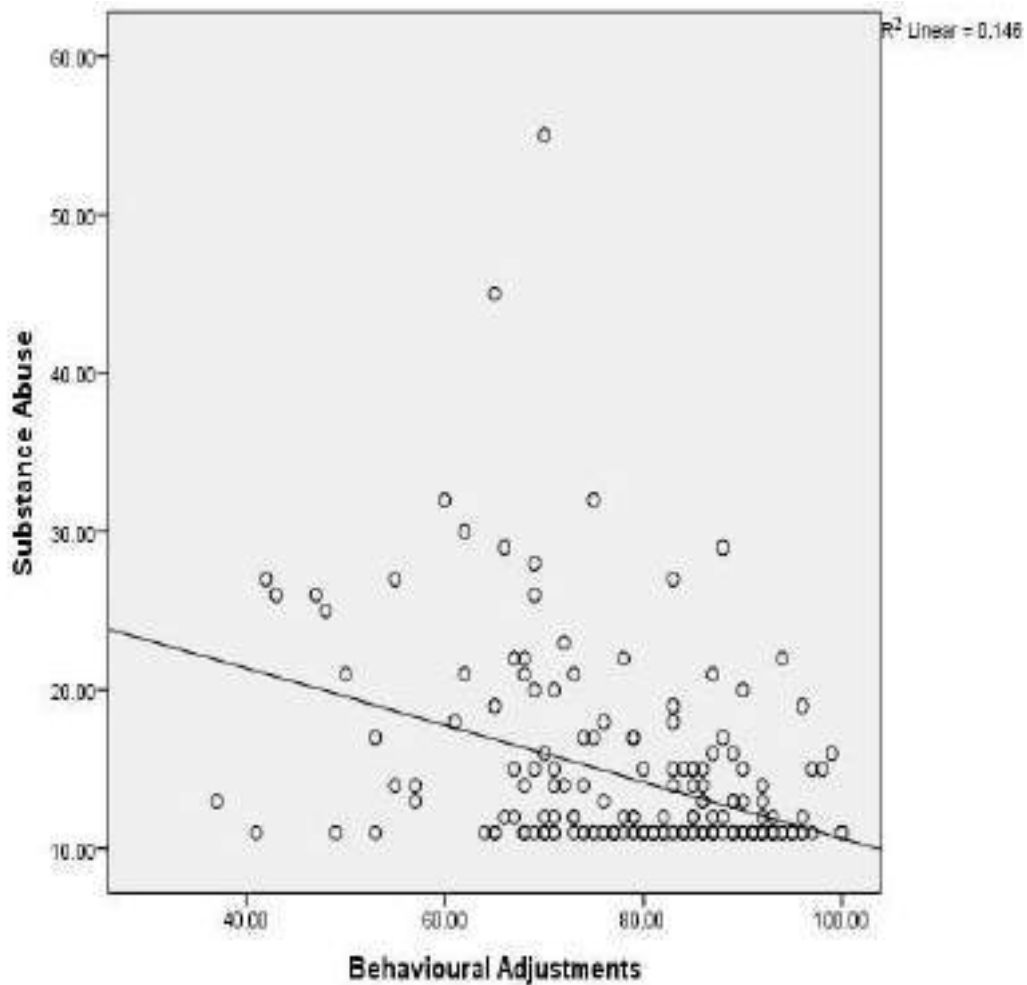


Figure 1. Scatter Graph for Correlation between Substance Abuse Counseling on Behavioural Adjustment

Figure 1 demonstrates a coefficient of determination of 0.146, suggesting a limited degree of shared variation between substance use counseling and behavioural adjustments among university students. There is limited correlation between substance abuse counseling among students and behavioural adaptations. The coefficient of determination of 0.146 indicates that approximately 0.14% of the variability in the two sets of scores can be attributed to shared variance, while the remaining 99.86% of the variability is attributable to independent variance. This suggests that factors other than substance abuse are primarily responsible for the observed changes in behaviour.

## CONCLUSION

In conclusion, most students abused substances because of their availability, access and peer influence. The study recommends that Universities should enforce strict rules on alcohol and drug abuse by requiring all social events during orientation of first years to be alcohol free. Disseminate responsible host guidelines for both on and off-campus parties, install a responsible beverage service program, eliminate residence hall delivery of alcohol purchases, and advertise food and activities, such as dancing or sports, rather than drinking as the focus of

the event. This study suggests that future studies should be carried out to assess the effectiveness of different counseling methods, including cognitive-behavioural therapy (CBT), mindfulness-based interventions, group therapy, and online counseling, in enhancing behavioural adjustments among university students.

## REFERENCES

1. Arria A. M., Geisner, I. M., Jason, I. R. Kilmer, J. R., Caldeira, K. Barrall, A et al., (2018). Perceived academic benefit is associated with nonmedical prescription stimulant use among college students. *Addict Behaviours* 27-33.
2. Ayele A. (2018). Assessing Major Adjustment Problems of First Year Students in Ethiopia, Wolaita Sodo University. *American Journal of Educational Research*. 2018, 6(9), 1326-1332.
3. Barrable, A., Papadatou-Pastou, M. & Tzotzoli, P. (2018). Supporting mental health, wellbeing and study skills in Higher Education: an online intervention system. *Int J Ment Health Syst* 12, 54 (2018). <https://doi.org/10.1186/s13033-018-0233-z>
4. Commission of University Education (2023). *Universities Regulations 2023*. Retrieved



- from [https://www.cue.or.ke/index.php?option=com\\_phocadownload&view=category&id=71:amended-universities-regulations-2019&Itemid=494](https://www.cue.or.ke/index.php?option=com_phocadownload&view=category&id=71:amended-universities-regulations-2019&Itemid=494)
- Kaggwa, M. & Muwanguzi, M., Najjuka, S., Elicana, N., Kajjimu, J., Mamunid, M., Arinaitwe, I., Ashaba, S., & Griffiths, M. (2022). Risky sexual behaviours among Ugandan university students: A pilot study exploring the role of adverse childhood experiences, substance use history, and family environment. *PLoS ONE*. 17. e0277129. doi:10.1371/journal.pone.0277129.
  - Khaliq, A., & Rasool, S. (2020). Causes of Students' Antisocial Behavior at Secondary Level Schools. *The Spark*, Vol. 4 (2019).
  - Mahmood D & Kakamad, K. K. (2018). Measuring Aggression Among University Students: A Comparative Study Between Garmian University and Soran University Students. *Journal of Garmian University* <https://doi.org/10.24271/garmian.385>.
  - Magill, M., Ray, L., Kiluk, B., Hoadley, A., Bernstein, M., Tonigan, J. S., & Carroll, K. (2019). A meta-analysis of cognitive-behavioral therapy for alcohol or other drug use disorders: Treatment efficacy by contrast condition. *Journal of Consult Clin Psychol*. 2019 Dec;87(12):1093-1105. doi: 10.1037/ccp0000447.
  - Mangeni, J. N. & Mbuthia, G. W. (2018). Substance Use, Abuse and Risky Sexual Behaviour among Students Studying Health Related Courses In A Tertiary Institution In Western Kenya. . *East African Medical Journal*. Vol. 95. No. 3.
  - Mendo-Lázaro, S., León-Del-Barco, B., Polo-Del-Río, M. I., & López-Ramos, V. M.(2022). The Impact of Cooperative Learning on University Students' Academic Goals. *Front Psychol*. 2022 Jan 5;12:787210.
  - McCance-Katz E. F. (2017). *The National Survey on Drug Use and Health: 2017 National Survey on Drug Use and Health (NSDUH)*. SAMHSA – Subst Abuse Ment Heal Serv Adm. 2017;53.
  - Murphy, J. J., MacDonncha, C. Murphy, M. H., & Murphy, N. (2019). Identification of health related behavioral clusters and their association with demographics characteristics in Irish university Students. *BMC Public Health* 2019, Jan 28; 19 (1): 121.
  - National Authority for the Campaign Against Alcohol, & Drug Abuse (Kenya). (2012). *Rapid Situation Assessment of the Status of Drug and Substance Abuse in Kenya, 2012*. National Authority for the Campaign Against Alcohol and Drug Abuse.
  - National Campaign against Alcohol and Drug Abuse (2021). *National Guidelines for Alcohol and Substance Use Prevention and Management in Basic Education Institutions, 2021 National Campaign against Alcohol and Drug Abuse*.
  - Nwanna, U.K, Sulayman A.A, Oluwole I, Kolawole A.K, Komuhang G, & Lawoko S. (2018). Prevalence & Risk Factors for Substance Abuse among University Students in Kampala, Uganda. *Int J Med Res Public Heal (IJMRPH)*. 2018;1(2):1-13.
  - Otto, C., Kaman, A., Erhart, M., & Barkmann, C. (2021). Risk and resource factors of antisocial behaviour in children and adolescents: results of the longitudinal Bella study. *Child Adolesc Psychiatry Ment Health*. doi:10.1186/s13034-021-00412-3.
  - Pedersen M. T., Vorup, J. Nistrup A. & Wilkam, J. (2017). Effect of team sports and resistance training on physical function, quality of life, and motivation in older adults. *Scand J Med Sci Sports*. , 852-864.
  - Ricou, M. Marina, S., Veira, P. M. Duarte, I., & Sampaio, I. (2019). Psychological intervention at a primary health care center: predictors of success. *Bmc Fam Pract* 20, 2019, Aug 17: 20 (1):116. doi:<https://doi.org/10.1186/s12875-019-1005-9>.
  - Salom, C. L., Williams, G. M., Najman, J. M., & Alati, R. (2019). Substance use and mental health disorders are linked to different forms of intimate partner violence victimisation. *Drug Alcohol Depend*. 2019 Jun 1;151:121-7.
  - Schulte-Körne, G. (2016). *Mental Health Problems in a School Setting in Children and Adolescents*. *Dtsch Arztebl Int*. 2016, Mar 113 (11); 183-190
  - Shekari, F, Habibi, P. Nadrian, H. & Mohammadpooras, A. (2020). Health-risk behaviors among Iranian university students, 2019: a web-based survey. *Arch Public Health*. 78, 131 (2020) doi:10.1186/s13690-020-00514-y.
  - Wang, K. (2022). The Yin–Yang Definition Model of Mental Health: The Mental Health Definition in Chinese Culture. *Conceptual Analysis article*. *Front. Psychol.*, 23 March 2022, Volume 13 - 2022
  - Zamanian, H. Poorolajal, J. & Taheri-Kharameh, Z. (2018). Relationship between stress coping strategies, psychological distress, and quality of life among hemodialysis patients. *Perspect Psychiatr Care*. 2018 Jul;54(3):410-415.





# ORGANIZATIONAL CULTURE AND STAFF PERFORMANCE IN SECONDARY SCHOOLS IN BUKEDEA DISTRICT, EASTERN, UGANDA

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Article DOI: <https://doi.org/10.36713/epra17656>

DOI No: 10.36713/epra17656

## ABSTRACT

The study examined the relationship between organizational culture and staff performance in secondary schools in Bukedea District. The study adopted a cross-sectional survey design in which both quantitative and qualitative data were collected. The study objectives were as follows: to determine the relationship between teamwork and staff performance and to determine the relationship between innovation and staff performance in secondary schools in Bukedea District. A sample of 100 employees was selected from the population of 157 respondents. The study's primary informants included deputies, teachers, and head teachers. The sampling methods used included simple random for teachers and census sampling techniques for head teachers and deputies. After data collection, analysis, and presentation, it was established that there is a positive and moderate relationship between teamwork and staff performance, as represented by ( $r = .530, n = 100, p = 0.000 < 0.05$ ). It was noted that staff understand the common goal for their organization, and hence, when an organization sets out the goals, all workers are mandated to abide by them to improve their performance. Similarly, it is concluded that in organizations where staff know each other, every member becomes consistent in their work, and in such a situation, all staff recognize each other for the job well done and staff proactively meet each other's needs by helping each other. In establishing the relationship between innovation and staff performance, it was found that there is a significant and moderate relationship between innovation and staff performance, represented by ( $r = .503, n = 100, p = 0.000 < 0.05$ ). It was noted that organizations with a strong culture of innovation are different in the marketplace and introduce innovations into products and processes to increase their performance. It is therefore concluded that organizational culture through teamwork and a culture of innovation play a tremendous role in staff performance, and hence secondary schools in Bukedea district need to embrace it for better results. It is therefore recommended that a dynamic and entrepreneurial organizational culture that can help staff stick their necks and take risks needs to be built; teamwork needs to be built and improved; more resources should be allocated to the staff members to make their work easy; and staff members should be encouraged to be innovative. Staff members enjoy working in an environment that encourages creative thinking and personal innovation.

## INTRODUCTION

Employee performance has attracted a lot of attention among scholars and practitioners. This is because employee performance is the company's key to success and a source of strategic advantage. Goal-oriented organizations typically rely on an organizational culture that is motivated by values to help them accomplish their goals and objectives. An organization's members must interact with one another and the outside world by a shared set of expectations, values, conventions, leadership styles, and work practices that make up their organizational culture to achieve its goals. Yusuf (2022) defines organizational culture as a system of customs, attitudes, and beliefs that dictate acceptable behavior for staff members. Being social creatures, humans essentially need the company of other humans to socialize, collaborate, and function. Because of this, there must be an organization to provide a space for people to interact and collaborate (Abdullahi et al., 2021).

The values, customs, beliefs, and behaviors that define an organization's identity and methods of operation are reflected in its organizational culture.

An effective corporate culture inspires workers, gives them clear direction, and has an impact on their decisions and behavior (Adam, 2020). It is impossible to overlook the significance of an efficient organizational culture that aligns with business objectives. Workers who are aligned with their personal beliefs and feel part of a positive company culture are typically more engaged in their work, have high job satisfaction, and make valuable contributions to the achievement of organizational objectives. An inclusive work environment, decreased interpersonal disputes, and more cooperation and collaboration among employees are all benefits of a strong organizational culture. Companies can encourage employees to embrace innovation, teamwork, high performance standards, and customer



focus by developing a strong organizational culture. This can boost the competitive edge of the business (Jufrizen, 2021). There may be a difference between the company's ideal culture and the culture that employees truly embrace, even in spite of the fact that organizational culture has a significant impact on worker performance. This disparity arises when the company's professed values and the norms followed on a daily basis at work diverge. Employee discontent, annoyance, and even poor performance may arise from this misalignment (Ekosusilo, 2020; Hasibuan & Bangun, 2020). Performance is both a qualitative and quantitative manifestation of an individual or group's ability to use their knowledge, skills, and talents to carry out and finish tasks in order to achieve goals (Altındağ & Köseadağı, 2015). Thus, it can be claimed that employee performance is a company's key to success and a source of strategic advantage (Diamantidis & Chatzoglou, 2019; Rusu et al., 2016). According to Diamantidis and Chatzoglou (2019), maintaining the organization's existence in a continually changing environment can be achieved through sustainable employee performance growth. A performance appraisal, which must be customized to the needs of each firm, can be used to determine if an employee's performance is good or bad (Rusu et al., 2016).

#### The specific objectives of the study are

1. To determine the relationship between teamwork and staff performance in secondary schools in Bukedea District
2. To determine the relationship between innovation and staff performance in secondary schools in Bukedea District.

#### The following are the null hypotheses of the study

H<sub>02</sub>: There is no statistically significant relationship between teamwork and staff performance in secondary schools in Bukedea District.

H<sub>03</sub>: There is no statistically significant relationship between the culture of innovation and staff performance in secondary schools in Bukedea District.

## LITERATURE REVIEW

### Teamwork and Staff Performance

Teamwork is usually defined as the extent to which a team can reach a predictable goal or completely reach the expected quality of a task Kadavakollu (2013). While there are many variables that can propel proper organizational functioning, teamwork is a key factor that cannot be ignored. While teamwork is regarded by management experts as an important factor in organizations, there is a broad consensus in the literature about its defining features. Katzenbach and Smith (2018) stated that a team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable. In addition, regular communication, coordination, distinctive roles, interdependent tasks, and shared norms are important features'. In this era of increased competition, leaders within school management recognize the importance of teamwork more than ever before.

Teachers working in teams can improve the performance of students through collaboration. In schools where teachers work as teams, this becomes the standard for the organization (Beam & Carey, 2019). It is a means of improving manpower utilization and potentially raising the performance of students. With support from upper - level management, teachers work confidently in teams and increase the productivity of the organization. A recent study shows that employees working within a team can produce more output as compared to individuals (Jones, Richard, Paul, Sloane, & Peter, 2017). According to (Amadi, 2019), culture and teamwork in an organization foster openness, fairness, and sincerity, thus allowing full involvement of everyone in the organization. Additionally, Cohen & Bailey (2015) argued that an employee team is a collection of individuals who are interdependent on the tasks and who share responsibility for the outcomes. Teamwork is an important factor for the smooth functioning of the school. Most of the school activities become complex due to advancements in teamwork; therefore, teamwork is a major focus of many organizations. One research study concluded that teamwork is necessary for all types of organizations including non-profit organizations, since it enhances skills, knowledge, and abilities.

Amadi (2019) pointed out that 85% of problems are the result of system problems caused by a failed organizational culture in teamwork; on the other hand, 15% of the problems are attributed to the low performance of staff. Staff must receive clear standards for work and a stress-free working environment, among others, from the culture, and lead the team effectively through clear goals, and assessment technique. Further, (Amadi, 2019) gave staff the status of managers so that they could implement the culture, and be role models in dealing with the most vital processes of human life, that is, learning, coping with the challenges of the changing world, and socialization. As a culture, administrators must treat their staff fairly, and create a comfortable environment by stimulating them to cooperate with one another. (Amadi, 2019) argued that for teams to be successful, they must have attributes of clear objectives in the educational policy. The performance as a team works hand in hand with the school culture compliance team to make sure that school culture and quality are not compromised, as each employee is expected to perform at their best. In the United Kingdom, schools are involved in staff performance, while in Uganda, schools are mostly concerned with collective bargaining, terms and conditions of work without much concern about the performance of staff (Kelly et al., 2019). (Wambugu, 2014), points out that open-book management takes those new management ideas of empowerment, teams and gives them business logic. (Wambugu, 2014) additionally explains that, in open-book management, there are three essential differences to a conventional business. Every employee sees and learns to understand the organization's financial, along with all the other numbers that are critical to tracking organizational performance.



### Innovation and Staff Performance

Organizations with the aim of improving innovation and the performance of staff must pay attention to their culture, since it's a key enabler or great barrier against both, depending on the values that make up the current organizational culture (Naranjo-Valencia et al., 2016). Additionally, Sharifirad and Ataei (2012) claimed that organizational culture impacts the culture of innovation, which is formed by traits that use values of flexibility as a means of reaching goals aimed at development, and interaction with the external environment, while culture is shaped by traits that involve order, information management, and communications with the goal of maintaining stability and control. Recent studies (Shahzad et al., 2017; Park et al., 2016) have considered the relationship between organizational culture of innovation and staff performance.

Shahzad et al (2017) established that product innovation does not affect staff performance in generous environments but has a positive impact on the performance of staff in antagonistic environments. Focusing on a sample of US business service companies, (Uzkurt et al., 2013) established that the availability of innovation has a positive impact on the organization's development, but has no effect on productivity, which is contrary to our study in Uganda. Callan and Levinson (2011) contended that goal setting is a process that uses the strengths of students to improve upon their weaknesses, and ultimately helps lead them to success. Teachers, administrators, parents, and the community should have a working relationship to that students are given every opportunity to succeed. Student achievement is ultimately the goal of all stakeholders, and everyone needs to understand how they work and what role they play in helping students achieve each goal that is set.

Naranjo-Valencia et al., (2016) investigated the value of creativity in corporate culture, indicating that organizations are based on knowledge; the success and survival of these depend on innovation, and originality, among others. The effect is that organizations foster the creation of an institutional environment in which innovation is accepted as a cultural norm in varying

environments, emphasizing the value of organizational culture in this context (Uzkurt et al., 2013). Organizational innovation and learning are affected by organizational values, work environment, knowledge sharing, and all other factors created by organizational culture (Shahzad et al., 2017). Researchers agree that the culture of the organization has an effect on staff performance and effectiveness (Saad & Abbas, 2018). Meanwhile, studies have been enthusiastic about examining the role of culture as an organizational resource that affects performance (Kumari & Singh, 2018). According to (Hogan and Coote, 2014), the fact that culture influences the effectiveness of a firm is an inherent assumption of many administrators, yet they admit that few empirical studies have provided a detailed view of these relationships. They further accomplish that, through the analysis of 99 health units in the United States, staff attitude has a mediating role in the relationship between organizational culture and various measures of organizational performance.

### METHODOLOGY

A cross-sectional survey design was used in this study. Headteachers, teachers, and non-teaching staff from the secondary schools in Bukedea District constituted the study's population. A sample of 100 employees was chosen from the 157 respondents that made up the study population. The study's primary informants included deputies, teachers, and head teachers. A simple random sample was employed for teachers, while census sampling was used for head teachers and deputies. Interview techniques and questionnaires were used to gather data. Descriptive statistics and percentages were used to evaluate the quantitative data, and content analysis was used to study the qualitative data.

### RESULTS

The hypotheses were tested using a Pearson correlation coefficient at the 0.05 level of significance. **Hypothesis One:**

H<sub>02</sub>: There is no statistically significant relationship between teamwork and staff performance in secondary schools in Bukedea District.

**Table 1: The Pearson Product Moment Correlation Index obtained on Team work and Staff Performance in Secondary School in Bukedea District.**

		Team Work	Staff Performance
Team work	Pearson Correlation	1	.530**
	Sig. (2-tailed)		.000
	N	100	100
Staff Performance	Pearson Correlation	.530**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results shown in Table 1 above pertain to the Pearson product moment correlation index, which measures teamwork and staff performance. It is denoted by  $r = 0.530^{**}$ . The results show a moderate relationship between teamwork and staff performance

in secondary schools in Bukedea District, with a positive sig value of  $p = 0.000 < 0.05$ . Based on the p- value the null hypothesis is rejected .The findings demonstrate the importance of teamwork in employee performance in firms, indicating that all



organizations should promote it. This relates to (Alie, Beam, & Carey, 2019), who observed that collaborative teaching among teachers can enhance students' performance. When educators collaborate in teams, it becomes the norm for the institution.

### Hypothesis Two

Ho3: There is no statistically significant relationship organisational culture of innovation and staff performance in secondary schools in Bukedea District.

**Table 2: The Pearson Product Moment Correlation Index obtained on Innovation and Staff Performance in Secondary School in Bukedea District.**

		Innovation	Staff Performance
Innovation	Pearson Correlation	1	.503**
	Sig. (2-tailed)		.000
	N	100	100
Staff Performance	Pearson Correlation	.503**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

According to Table 2, the Pearson product moment correlation index obtained on teamwork and staff performance is represented as  $r = 0.503^{**}$ . The null hypothesis is rejected because the association between innovation and staff performance in secondary schools in Bukedea District is positive and moderate, as indicated by the sig value of  $p = 0.000 < 0.05$ . This relates to Laforet (2011), who noted that organizations with a strong innovation culture stand out in the marketplace and incorporate new ideas into their operations and products to improve efficiency.

### CONCLUSION

Based on the findings of the study, the following conclusions are made;

- The study established a positive and moderate relationship between teamwork and staff performance. This indicates that effective teamwork can contribute to improved staff performance in organizations, and hence, organizations need to embrace teamwork as a means of improving their staff performance.
- There was also a significant and moderate relationship between innovation and staff performance. Organizations with a strong culture of innovation were found to stand out in the marketplace and enhance their performance through innovative practices. This means that organizations need to be innovative for them to stand out from the rest of the organizations in the marketplace.
- The study highlighted the significant effect of teamwork and a culture of innovation in enhancing staff performance in secondary schools. Embracing these aspects can lead to better results in secondary schools in Bukedea and around the world.
- Finally, the study emphasizes the importance of teamwork, innovation, and a supportive organizational culture in enhancing staff performance in secondary schools. By recognizing and fostering these elements, schools can create an environment conducive to improving staff performance and overall organizational success.

### Recommendations

Based on the findings of the study, the following recommendations are made;

1. Organizations need to create a dynamic and entrepreneurial organizational culture that encourages staff members to take risks and be innovative, thereby enhancing staff performance and productivity.
2. Organizations need to build teamwork among staff members since it can positively impact staff performance, which leads to overall organizational success.
3. Organizations should allocate more resources to staff members to make their work easier and more efficient since more resources can contribute to improved performance amongst staff members in the organization.
4. Staff members should be encouraged to be innovative. Staff members enjoy working in an environment that encourages creative thinking and personal innovation.

### REFERENCE

1. Abdullahi, M. R. (2021). *Effect of Organizational Culture on Employee Performance: A Mediating Role of Employee Engagement in Malaysia Educational Sector*. . *International Journal of Supply and Operations Management*.
2. Adam, A. Y. (2020). *The Mediation Effect of Organizational Commitment in the Relation of Organization Culture and Employee Performance*.
3. Adu, J. &. (2022). *Build Organizational Citizenship Behavior Toward Environment Through Organizational Culture, Organizational Commitment and Mediated Self-efficacy*. *International Journal of Indonesian Business Review*.
4. Altındağ, E. &. (2015). *The Relationship Between Emotional Intelligence of Managers, Innovative Corporate Culture and Employee Performance*. . *Procedia - Social and Behavioral Sciences*.
5. Dermal, V. &. (2013). *The influence of training and training transfer factors on organizational learning and performance*. *Personnel Review*, 42(3), 324–348.
6. Diamantidis, A. D. (2019). *Factors affecting employee performance: an empirical approach*. . *International Journal of*





*Productivity and Performance Management*, 68(1), 171–193.

7. Ekosusilo, M. (2020). *The impact of organizational culture, compensation on job satisfaction, and work motivation on school principal performance in Indonesia: Mediating role of supply chain practices*. *International Journal of Supply Chain Management*.
8. Hasibuan, P. W. (2020). *The Influence of Organizational Compensation and Culture on Employee Performance in PT. Artatel Indokarya*. *Journal of Research in Business, Economics, and Education*.
9. Jufrizen, J. M. (2021). *Effect of Moderation of Work Motivation on the Influence of Organizational Culture On Organizational Commitment and Employee Performance*. *International Journal of Business Economics (IJBE)*.
10. Pulakos, E. D. (2015). *Performance management can be fixed: Anon-the-job experiential learning approach for complex behavior change*. *Organizational Psychology*, 8(1), 51–76. <https://doi.org/10.1017/iop.2014.2>.
11. Rusu, G. A. (2016). *Organizational Context Factors Influencing Employee Performance Appraisal: A Research Framework*. *A Research Framework. Procedia - Social and Behavioral Sciences*, 221, 57–65.



# FACTORS AFFECTING THE PROFITABILITY OF COAL MINING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Article DOI: <https://doi.org/10.36713/epra17695>

DOI No: 10.36713/epra17695

## ABSTRACT

Coal mining companies are the top three contributors to the national economy after the trade and retail sector and the agriculture and livestock sector. Coal mining companies show a negative trend in the achievement of return on assets (ROA), especially in 2021 as the peak experienced. This is none other than due to the Covid-19 pandemic that is spreading and has resulted in many company sectors experiencing setbacks due to the regional restrictions imposed. This implies that the majority of companies fail to achieve maximum return on assets but many companies experience losses in 2021. This study aims to determine the effect of operational efficiency, working capital turnover, and asset turnover on the rate of return on assets of coal mining companies listed on the Indonesia Stock Exchange in 2018-2022. The method used in this study is panel data regression which combines time series data, namely 2018-2022 and cross section data in the form of 16 companies, then classical assumption tests and hypothesis testing are carried out. The results of this study indicate that operational efficiency (BOPO) has a significant negative effect on the rate of return on assets (ROA). While working capital turnover (WCTO) and total asset turnover (TATO) have a significant positive effect on the rate of return on assets (ROA).

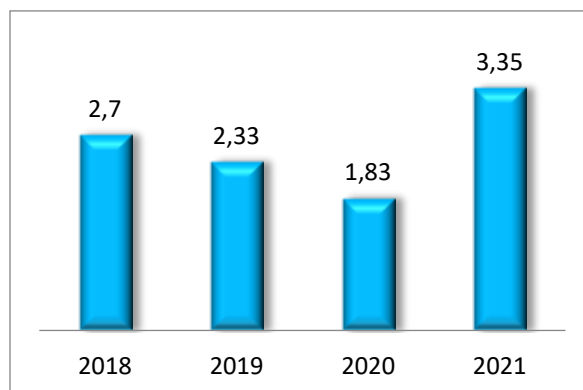
**KEYWORDS:** Operational Efficiency (BOPO), Working Capital Turnover (WCTO), Total Asset Turnover (TATO), Return on Assets (ROA).

## 1. INTRODUCTION

### Background

Indonesia is a country with abundant resources, especially in the mining sector. Mining reserves, including coal, are a sub-sector of the mining and quarrying business field which is the

primary fuel for most companies. Coal mining companies are the top three contributors to the national economy after the trade and retail sector and the agriculture and livestock sector. However, in 2022, coal mining companies experienced a rapid increase in their contribution to GDP.



Contribution of Coal Mining Companies to GDP (Percent) Source: Central Bureau of Statistics, 2022.

In the 2018-2021 period, coal mining companies experienced significant fluctuations in their achievements in National GDP. This is due to the covid-19 pandemic phenomenon. The lowest achievement occurred in 2020, namely 1.83%, which was the peak year of the co-19 pandemic, resulting in financial performance in all industrial sectors experiencing a slowdown and even a very significant negative trend. However, in 2021 it gradually increased to 3.35%, showing the positive stretch of

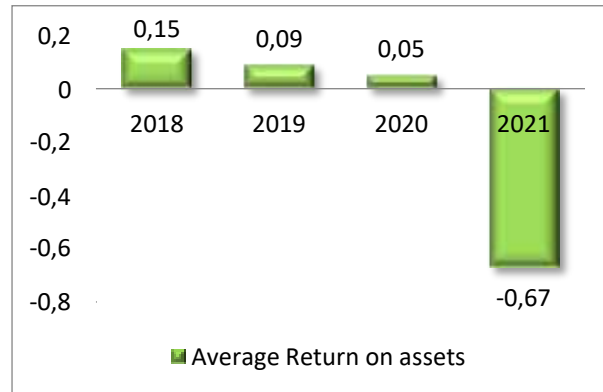
coal mining companies. This achievement cannot be separated from the financial performance of coal mining companies. Financial performance has indicators, one of which is the rate of return on assets.

In 2020, coal mining companies are still the largest contributor to state revenue through Non-Tax State Revenue (PNBP). As much as 85% of the total Minerba PNBP came from coal and



in 2020 this achievement touched a figure of 110.15% of the set target. However, in 2019, the covid-19 pandemic phenomenon significantly targeted the mineral and coal sector. The financial performance of coal mining companies

on average experienced a decrease in revenue or net profit of 20% to 50% on an annual basis in the first quarter of 2020 (Fadliansyah, 2020).



Average ROA of Mining Companies 2018-2021 (Percent) Source: Faradita & Damayanti, 2023.

Coal mining companies show a negative trend in the achievement of *return on assets* (ROA), especially in 2021 as the peak experienced. This is none other than due to the Covid-19 pandemic that is currently raging and has resulted in many company sectors experiencing setbacks due to the regional restrictions imposed. The average ROA decreased to -0.67% in 2021, implying that the majority of companies failed to achieve maximum return on assets but many companies experienced losses in 2021.

The rate of *return on assets* (ROA) is important in the company's financial performance because it reflects the ability of a company to generate profits from its assets or resources (Primatua, 2017). ROA provides a better measure of the company's profitability as a reflection of the effectiveness of management in using assets to generate revenue. Companies with a high rate of return on assets are stated to have reliable financial management capabilities and are successful in carrying out company operations within a certain period of time (Adang & Wijoyo, 2023). Companies with good asset returns will also be assessed by the public as having good financial performance (Ervina & Salim, 2021). With a high rate of return on assets, the task of financial management is also glimpsed because of its financial performance in managing a business that reaches the target (Larisa & Salim, 2021).

The rate of return on assets (ROA) is determined by earnings management that results in good financial performance so that the higher rate of return on assets obtained triggers the company's superior potential (Andriawan & Setiawan, 2020). The achievement of the rate of return on assets depends on the management of financial accountability carried out by the company to allocate funds for the company's operational activities (Indra, et.al., 2022). The company's role in providing capital and ensuring financial leverage also triggers an increase in the rate of return on assets (Setyawan, et.al., 2022). So that the return on assets report is reconsidered as a picture of the company's efficiency in utilizing assets or maximum profit sharing (Widoatmodjo & Setyawan, 2023). Which in the end all boils down to attracting investor attention (Setijaningsih,

et.al., 2021).

There are various influencing factors that can affect the increase or decrease in ROA of a company. This study uses operational efficiency, working capital turnover and total asset turnover based on previous research that has been done. Operational efficiency or operating expenses operating income (BOPO) is the ratio of operating costs and operating income, if the value is lower, the level of operational efficiency is getting better in a company (Kasmir, 2016). The rate of return on assets of a company is highly dependent on the operational efficiency of a company, the company will not get maximum profit if operational efficiency does not run well (Rosandy & Sha, 2022). According to research conducted by (Setyawan, et.al 2023) states that BOPO has no significant effect on *return on assets*. Meanwhile, research (Dewi, 2018) and (Rasyid & Kurniawati, 2022) state that BOPO has a significant negative effect on *return on assets*.

*Working capital turnover* (WCTO) is a ratio measure of the effectiveness of the company's working capital in a certain period by comparing net sales and working capital (Kasmir, 2016). A high WCTO will show the higher the company's ability to manage working capital so that it has a good operational cycle and does not experience excess inventory. So that the better the operational cycle through the maximum WCTO ratio will increase the company's cash flow and income which leads to the rate of return on assets of a company. According to research conducted (Amelda, et.al 2022) and (Amanda, et.al 2023) WCTO has a significant effect on net income with a *return on assets* indicator. Meanwhile, according to research conducted (Jastine & Susanto, 2020) and (Maisa, etal 2020), WCTO does not have a significant effect on profitability or *return on assets*.



The third factor in this study is asset turnover or total asset turnover (TATO) which is a measure of the effectiveness of the company's assets in generating sales from each fund embedded in total assets (Hery, 2016). High TATO reflects that the company is very efficient in optimizing the use of assets to obtain maximum income. According to research conducted (Amelda, et.al 2022) and (Nurlaela, et.al 2019) TATO has a significant effect on net income with the return on assets indicator. Meanwhile, according to research conducted by (Setyawan, et.al 2023) and (Prasetio, et. al 2021) stated that TATO has no significant effect on return on assets.

Based on the data and research gaps described above, this study aims to determine the effect of operational efficiency, working capital turnover, and asset turnover on the rate of return on assets of coal mining companies listed on the Indonesia Stock Exchange in 2018-2022. Analysis of the factors influencing the rate of return on assets is important considering that coal mining companies are a leading sector that dominates the contribution to national economic growth and financial performance reports are considered important by stakeholders such as the government and investors in relation to the ability of a company to generate profits from its assets or resources.

$$\text{Return On Assets} = \frac{\text{Earning After Tax}}{\text{Total Asset}} \times 100\%$$

### Operational Efficiency (BOPO)

According to Cashmere (2016) operational efficiency is the ratio of operating costs and operating income as a measure of the level of efficiency and the company's ability to carry out its operating activities. If the value is lower, the level of

$$\text{Operasional Efficiency} = \frac{\text{Operating Cost}}{\text{Operating Income}} \times 100\%$$

### Working Capital Turnover (WCTO)

According to Cashmere (2016) Working capital turnover is a ratio measure of the effectiveness of the company's working capital in a certain period by comparing net sales and working capital. A high WCTO will show the higher the company's ability to manage working capital so that it has a good

$$\text{Working Capital Turnover} = \frac{\text{Net Sales}}{\text{Working CApital}} \times 100\%$$

### Total Asset Turnover (TATO)

According to Kasmir (2016), asset turnover is a measure of the effectiveness of the company's assets in generating sales from each fund embedded in total assets. High TATO reflects that

$$\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Asset}} \times 100\%$$

## 2. RESEARCH METHODS

This research using quantitative methods has the aim of identifying the relationship between the variables used, testing the theory to get a generalization of the predictive value (Sugiyono, 2019). The data used in this study is panel data consisting of cross section and time series data. The cross section data used are 16 coal mining companies listed on the Indonesia Stock Exchange and time series data consisting of

### Problem Formulation

Based on the background above, this research has the following problem formulations:

1. How does Operating Expenses and Operating Income (BOPO) affect the Profitability of Mining Companies listed on the IDX in 2018-2022?
2. How does Working Capital Turnover (WCTO) affect the profitability of mining companies listed on the IDX in 2018-2022?
3. How does Total Asset Turnover (TATO) affect the profitability of mining companies listed on the IDX in 2018-2022?

## 2. LITERATURE REVIEW

### Return on Assets

According to Cashmere (2016) the rate of return on assets known as the yield ratio is a profit power ratio that defines the company's strength in generating maximum profit from the resources owned by the company (assets). If the ratio is greater, it is considered better because it reflects the company's success in using assets effectively to generate profits. The rate of return on assets is formulated as follows:

operational cost efficiency is getting better because with cost efficiency, the company's profits are getting bigger. The operational efficiency ratio is formulated as follows:

operational cycle and does not experience excess inventory. So that the better the operational cycle through the good performance of WCTO will increase the company's cash flow and income which leads to the rate of return on assets of a company. The working capital turnover is formulated as follows:

the company is very efficient in optimizing the use of assets to obtain maximum income. The asset turnover is formulated as follows:

2018 to 2022. This research uses Eviews software to conduct statistical testing.





## DATA ANALYSIS TECHNIQUE

### a. Panel Data Regression Model Selection Test

#### 1. Chow Test

Statistical testing on panel data which aims to choose the best model between

*Fixed Effect* or *Common Effect*. The hypothesis of this test is:

$H_0$  : accept *Common Effect Model*  $H_1$  : accept *Fixed Effect Model*

If the probability value is greater than  $\alpha = 0.05$  then  $H_0$  is accepted which means that the *Common Effect Model* is the best model to use. However, if the probability value is smaller than  $\alpha = 0.05$  then  $H_1$  is accepted, which means that the *Fixed Effect Model* is the best model that can be used. However, if  $H_0$  is rejected, the FEM must be tested again to choose between FEM and REM as the best model to use.

#### 2. Hausman Test

The Hausman test is a statistical test on the panel data regression model which aims to choose the best model between the *Fixed Effect Model* or the *Random Effect Model*. This specification will provide a *chi-square statistic* so that the mode selection decision can be determined statistically. The hypothesis of this tester is :

$H_0$  : *Random Effect Model*  $H_1$  : *Fixed Effect Model*

If the probability value is greater than the significance level  $\alpha = 0.05$  then  $H_0$  is accepted, meaning that the *Random Effect Model* is the best model to use, but if the probability value is smaller than the significance level  $\alpha = 0.05$  then  $H_1$  is accepted, meaning that the *Fixed Effect Model* is the best model that can be used.

#### 3. Lagrange Multiplier Test (LM Test)

The lagrange multiplier test is the value of statistical testing to determine between the *Random Effect Model* and the *Common Effect Model* which is most appropriate for panel data estimation. The hypothesis of this test is:

$H_0$  : *Common Effect Model*  $H_1$  : *Random Effect Model*

### b. Classical Assumption Test

The classic assumption test is carried out to ensure that the regression model is not infected with classic assumption problems (Ghozali, 2018).

#### 1. Normality Test

The normality test is carried out to check whether a normal distribution exists in the independent and dependent variables in the regression model. Statistical test results will be affected if the distribution is not normal. The normality test in this study uses the *Jarque-Bera* test to detect data distribution (Ghozali, 2018).

#### 2. Multicollinearity Test

The multicollinearity test aims to determine whether there is a correlation between the independent variables in the regression model. This test decision is based on the correlation between independent variables. If the correlation coefficient value is greater than 0.8, it can be said that multicollinearity occurs and if the correlation coefficient value of each independent variable is less than 0.8, multicollinearity does not occur (Ghozali, 2018).

#### 3. Heteroscedasticity Test

The heteroscedasticity test is used to check whether there

are differences in the *variance of the* residuals between observations in the regression model. In this study, the Glejser test is used to evaluate the absolute residual value against the independent variable. This study uses the Heteroscedasticity Test by looking at the *cross-section LR test* value. In the *cross-section LR test*, if the *pro chi-square* value is  $>$  from 0.05 then there is no heteroscedasticity problem (Ghazali, 2018).

#### 4. Autocorrelation Test

Testing for autocorrelation in a model is aimed at checking for a correlation between the values of variables during a particular time period and the values of variables in the previous period. Autocorrelation occurs when successive observations in time are related. The ideal regression model is free of autocorrelation (Ghazali, 2018). The clue for this test is related to the Durbin-Watson or D-W value, namely:

- A D-W number below -2 indicates positive autocorrelation
- D-W numbers between -2 and +2 indicate the absence of autocorrelation (independent)
- D-W number above +2 indicates negative autocorrelation

### c. Panel Data Regression Analysis

The panel data regression equation in this study is as follows:

$$ROA_{it} = \alpha + \beta BOPO + \beta_{1it} WCTO + \beta TATO_{2it33it} + e$$

Description:

ROA	= Return on Assets
$\alpha$	= constant
$\beta$	= Variable coefficient BOPO = Operating Efficiency WCTO = Working capital turnover TATO = Total asset turnover
t=	year 2018-2022
i=	company = error term

### d. Hypothesis Test

#### 1. Partial Test

The t test is used to determine how the effect of each independent variable partially on the dependent variable. The independent variables used in this study are Operational Efficiency (X1), Working Capital Turnover (X2) and Total Asset Turnover (X3) while the dependent variable used is the Asset Return Rate (Y) The partial test shows how much influence each independent variable has on the dependent variable individually. In this study, the significance level of the partial test is 5% (Ghazali, 2018).

#### 2. Simultaneous F Test

The Simutan F test aims to assess whether the independent variables jointly affect the dependent variable. In this study, the significance level of the f statistical test is 5% (Ghazali, 2018). With the following decision-making requirements:

- Prob. F-statistic  $<$   $\alpha = 0.05$  then  $H_1$  is accepted. The independent variable simultaneously affects the dependent variable.
- Prob. F-statistic  $>$   $\alpha = 0.05$  then  $H_0$  is accepted. Independent variables simultaneously do not affect the dependent variable.



3. Determination Test

The coefficient of determination ( $R^2$ ) is used to measure how well the model can explain the variation in the dependent variable caused by the independent variable. The  $R^2$  value ranges between 0 and 1, where a value close to one indicates

that the independent variable provides significant information to predict changes in the dependent variable (Ghazali, 2018).

The following are 16 coal mining companies listed on the Indonesia Stock Exchange which are used as research samples:

**Table 1. Sample of Listed Coal Mining Companies on the Indonesia Stock Exchange**

NO	COMPANY NAME
1	PT Transcoal Pacific Tbk (TCPI)
2	PT Baramulti Suksessarana Tbk (BSSR)
3	PT Bumi Resources Tbk (BUMI)
4	PT Bayan Resources Tbk (BYAN)
5	PT Adaro Energy Tbk (ADRO)
6	PT Dian Swastatika Sentosa Tbk (DSSA)
7	PT Harum Energy Tbk (HRUM)
8	PT Indo Tambangraya Megah Tbk (ITMG)
9	PT Bukit Asam Tbk (PTBA)
10	PT Golden Eagle Energy Tbk (SMMT)
11	PT TBS Energi Utama Tbk (TOBA)
12	PT Mitrabara Adiperdana Tbk (MBAP)
13	PT Resource Alam Indonesia Tbk (KGGI)
14	PT Golden Energy Mines Tbk (GEMS)
15	PT Atlas Resources Tbk (ARII)
16	PT Indika Energy Tbk (INDY)

Source: Indonesia Stock Exchange, 2022.

4. RESULTS AND DISCUSSION

a. Panel Data Regression Model Selection Test

1. Chow test

Statistical testing on panel data which aims to choose the best model between the *Fixed Effect Model* or the *Common Effect Model*.

**Table.1 Chow Test Results**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	118.230953	(21,85)	0.0000
Cross-section Chi-square	374.899030	21	0.0000

Source: Eviews Data Processing, 2024.

From the results of the *Chow Test* data processing, the cross-section F probability value is 0.0000. This result shows that the cross-section F probability value  $< \alpha$  of 0.05, thus indicating that  $H_0$  is rejected and  $H_1$  is accepted, so the better model to use is the *Fixed Effect Model* (FEM).

b. Hausman Test

Statistical testing on panel data which aims to choose the best model between the *Random Effect Model* or the *Common Effect Model*.

**Table.2 Hausman Test Results**

Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.224963	3	0.0270

Source: Eviews Data Processing, 2024.

Based on the results of the Hausman test in the table, the probability value on the *random cross-section* is  $0.0000 < \alpha$  (0.05). So it can be concluded that  $H_0$  is rejected and  $H_1$  is accepted, thus the chosen and most appropriate model to use is the *Fixed Effect Model* (FEM).

Based on the *Chow Test* and *Hausman Test*, the selected panel data regression model is the *Fixed Effect Model* (FEM).



**b. Classical Assumption Test**

**Table.3 Multicollinearity Test Results**

	X1_BOPO	X2_WCTO	X3_TATO
X1_BOPO	1.000000	0.130806	0.040633
X2_WCTO	0.130806	1.000000	0.138807
X3_TATO	0.040633	0.138807	1.000000

Source: Eviews Data Processing, 2024.

Based on the results of the Multicollinearity Test, the correlation value between each independent variable is less than 0.8. So it can be concluded that there is no multicollinearity

problem between the independent variables in this research model.

**Heteroscedasticity Test**

**Table.3 Heteroscedasticity Test Results**

Panel Cross-section Heteroskedasticity LR Test			
Null hypothesis: Residuals are homoscedastic			
	Value	Df	Probability
Likelihood ratio	9.154752	4	0.1573

Source: Eviews Data Processing, 2024.

Based on the table above, the probability value of the Likelihood Ratio (LR) statistic 0.1573 is greater than  $\alpha = 0.05$ , so the homoskedastic variance is accepted and it can be

concluded that there is no heteroscedasticity problem.

**2. Panel Data Regression Analysis**

**Table.5 Fixed Effect Regression Model**

Dependent Variable: Y_ROA					
Method: Panel Least Squares					
Sample: 2018 2022					
Periods included: 5					
Cross-sections included: 16					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	1.308554	1.031152	9.904956	0.0000	
X1_BOPO	-1.284386	0.294885	-4.355553	0.0001	
X2_WCTO	2.600005	0.000147	0.176724	0.0003	
X3_TATO	0.099376	0.029305	3.391103	0.0012	
Adjusted R-squared	0.668687				
Prob(F-statistic)	0.000000				
Durbin-Watson stat	1.511209				

Source:DataViews,2024.

Based on the Fixed Effect Model panel data regression results, the following regression equation is obtained:

$$ROA_{it} = 0.308554 + -1.284386BOPO_{1it} + 2.600005WCTO_{2it} + 0.099376TATO_{3it}$$

The panel data regression results with the Fixed Effect Model estimation model show a constant value of 1.308554. This value means that if the value of the independent variables, namely Operational Efficiency, Working Capital Turnover and Total Asset Turnover, is considered constant, the Asset Return Rate is 1.308554. The natural constant of this study is positive.



### 3. Hypothesis Test T Test Statistics

Table.6 T-test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.308554	1.031152	9.904956	0.0000
X1_BOPO	-1.284386	0.294885	-4.355553	0.0001
X2_WCTO	2.600005	0.000147	0.176724	0.0003
X3_TATO	0.099376	0.029305	3.391103	0.0012

Source: Eviews Data Processing, 2024.

The BOPO variable has a significant negative effect on the value of the rate of return on assets of coal mining companies with a probability value of 0.0001, smaller than  $\alpha = 0.05$ . This means that an increase in Operational Efficiency by 1% will reduce the return on assets of coal mining companies by 1.284386%.

The WCTO variable has a significant positive effect on the return on assets of coal mining companies with a probability value of 0.0003, smaller than  $\alpha = 0.05$ . This means that an increase in Working Capital Turnover by 1% will increase the rate of return on assets of coal mining companies by 2.600005%.

The TATO variable has a significant positive effect on the rate of return on assets of coal mining companies with a probability value of 0.0012, smaller than  $\alpha = 0.05$ . This means that an increase in Total Asset Turnover by 1% will increase the rate of return on assets of coal mining companies by 0.099376%.

#### Simultaneous F Test

Based on the regression results in table.5, the probability value (*F-statistic*) of 0.000000 is smaller than  $\alpha = 0.05$ . Indicates that the variables of operational efficiency, working capital turnover, and total asset turnover have a simultaneous influence on the rate of return on assets of coal mining companies.

#### Coefficient of Determination

Based on the regression results in table.5 shows the R-Squared value of 0.668687, namely the rate of return on assets of coal mining companies can be explained by operational efficiency variables, working capital turnover, and total asset turnover of 66.8687%, while 33.1313% is explained by other variables outside the study.

### DISCUSSION

#### The Effect of Operational Efficiency on the Return on Assets of Coal Mining Companies

Based on the results of data analysis, operational efficiency has a significant negative effect on the rate of return on assets of coal mining companies, it can be seen from the probability value of 0.0001 smaller than  $\alpha = 0.05$  and a negative coefficient of -1.284386. This means that an increase in operational efficiency by 1% will reduce the rate of return on assets of coal mining companies by 1.284386%.

The results of this study are also in accordance with the theory put forward by Kasmir (2016) that the smaller the operating income, the lower the operational efficiency of a company and the impact on the rate of return on assets. The results of this study are supported by research conducted by Dewi (2018)

which states that BOPO has a significant negative effect on the rate of return on assets. This condition occurs due to any increase in the company's operating costs will result in reduced profit before tax earned which in turn reduces the company's rate of return on assets. Then the high BOPO is also caused by high operating costs and low interest income from capital investment. Furthermore, the same thing is also revealed by the research of Rasyid & Kurniawati (2022) which states that BOPO has a significant negative effect on the rate of return on assets because high operating costs can reduce the company's operating income thereby reducing the rate of return on assets periodically.

The results of this study are also in line with research data that coal mining companies with a high level of operational efficiency have a lower return on assets. As happened in PT Baramulti Suksessarana Tbk (BSSR) with the highest BOPO achievement in 2022 among 16 coal mining companies sampled in the study, it has a BOPO level of 15.07% and has an ROA achievement of 59.26%. The rate of return on assets is smaller than PT Golden Energy Mines Tbk (GEMS) which has an ROA achievement of 60.26% with a lower BOPO level of 13.62%.

#### The Effect of Working Capital Turnover on the Return on Assets of Coal Mining Companies

Based on the results of data analysis, working capital turnover has a significant positive effect on the rate of return on assets of coal mining companies, it can be seen from the probability value of 0.0003 smaller than  $\alpha = 0.05$  and a positive coefficient of 2.600005. This means that an increase in working capital turnover of 1% will increase the rate of return on assets of coal mining companies by 2.600005%.

These results are in accordance with the theory expressed by Cashmere (2016) that a high WCTO will show the higher the company's ability to manage working capital so that it has a good operational cycle and does not experience excess inventory so that the return on assets is easier to maximize. The results of this study are also supported by research conducted by Amelda, et.al (2022) which states that working capital turnover or WCTO has a significant positive effect on the rate of return on assets. High working capital turnover in line with the shorter period owned will raise the possibility of the company to earn profits from sales and working capital that is increasing. WCTO which tends to be high will also stimulate the acceleration of funds invested into working capital back into cash or in other words the company is more effective in carrying out transaction activities so that the rate of return on assets will be received more quickly. The same thing is also stated in the research of Amanda, et.al (2023) that a high WCTO indicates





the greater cash flow received by the company, thus creating an opportunity for the company's profitability to grow in the future.

Based on research data, PT Golden Energy Mines Tbk (GEMS) is a company that has WCTO achievements that have always increased significantly from 2018 to 2022 and has never experienced collapse. In line with this, the ROA achievement of PT Golden Energy Mines Tbk (GEMS) was the highest in 2022, which was 60.26% greater than other coal mining companies used in the research data.

### The Effect of Total Asset Turnover on the Return on Assets of Coal Mining Companies

Based on the results of data analysis, total asset turnover has a significant positive effect on the rate of return on assets of coal mining companies, it can be seen from the probability value of 0.0012 smaller than  $\alpha = 0.05$  and a positive coefficient of 0.099376. This means that an increase in total asset turnover of 1% will increase the rate of return on assets of coal mining companies by 0.099376%.

The results of this study are also supported by Amelda, et.al (2022) which states that a high level of total asset turnover greatly supports the company's activities in sales effectively and the greater the company gets a large profit which impacts the rate of return on assets. A high level of total asset turnover also shows that the company is reliable in managing assets so that it has an impact on increasing sales. Then the same thing was also revealed by Nurlaela, et.al (2019) that total asset turnover has a significant effect on net profit with an indicator of the rate of return on assets. The company's success in utilizing assets will increase the level of sales so that the proportion of the rate of return on assets goes up.

Based on research data, PT Golden Energy Mines Tbk (GEMS) as a company with the highest rate of return on assets in 2022 among 16 coal mining companies used in the research

sample, it turns out that it also has the highest total asset turnover achievement as well, reaching 3.09% and once again proving that companies with high total asset turnover rates get high rates of return on assets as well. From this data, it can be seen that the company really optimizes the use of its assets in generating income.

## 5. CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on the results and discussion, the research conclusions are as follows:

- The operational efficiency variable is proven to have a significant negative effect on the rate of return on assets.
- The working capital turnover variable is proven to have a significant positive effect on the rate of return on assets.
- The total asset turnover variable is proven to have a significant positive effect on the rate of return on assets.

### Advice

Coal mining companies in Indonesia can maximize financial performance, especially in working capital turnover and total

asset turnover to increase the company's return on assets which can also have an impact on the attractiveness of investors to invest in coal mining companies because they are considered potential in future prospects if they achieve a good asset return rate within a certain period. The company management also needs to be more vigorous in maintaining the level of operational efficiency because it is very important for the company's income.

For further research, it is hoped that it is not only limited to variables in the economic field but can extend to social and other fields to prove its influence on the rate of return on assets of coal mining companies. The research period can also be updated considering the dynamics of the financial performance of coal mining companies continues to run so it is necessary to conduct research regularly.

## REFERENCES

- Adang, F., Wijoyo, A. (2023). *Factors Affecting Audit Report Lag in Manufacturing Companies in Indonesia*. *Scientific Journal of Civilization Accounting*, 9(1), 118-134.
- Amanda, N., Sahabuddin, R., & Nurman. (2023). *Working capital turnover analysis of profitability levels at PT Semen Indonesia (Persero) Tbk*. *Economic and Business Journal*, 1(4), 285.
- Amelda, R. S., Baining, M. E., & Khairiyani. (2022). *The effect of activity ratios on net income in the sharia securities list for the 2018-2020 period*. *JURIMEA*, 2(2).
- Andrianto, Firmansyah, A. (2019). *Islamic Bank Management*. CV Qiara Media Publisher, Pasuruan.
- Andriawan, Setyawan, I. R. (2020). *Earning Management Actions and Conditional Revenue as Managerial Efforts to Maintain Bond Rating*. *The Indonesian Journal of Accounting Research*, 23(3), 349-372.
- Azmy, A. (2018). *Analysis of the Effect of Financial Performance Ratios on the Profitability of Islamic People's Financing Banks in Indonesia*. *Journal of Accounting*, 22(1), 119-137.
- Central Bureau of Statistics (2022). *GDP Distribution at Current Prices*. Accessed on February 03, 2024 from <https://www.bps.go.id/id/statistics-table/2/MTA2IzI=/seri-2010--distribusi-pdb-triwulanan-seri-2010-atas-dasar-harga-berlaku--persen-.html>.
- Darmawan. (2020). *Basics of Understanding Ratios and Financial Statements*. Yogyakarta.
- Dewi, A. S. (2017). *The effect of CAR, BOPO, NPL, NIM, and LDR on ROA in companies in the banking sector listed on the IDX for the period 2012-2016*. *Pundi Journal*, 1(3), 223.
- Ervina, N., Salim, S. (2021). *Analysis of Factors Affecting Audit Report Lag in 2019-2020*. *Journal of Economics*, 26(11), 37-58.
- Fadliansyah, M. E. (2020). *The Performance of Coal Issuers Plummeted Due to Pandemic and Price Decline*. Accessed on February 03, 2024 from <https://www.google.com/amp/s/katadata.co.id/amp/happyfajria/n/finansial/5f353137a1d66/performance-of-coal-stone-emitters-drops-impacted-by-pandemic-and-declining-prices>.
- Faradita, L., Damayanti. (2023). *Financial Distress Analysis Before and During the Covid-19 Pandemic (Case Study of Mining Companies Listed on the Indonesia Stock Exchange)*. *Journal of Competitive Business*, 1(11), 937-949.



14. Francis, H. (2020). *Analysis of Company Financial Performance*. Banten: Desanta Muliavisitama.
15. Hery. (2016). *Financial Statement Analysis*. Jakarta: Grasindo.
16. Hidayat, W. W. (2018). *Basic Book of Financial Statement Analysis*. Jakarta: Uwais Inspirasi Indonesia.
17. Indra., Iskak, J., Khaq, A. (2022). *Enhancing the Role of the Audit Board of the Republic of Indonesia in Fraud Detection*. *Journal of State Financial Governance and Accountability*, 8(2), 131-143.
18. Irham, F. (2017). *Financial Performance Analysis*. Bandung: Alfabeta.
19. Jastine, V., & Susanto, L. (2020). *Factors that affect the profitability of manufacturing companies listed on the IDX*. *Tarumanagara Journal of Multiparadigm Accounting*, 2, 1296-1305.
20. Cashmere. (2016). *Introduction to Financial Management, 2nd Edition*, Jakarta: Kencana. Cashmere. (2019). *Financial Statement Analysis. First Edition Twelfth Mold*. Jakarta: PT Raja Grafindo Persada.
21. Larisa, E., Salim, S. (2021). *Analysis of the Effect of Company Characteristics on Audit Report Lag 2019-2020*. *Journal of Economics*, 26(11), 83-102.
22. Nurlaela, S., Mursito, B., Kustiyah, E., Istiqomah, & Hartono, S. (2019). *Asset turnover, capital structure and financial performance consumption industry company in Indonesia stock exchange*. *International Journal of Economics and Financial Issues*, 9(3), 297-301.
23. Prasetyo, A. E., Al Azizah, U. S., & Daulay, Y. (2021). *The effect of total assets turnover, current ratio and financial technology on the profitability of banking companies in Indonesia*. *Scientific Journal of Management and Business*, 7(2), 253-262.
24. Rasyid, R., & Kurniawati, H. (n.d.). *Credit risk, efficiency and bank financial performance before and time of the Covid-19 pandemic*. *Advances in Social Science, Education and Humanities Research*, 655.
25. Rosandy, N., Sha, T. L. (2022). *The Effect of CAR NIM, LDR, and BOPO on ROA in Banking on the IDX*. *Journal of Multiparadigm Accounting*, 4 (4), 1566-1576.
26. Setijaningsih, H. T., Handoyo, S. E., & Sundari, N. (2021). *Factors Affecting the Selection of Fair Value Methods for Investment Property*. *Journal of Organization and Management*, 17(1), 111-121.
27. Setyawan, I. R., Ekadjaja, M., Ekadjaja, A., (2022). *Industry Market Structure and Banking Performance in Indonesia*. *Academic Journal of Interdisciplinary Studies*, 11(2), 346.
28. Setyawan, N. B., Paidi, W.S., & Ishak, G. (2023). *Effect of total asset turnover (TATO), BOPO, debt to asset ratio through firm size as moderation variables on return on assets (ROA) at PT Pelabuhan Indonesia (Persero)*. *Economic Journal*, 2(8).
29. Siswanto, E. (2019). *Basic Financial Management*. Malang: State University of Malang. Widoatmodjo, S. Setyawan, I. R. (2023). *Special Treatment to Bank CEOs in Indonesia*. *Academic Journal of Interdisciplinary Studies*, 12(2), 1.



# MANAGING SCHOOL FACILITIES DURING THE IN-PERSON CLASSES THROUGH THE LENS OF SCHOOL HEADS: A PHENOMENOLOGY

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Article DOI: <https://doi.org/10.36713/epra17703>

DOI No: 10.36713/epra17703

## ABSTRACT

*This qualitative-phenomenological study aimed to explore and understand the lived experiences of school heads in managing the school facilities during in-person classes. This also elaborates on how these experiences empower them, as well as how they cope with the challenges, they encounter in managing the school facilities during the in-person classes. The study was conducted in 14 public schools in Sto. Tomas East district, Division of Davao del Norte and there were fourteen participants who participated in this study that were selected through purposive sampling technique. Of these participants, ten were school heads who underwent in-depth interviews, and the remaining four school heads underwent focus group discussion. The data gathered were analyzed through thematic analysis. Results revealed four major themes in their experiences: lacking and damaged school facilities, struggling with insufficient financial resources, promoting shared responsibility in facilities, and maintaining school facilities. To respond to the challenges encountered, participants revealed four coping mechanisms: building strong connections and partnerships, planning in managing the utilization of school facilities, caring for school facility everyone's responsibility, and establishing open communication. Lastly, they have cited four insights that can contribute to managing the school facilities. These include copy best practices in managing school facilities, provision of training on facility management, allocation of budget for repair and maintenance of school facilities, and collaboration with stakeholders. These insights were drawn from the interview of the participants when asked what their key takeaways from all their experiences and challenges were encountered as a school head managing school facilities during the in-person classes.*

**KEYWORDS:** education, managing school facilities, school heads, in-person classes, qualitative-phenomenological study, Sto. Tomas East District, Division of Davao del Norte

## INTRODUCTION

School leaders needed to be prepared for the new demands of learning to facilitate smooth school operations during the resumption of in-person face-to-face classes. They were required to use all their skills and resources to manage schools appropriately and achieve educational success (Spotlight, 2021). However, not all school heads were trained and knowledgeable on pandemic-induced school lockdowns, thus, practices during the re-opening of in-person face-to-face classes varied among schools (Jakavonytė-Staškuvienė & Ignatavičiūtė, 2022).

In Guangzhou, China, school leaders struggled to create flexible plans to consider possible situations that may arise in their setting, due to a lack of preparedness of school facilities for school re-opening (Chen, Yuzhu & Li Yu, 2021). Similarly, in Korea, some schools face difficulty in sustaining competitiveness due to a lack of extensive and thorough analysis of school facility management which affects student satisfaction and school efficiency (Kim & Kim, 2020). Likewise, elementary schools in Banda Aceh City, Indonesia also had growing numbers in keeping a safe and conducive learning environment because of a lack of school facility plans

and monitoring, which led to the deterioration of these learning infrastructures (Sakurai et. al 2017).

In the Philippines, students at elementary schools in Manila lacked basic school infrastructure which affects the teaching and learning process (Agence France-Presse, 2022).

Likewise, in public schools in the Schools Division of Laguna, Valenzuela and Buenvenida (2021) previously reported that school heads needed technical assistance training and mentoring on school facilities and resources management to address challenges that affect school operations due to facility management. JHCCG (2022) added that during the resumption of classes, schools needed to maintain a learning environment that caters to the needs of children during the two years of school closure.

In the Schools Division of Davao del Norte, school leaders were required to plot out actions to prepare for the resumption of in-person classes. A school leader shared that there were a lot of school facilities and resources needed to continue delivering quality education after the pandemic, but they were willing to address these concerns just to avoid sacrificing the learning of the students. One of the common issues was the lack of chairs and poor management of school facilities due to the two-year



school lockdowns. Another, school head supported that they were pressured to cope with these problems and evaluate their actions just to avoid wastage of school resources, so they need to come up with better plans and programs.

There had been lacking literature on the role of school heads in school facility management during the re-opening of face-to-face classes. Bond, Christakis, and Lach (2022) found out in their study that leaders had the role of coming up with different strategies and better decisions to address problems in school facilities. Furthermore, the study by Ezeugbor, Ongeli, and Okaye (2018) also identified school heads administrative strategies in providing safe and efficient school facilities to demonstrate quality learning. Despite growing research on school facilities, there is an existing gap in how school leaders manage school facilities and ensure that these facilities are properly used to achieve their intended educational goals. This research focused on the administration role of school heads and how they manage school facilities to impact the quality of education.

## PURPOSE OF THE STUDY

The purpose of this phenomenological study was to explore and understand the lived experiences of school heads of Santo Tomas-East district, Santo Tomas, Davao del Norte in managing school facilities during the in-person classes.

In this study, the lived experiences of school principals in managing school facilities are generally defined as their challenges and coping mechanisms in managing school facilities during the resumption of in-person classes, and the insight gained from these experiences.

## RESEARCH QUESTION

The study aims to answer the following research questions:

1. What are the lived experiences of school heads in managing school facilities during the in-person classes?
2. How do the school heads cope with the challenges encountered in managing school facilities during the in-person classes?
3. What are the insights that can be shared by the school heads in managing school facilities during the in-person classes?

## METHODS

This study employed qualitative research particularly using the phenomenological approach which sought to explore the lived experiences of school heads in managing the school facilities during the in-person classes. Phenomenological study was used to describe and understand the lived experiences of school heads in managing the school facilities during the in-person classes. Besides, phenomenological study could interpret the perception and beliefs of the school heads.

The participants of this study were the 14 selected school heads of Sto. Tomas East district, Sto. Tomas Davao del Norte. According to Creswell and Poth (2019), to produce a thorough and comprehensive description of the phenomenon under inquiry, the sample size for a phenomenological study may range from three to 25 people. I purposefully selected fourteen (14) research participants for this study, ten participants would undergo In-Depth Interview (IDI) and four participants would

have the Focus Group Discussion (FGD). The interview was done face to face in the selected large schools in Sto. Tomas East district. The participants of this study were chosen through a purposive sampling technique. The following criteria was used in selecting the participants: (a) they were a school head for at least three (3) years; (b) they were managing school facilities during in-person classes, and (c) they were handling public schools in Sto. Tomas-East district.

Furthermore, thematic analysis is a qualitative data analysis method that involves reviewing a data collection and looking for patterns in meaning throughout the data to extract themes.

## REVIEW OF RELATED LITERATURE

### Role of School Heads in Managing School Facilities

School management of school facilities is an integral part of the overall management of the school. During the actualization of the education goals, it requires the availability, planning, organizing, maximum utilization, and appropriate maintenance of the school facilities (Adamu et. al. 2019). Schools need to adapt new practices in school facility management to continue delivering educational services. With this, school heads need to be aware of their functions in managing school facilities (NEDA, 2021).

Accordingly, effective facility management among is crucial in increasing the achievement of educational objectives and establishing a suitable learning environment. Effective school facility management is a precursor that permits the long-term development, usage, and maintenance assistance that improves students' and teachers' overall efficiency. (Fadahunsi et al.2019). Likewise, school heads should make sure that a school's facilities are adequately maintained, stored, or run effectively. They can perform site visits to learn more about the upkeep procedures followed by instructors and students (Alsayyari et al. 2019).

Furthermore, Krysiak (2022) cited that managing school buildings is a crucial duty for school heads. They should have a clear potential to enhance the learning environment by managing the school's facilities. They need to gather fresh perspectives and develop an improvement strategy. They must interact with instructors and other facility workers to know the existing conditions of school facilities.

### School Facility Management

School facility management is a multifaceted discipline encompassing the strategic planning, organization, decision-making, coordination, and control of the physical environment within educational institutions to achieve educational objectives (Atogenzoya & Kidodo, 2020). It involves the effective and efficient utilization of all educational equipment, including planning, procurement, maintenance, and control of facilities and infrastructure (Safitri et al., 2021).

The comprehensive nature of school facility management is crucial for ensuring the smooth functioning of educational institutions. According to Christopher and Okoye (2022), educational facilities encompass the entire school that administrators, teachers, and students utilize. The availability and proper management of these resources are critical for





achieving effectiveness in the learning process and supervision within schools. This comprehensive approach ensures that all aspects of the physical environment are conducive to learning and teaching.

Furthermore, effective school facility management plays a significant role in supporting the educational process and social needs of students. The efficient management of educational facilities and infrastructure is vital for enhancing the learning process. It involves utilizing all resources owned by schools to improve the educational experience. This includes ensuring that physical structures and equipment are maintained and utilized effectively to create an environment conducive to learning (Pangestu & Hariri, 2022).

Similarly, school facility management also involves planning for preventive and corrective maintenance of school facilities and resources which improves school efficiencies, reduce administrative burden, and saves money in the long run (HES, 2021). However, the study of Leal,et.al.(2018) revealed that these planning for sustainable school facility management are often challenged by lack of institutional support and lack of capacity to sustain school facility management.

#### School Facility in the Resumption of In-person Classes

One challenge during the opening of in-person classes was enough space for socially distanced teaching. Guadix, et al. (2020) pointed out that there were limited classrooms and traditional classrooms were not enough to adhere to the suggested physical distancing of learners. Atalian Global Services (2019) shared that these educational changes influenced the designs, nature, and types of school facilities.

Today, these school facilities create spaces both for academic purposes and social activities.

Moreover, school facilities in the new normal will focus on flexibility, digital interaction, safety and well-being of learners and teachers (Europa, 2020). Classrooms will be adaptable to the changing needs and will allow configurations based on the needs of the class or activities to be conducted. Schools should implement several ways to accelerate the improvement of school quality by analyzing the availability of facilities and infrastructure that support the learning process (Nurabadi, 2021).

Accordingly, Yearout Energy (2022) also posed the challenge of space utilization during the in-person classes since there is a required occupancy rate in the classroom. School facility management must be carefully decided on how to best use existing space to meet these requirements while also achieving the goals of education. Navarro (2022) also reported that there is still a problem in classroom-student ratio that must be addressed. More classrooms are needed to meet the safety standards and the increasing enrollment. Existing classrooms must be properly maintained due to wear and tear, and calamities.

Furthermore, Krysiak (2022) also shared that during the school lockdowns, some schools failed to thoroughly assess the condition of school facilities which lead to safety issues, disrepair, and lack of maintenance. These issues impact students coming to school as it takes away from the student's educational experience and can lead to public concerns about the ability of a school to meet the required needs.

## RESULTS AND DISCUSSIONS

Table 1

Major Themes and Core Ideas on the Experiences of School Heads in Managing School Facilities during the In-person Classes

Major Themes	Core Ideas
<b>Lacking and Damaged School Facilities</b>	<ul style="list-style-type: none"> <li>• having dilapidated classrooms need minor and major repairs.</li> <li>• facing problem with water facilities</li> <li>• having insufficient handwashing facilities</li> <li>• lacking classrooms</li> <li>• using substandard classrooms for learning</li> <li>• lacking armchairs</li> <li>• having damaged lamps and school fence</li> </ul>
<b>Struggling from Insufficient Financial Resources</b>	<ul style="list-style-type: none"> <li>• receiving limited budget from DepEd</li> <li>• having encountered problem sourcing out funds for school improvement</li> <li>• having difficulty managing the limited budget</li> <li>• needing budget for repair and maintenance of physical facilities</li> <li>• being challenged with no budget for the shortage of classrooms</li> </ul>
<b>Receiving Help from Stakeholders</b>	<ul style="list-style-type: none"> <li>• being grateful to community partners for the promised two classrooms</li> <li>• getting the help of co teachers, PTA and LGU</li> <li>• having received help from barangay council for the school</li> <li>• being helped by the parents repair the armchairs</li> </ul>
<b>Maintaining School Facilities</b>	<ul style="list-style-type: none"> <li>• assuring the functionality of facilities provided by DepEd for the learners</li> <li>• utilizing available resources in the school</li> <li>• improving the school physical facilities</li> <li>• addressing issues in plumbing and electrical system</li> </ul>



### **Lacking and Damaged School Facilities**

*We have repairable chairs and desk, and we have a problem also in our water facilities. IDI-03*

*One of the problems is lack of classrooms. IDI-08*

*Facilities like classrooms and handwashing facilities are the main concern considering that some of our classrooms need minor and a major repair because their classrooms are almost dilapidated. IDI-01*

School heads confirmed that one of the challenges they encounter in managing school facilities during the in-person classes is diverse. They also agreed that paying attention to the various issues is necessary as it will establish the best possible learning environment for both students and staff. As a school head they were expected to address maintenance difficulties, deal with resource shortages, and cope with the physical deficiencies. Furthermore, proactive action is also necessary to effectively address these fundamental problems. School heads who prioritize infrastructure enhancements ultimately set the stage for a more rewarding and enriched educational experience for all parties concerned.

This emerging theme was supported by Pandi (2022) stressing that it is important for school leaders to address the inadequacy of school facilities as it significantly impacts the quality of education. Furthermore, Aini (2023) also added that failing to address this issue will not only directly affect the academic performance of the students but also some of the administrative services. Likewise, Penti's (2023) findings also indicates that inadequate school facilities have direct correlation to school achievement. Limitations in school facilities hinder ability of the teachers to achieve learning goals and affect academic outcome of the students.

Hardiana et al. (2023) also added that adequate school facilities do not only facilitate effective teaching but also include overall well-being of the students. School heads should invest in comprehensive infrastructure and resources to reflect a school that elevates educational experience among students and empowers teachers. School heads contribute in achieving a thriving academic atmosphere if they understand the value of school facility management and how it relates to their educational targets.

### **Struggling from Insufficient Financial Resources**

*To resolve that kind of problem, lacking of classroom is challenging because it involves large budget. FGD-01*

*I experience difficulty especially which involves money, financial resources, and producing budget for the repair and maintenance of the physical facilities. IDI-06*

*I have difficulty in the limited budget. Managing limited budgets and resources is a common challenge. School heads need to allocate funds strategically to address the diverse needs of the school facilities, considering maintenance, repairs, and potential upgrades. IDI-10*

School heads during the in-person classes encountered difficulty in managing the limited budget to address the maintenance and procurement of some essential school

facilities for the in-person classes. This also led to devise strategies necessary to address the problem on financial constraints, as it may affect the quality of learning of the students.

This result is supported by Mulyadi et al. (2022) highlighting that limited budget may defer school facility maintenance and plans. This may lead to poor resource management and contribute to gradual school facility deterioration. Limited budget poses an obstacle to addressing critical maintenance needs which hinders the functionality and sustainability of school facilities. Furthermore, this is also supported by Pandi (2022) saying that the lack of school facilities is coupled by the constrained school funds which compelled school heads to innovate solutions, especially on funding strategies. Herath et al. (2022) also shared the importance of exploring alternative funding avenues such as donations from private partnership and key community stakeholders to improve the quality of school infrastructures and enhance the maintenance process.

The challenges on budget constraints were also linked to issues of classroom-student ratios, and inadequate furniture as reported by Yearout Energy (2022). School heads were challenged to make strategic planning to optimize available funds effectively and set clear goals. Advocating wise budget utilization and collaborating with stakeholders and government bodies secure additional funds for upkeep to sustained management of school facilities during the in-person classes (Onyekwere and Ubong, 2019).

### **Receiving Help from Stakeholders**

*They helped in the repair of the armchairs. Unlike in my previous station where there were no male teachers that can easily help. I can also compare the help from the parents or people from the school community. IDI-08*

*There are many individuals, groups who helped the school most especially the Baranggay council they are very helpful and very active in helping our school, assisting our school. Also, the PTA and private company help the school. IDI-07*

*I am deeply grateful to our community partners, the Parent-Teacher Association (PTA), and the LGU Sto. Tomas for their invaluable assistance in addressing the challenges I encountered. Their generous donations of materials have been instrumental in overcoming these difficulties. Additionally, I am inspired by the commitment of LGU Sto. Tomas, who have pledged to provide at least two classrooms, promising further support for our cause. IDI-05*

School heads recognize the potential of tapping to stakeholders and community for an extra help. This also emphasized the benefit of their connections with people that have concern to the school and encouraging them for continuous support, especially in the times of need.

This finding relates to the ideas shared by Ramasimu (2022) that external support from stakeholders and community engagement are essential in ensuring optimal functioning and maintenance of school facilities. School heads need to establish comprehensive and inclusive stakeholder engagement,



especially in identifying and addressing issues on school facilities. However, Khadija (2022) also highlighted that not all school heads have fully engaged with certain stakeholders such as civic groups, businesspeople, non-governmental organizations, and alumnae. He added that holistic approach is necessary to ensure involvement of all relevant stakeholders, regardless of their background or affiliation.

Ongwela (2023), further, explained that external support can also be associated to involving all parties during the planning process of educational facilities to ensure that all their needs are met. This inclusive approach aligns educational goals to the interest of the community. This is also supported by Firman and Arnyana (2023) saying that by informing stakeholders, and giving them opportunity to engage and help, they can actively collaborate to all the school facility management initiatives. Likewise, engaging local communities can also contribute to grassroots solutions, whether through volunteer efforts, resource contribution, or advocacy for improved facilities. Schools need to actively seek external assistance, engage stakeholders, and involve the community to ensure a sustainable and effective approach to managing their facilities. (Alsayyari et. Al. 2019).

**Maintaining School Facilities**

*It's about both enjoying and effectively utilizing the diverse resources available to us within the school.*

FGD-02

*The challenge here revolves around maintaining and repairing a range of facilities within the school premises, encompassing classrooms, laboratories, libraries, and recreational areas.*

*This encompasses tasks like addressing plumbing and electrical system issues, among others. FGD-04*

*As a school head, there are so many concerns about how to improve the physical facilities of the school especially repair and maintenance of the classrooms. FGD-02*

School heads need to check on the quality of educational infrastructures and involve students and teachers in the process, since they are the ones occupying and using these facilities.

It is also supported by the ideas of Kingsley (2019) emphasizing the role of school heads in the reinforcement of preventive maintenance practices. These practices were crucial in identifying potential issues in school facilities before they escalate into major problems. Preventive maintenance was also described by Chatwin (2022) as one of the priorities of school heads as it keeps school facilities in good conditions. Scaletta and Hughes (2020) previously echoed this sentiment, highlighting the necessity of effective maintenance strategies and policies to ensure the longevity and efficiency of school facilities.

In the context of preventive and corrective maintenance, Leal et al. (2018) shed light on the challenges posed by a lack of institutional support, hindering sustainable school facility management planning. Moreover, Shaibu et al. (2019) attribute problems in facility management to the lack of effective monitoring and poor maintenance culture among teachers, learners, and staff. The paramount importance of regular and routinary maintenance and checking of school facilities emphasizes the need for proactive facility management strategies to ensure a conducive learning environment.

**Table 2**  
**Major Themes and Core Ideas on Coping Mechanism of School Heads in Managing School Facilities during the In-person Classes**

Major Themes	Core Ideas
<b>Building Strong Connections and Partnership</b>	<ul style="list-style-type: none"> <li>• establishing good and harmonious relationship with stakeholders to gain their support</li> <li>• sending letter for assistance from internal and external stakeholders</li> <li>• partnering with alumni abroad</li> <li>• seeking support from the teachers, PTA and other authorities</li> <li>• delegating teachers in handling the maintenance of school facilities</li> <li>• gaining support from the PTA and barangay council</li> <li>• involving stakeholders in addressing challenges effectively</li> </ul>
<b>Planning in Managing the Utilization of School Facilities</b>	<ul style="list-style-type: none"> <li>• planning in prioritizing facilities that the learners need</li> <li>• scheduling the use of handwashing facilities by grade level to avoid crowding</li> <li>• developing effective strategies to ensure safe and inclusive learning environment for all</li> <li>• prioritizing school facilities that need immediate repair</li> <li>• conducting regular inspection of the school facilities to prevent damages may cause major repair</li> <li>• drafting detailed facility management plan for maintenance and improvement projects</li> </ul>
<b>Promoting Shared Responsibility in Facilities</b>	<ul style="list-style-type: none"> <li>• promoting shared responsibility among stakeholders as part of the school</li> <li>• imposing proper use of handwashing facility as training the kids</li> <li>• reminding teachers to teach students to be responsible in using school facilities</li> <li>• asking teachers to remind students take care of school facilities .</li> </ul>
<b>Establishing Open Communication</b>	<ul style="list-style-type: none"> <li>• presenting school problems to PTA officials for some alternative solutions</li> <li>• consulting teachers to make a right decision</li> <li>• including teachers and stakeholders in planning, assessing, and managing school facilities</li> </ul>



### **Building Strong Connections and Partnership**

*I do believe that by establishing a good and harmonious relationship between the school and the stakeholders and it will build strong connection. It really helps a lot of gain support from them. FGD -01*

*I always seek support from the teachers, co-school heads, PTA and other relevant authorities. IDI-05*

*The strategy that I employ is that to involve the presence and the help of stakeholders. IDI-02*

School heads need to address the issues on managing school facilities during the in-person classes by seeking assistance from key individuals and groups. This is only possible if they build meaningful connections with various stakeholders through collaboration and partnership.

This strategy is also emphasized by Cabigan (2023) on his findings revealing that collaborative culture is important in effective school facility management. Similarly, Sergienko (2022) also noted distributed leadership, collaborating and teamwork, especially on coming up with decisions on school facility management. Lu and Hallinger (2022) also bring attention to the positive impact of collaboration and partnership by emphasizing the importance of open communication and feedback for continuous improvement.

Furthermore, Raman (2019) also emphasized the role of school heads in fostering a democratic, distributed culture, and collaboration among teams within and outside the school for an effective school facility management. For instance, in the context of transitioning back to in-person classes, Spotlight (2021) emphasizes the need for collaborative efforts among educators, administrators, and community stakeholders. Bond, Christakis, and Lach (2022) also underline the importance of collaborative decision-making and problem-solving among school leaders, emphasizing the role of external support and knowledge networks. Brunner & Vincent (2018) draw attention to the impact of partnerships on school facility management, stressing the importance of connections within the school community. Whether it is sharing knowledge, seeking technical assistance, or collaborating with external entities, strong connections and partnerships is a necessity in effective school facility management. The success of managing school facilities lies in fostering robust connections and partnerships that extend beyond the school walls.

### **Planning in Managing the Utilization of School Facilities**

*I make a list on the different school facilities that needs a repair, needs the immediate maintenance, need the reproduction and the priority order so that, needed one to be re-fix or repaired. IDI-06*

*As a school head coping with challenges in managing facilities during the in-person classes can be difficult, but it's important to develop strategies to address these challenges effectively. By implementing strategies, I can effectively manage facilities during in-person classes and ensure a safe and conclusive learning environment for all. IDI-05*

*It is on having a regular maintenance and inspection of the school facilities. Conducting regular inspections, By having this, It prevent minor damages and repairs becomes major problems. IDI-09*

School heads confirmed that this is crucial in fostering effective learning environment as thoughtful plans and decision-making allow them to navigate successfully through the different stages of school facility management and address underlying issues that they encountered.

This is supported Arizqi (2023) sharing that strategic school facility management supports educational activities by carefully planning how school facilities management is carried out for the goal of optimization. Yulius (2020) also previously accentuated the significance of implementing strategies and plans by recognizing the multifaceted aspects of facility management, including planning, procurement, utilization, supervision, and maintenance. This also highlights the need for a holistic approach that considers resource allocation, infrastructure analysis, and educational needs identification. Likewise, according to Ya'cub and Ga'a (2021), responsibilities of school heads in school facility management encompassed planning, organizing, mobilizing, and controlling infrastructure which underscore the complex nature of their role in driving effective facility management practices. This emphasizes the indispensable contribution of strong leadership in ensuring the efficient functioning of educational resources.

Furthermore, strategic planning, as highlighted by Chatwin (2022), assist school heads in managing facilities and infrastructure by developing targeted strategies and assigning responsibilities. This strategic approach ensures that facilities are well-maintained and aligned with the educational objectives of the institution, reinforcing the integral role of strategic school facility management in creating an environment conducive to effective learning and educational outcomes.

### **Promoting Shared Responsibility in Facilities**

*I consider the most effective is the strategy that I include the stakeholders in strategic planning. It is really best to include them because it promotes collaboration. In that way they can feel that they are part of the school, and they will have their shared responsibility. IDI-01*

*I always reminded the teachers to remind their students of their responsibilities to take good care of all the facilities they are using in return to the free of charge usage of all school facilities. In short, the teachers should teach responsibility for them to become responsible. IDI-08*

*I also asked the help of all the teachers in reminding the students to take good care of our school facilities. In that way, our school facilities will long last. IDI-09*

One of the many ways to reinforce sustainability and longevity of school facilities is through responsible and proper use. This includes constantly reminding teachers and students on how to take good custody of school properties so that it can be used by the next generation. Teachers must include in their lessons the benefit of functional facilities for the convenience of all, free of





charge so that students will make it a habit and become disciplined to do it on their own without someone reminding them. Thus, ensuring the maintenance of school facilities and properties is a shared responsibility of every member of school-community.

This idea is also supported by Elyani (2022) expressing that cultivating a culture of responsibility and proper use of school facilities is paramount. The fundamental role of school heads in educating teachers and students on the proper use of school facilities gradually instill a sense of responsibility. By constantly promoting proper usage of school facilities, it can be preserved and contribute for its longevity benefiting the entire school community. The importance of effective classroom management encourages teachers to leverage school facilities to foster discipline among their students to be responsible.

Furthermore, Pakpahan and Hidayati (2021) stressed that cultivating a culture of responsibility in the use and maintenance of facilities directly contributes to the overall well-being of students. Well-maintained physical environment of schools and high-quality educational infrastructure is crucial for supporting the physical, social, emotional, and cognitive health of the students. Thien et al. (2022) highlight how school leaders can cultivate such a culture by practicing value-driven leadership. Through promoting positive discipline, school leaders foster a culture of responsibility and proper use of school facilities. Similarly, collaborative efforts as emphasized by Alsayyari et al. (2019), ensure that responsibility becomes a shared value, fostering a sense of collective ownership. Ezeubor et al. (2018) also recommend fostering awareness among students to instill a sense of responsibility.

**Establishing Open Communication**

*We have these PTA officials in our school and I, tap and coordinated with them. I presented the problem that is why they have also that alternative. IDI-03*

*For me talk to the parents during meetings, conferences about the problem we encounter to solve the problem. FGD-03*

*Consultation among teachers, on what is the best to do because not all the time my decision is right, I made consultation among the teachers. IDI-04*

Effective communication and problem resolution is a must skill among school heads managing school facilities during the in-person classes. School heads noted that they need to discuss and connect important matters with people within and outside the school, regarding school facilities management. With effective communication they can ensure that problems were well-discussed, and they can agree on what is the best solution for each issue encountered.

This is supported by Firman and Arnyana (2023) that school heads need to develop effective communication for them to gain valuable support and openly address the challenges that their school faced. Harber (2020) also previously explained that effective problem resolution creates a conducive learning environment as matters like, proper allocation of budget is openly discussed by the entire group. Sugiratu and Mazdayani (2022) stress the importance of communication and problem resolution in addressing infrastructure-related challenges for quality education highlighting the role of school administrators in educating teachers and students on the proper use of facilities and encouraging them to take part on managing school facilities.

Furthermore, the work of Alsayyari et al. (2019) also underscores the importance of in-depth analysis and relationship-management skills for effective problem resolution. Involving the team to look closely on the issue allows them the opportunity to openly solicit idea on how to address the problem. School leaders who develop effective communication and sound problem resolution better cope with the challenges on school facility management during the resumption of in-person classes. Fostering clear communication channels and proactive problem resolution strategies ensure the smooth functioning of school facilities and active participation of involve parties.

**Table 3**

**Major Themes and Core Ideas on the Insights of School Heads in Managing School Facilities during the In-person Classes**

Major Themes	Core Ideas
<b>Collaboration with Stakeholders</b>	<ul style="list-style-type: none"> <li>• collaborating with various stakeholders for successful facility management</li> <li>• fostering collaboration with school community to get financial support from the community</li> <li>• engaging school community to gather valuable feedback for a collaborative approach to facility management</li> <li>• coordinating with stakeholders to get help in solving problems in facility management</li> </ul>
<b>Collection of Best Practices in Managing School Facilities</b>	<ul style="list-style-type: none"> <li>• asking potential leaders who can surely help for excellent output</li> <li>• benchmarking good practices for improvement</li> <li>• seeking advice from school head with best practices in managing school facilities</li> </ul>
<b>Provision of Training on Facility Management</b>	<ul style="list-style-type: none"> <li>• providing regular training and professional development for school heads in facility management</li> <li>• conducting trainings on maintaining school facilities during in-person classes</li> <li>• sending school heads to more trainings and workshop</li> </ul>
<b>Allocation of Budget for Repair and Maintenance of School Facilities</b>	<ul style="list-style-type: none"> <li>• allocating financial resources for school facilities</li> <li>• increasing life span of school facilities by allocating funds for repair and maintenance</li> <li>• needing to allocate funds to address diverse needs of the school facilities</li> </ul>



### Collaboration with Stakeholders

*Managing school facilities requires collaboration with various stakeholders, including teachers, parents and other stakeholders. Thus, building effective communication channels and team works is essential for successful facility management. IDI-05*

*School Head must establish and foster collaboration with the school community especially the parents, the Baranngay Council and other stakeholders. The school cannot stand alone. It needs financial support in the community. IDI-09*

*They have to coordinate also with their stakeholders in order that... whenever they have, they will be encountering problems... it can be solve by the stakeholders. IDI-03*

By facilitating cooperation among stakeholders, school leaders can effectively navigate challenges and ensure the sustained advancement of the educational mission of the institution. Their commitment to gain support from stakeholders emphasize that they need to have adequate knowledge and competence in addressing issues within educational facilities as much as foster an inclusive atmosphere, that acknowledges the valuable support of stakeholders.

This finding is supported by the study of Aquino (2023) revealing that fostering a collaboration within educational institutions is key to effective school facility management. School heads need to employ strategies that promote group decision-making, effective teacher collaboration, and strong school-community partnerships to create an inclusive and collaborative environment that supports effective school facility management. Likewise, Khan (2023) also added that soliciting feedback in assessing the needs of the school and community, creates a democratic and distributed culture that promotes collaboration within the school. By fostering a culture of collaboration, school leaders can create an inclusive and collaborative environment that supports effective school facility management. Holistic and collaborative approach to school facility management is fundamental to ensuring the effective and sustainable management of school facilities. This collaborative environment not only enhances the management of school facilities but also contributes to positive educational outcomes and overall school performance.

### Collection of Best Practices in Managing School Facilities

*Strategize, do not just try to ask those, leaders whom you think are insignificant. Try to ask those potential leaders; surely you will see a good output and strive for excellence. FGD-04*

*I always benchmarked to other school especially with their best practices or good practices. I'd like to suggest that they do the same. we have so much to know, we have so much to improve. learning in progress is a continuous process we cannot drawn to what we have now, we cannot say it on. IDI-07*

*Ask advices to other school heads on what. to do, what are their best practices in managing school facilities. IDI-09*

School heads can adopt effective strategies and implement successful approaches to enhance the quality and functionality of school facilities. This approach not only allows for the

transfer of knowledge and skills but also promotes a culture of continuous learning, improvement, and excellence within the school community.

This theme is supported by Mu'is (2023) sharing that the insights of experienced leaders, benchmarking successful approaches, and embracing exemplary practices stand as invaluable strategies for school heads to refine their facility management strategies. Emulating best practices not only cultivates innovation but also drives efficiency (Februannisa & Anggraini, 2022). Additionally, benchmarking initiatives contribute substantially to the holistic enhancement of facility management practices within educational institutions, as evidenced by research. Therefore, by leveraging these approaches, school leaders can foster continuous improvement and elevate the standards of infrastructure management in their respective institutions (Abdelmohsen et al., 2019).

### Provision of Training on Facility Management

*DepEd officials should conduct a training that focus on the maintaining on managing school facilities during in the in-person classes. IDI-06*

*DepEd Officials should conduct trainings and activities that helps school head in addressing the struggles they have encountered in managing the school facilities. IDI-07*  
*"Trainings, more trainings, workshop to the school heads. FGD-03*

This finding is supported by the Silva & Andal (2023) stressing developmental programs equip school heads with competencies in financial management, school facilities, and equipment. Through this, they can be able to come up with informed decision-making and efficient resource oversight. Furthermore, Omusula & Imbuka (2019) also emphasize the role of institutionalized professional development programs ensuring capacity building for teachers to contribute to the school facility management planning and practices. Similarly, Sergienko and Sokolova (2022) also cited these learning opportunities support the development of fully functional managers adhering to professional standards. In the rapidly evolving landscape of education, these initiatives become indispensable for school leaders, preparing them to navigate unprecedented challenges, particularly evident in the unique demands of the pandemic-induced lockdowns (Spotlight, 2021).

Furthermore, training programs not only address knowledge gaps but also contribute to enhancing the competitiveness of educational institutions by providing leaders with strategic planning skills. Institutionalized professional development and training programs for school leaders are crucial for equipping them with the skills, knowledge, and mindset needed to lead with excellence, resilience, and foresight. These initiatives play a vital role in shaping the trajectory of education in institutions, fostering a culture of informed decision-making, proactive leadership, and collaborative approaches to address the challenges in school facility management (Kim & Kim, 2020).



### Allocation of Budget for Repair and Maintenance of School Facilities

*Resource allocation support. Third, create technical assistance teams that can offer on-site support to school heads facing complex facility management challenges. IDI-05*

*Give proper or scheduled for the maintenance of your school facilities. Have a yearly budget for the repair and maintenance to all the school facilities in order to maximize its life span, assign the field expert teacher or personnel to maintain supervise operation of every school facility. IDI-06*

*Detailed facility management plan that outlines short-term and long-term goals, budget allocation, and a timeline for addressing maintenance and improvement projects. IDI-10*

Budget for repair and maintenance of school facilities, is necessary for strategic oversight and informed decision-making. Without a comprehensive understanding of the available resources and the prudent allocation of budget, school heads may continuously struggle to managing resources to ensure a conducive environment for teaching and learning.

This is supported by Filardo et al. (2019) also explained that budget planning and preventive maintenance is part of a strategic approach in mitigating financial challenges, as it employs cost-effective preventive maintenance strategies. School leaders need to develop a well-thought-out strategic school facility management plan to adapt to the challenges pose by the resumption of in-person classes (Yearout Energy, 2022). Likewise, financial considerations also play a crucial role in proactive planning, with schools needing to allocate funds wisely, plan for upgrades, and engage in preventive maintenance to ensure the longevity of facilities, aligning with the findings of Krysiak (2022).

### CONCLUSION

The experiences of school heads in managing the school facilities during the in-person classes has been incredibly enlightening for me. By delving into the varied and insightful narratives provided by the school heads, I've gained significant understanding of the challenges they encountered, how they dealt with them, and the beneficial results they achieved through this distinctive educational journey.

Managing school facilities during in-person classes is a multifaceted responsibility that requires effective resource management, community engagement, adaptability, regular maintenance, and environmental consideration. School heads who successfully navigate these challenges contribute significantly to creating a safe, effective, and welcoming learning environment for students and staff.

School heads often face the challenge of balancing limited resources with the need to maintain and upgrade facilities. Effective budgeting and resource allocation are critical to ensuring that all necessary repairs, upgrades, and maintenance are performed timely.

In summary of the above, this study has served as a profound revelation, illuminating the myriad experiences of school heads in managing the school facilities. The insights emphasized the importance of learning from successful models, investing in

professional development, securing financial resources, and engaging with stakeholders to enhance infrastructure sustainability and optimize facility management practices. Furthermore, the narratives of the participants also not only reflect the innovative and strategic approaches employed by school leaders but also emphasize the importance of continuous learning, resource allocation, and partnership development in ensuring the long-term sustainability and functionality of school facilities.

The coping mechanisms employed by school heads are proactive and collaborative approaches adopted by school leaders to address infrastructure challenges and enhance facility management practices. Moreover, by building partnerships, prioritizing facility management planning, promoting accountability, and enhancing communication channels, school heads can effectively navigate infrastructure challenges, optimize resource utilization, and create a supportive and inclusive environment for all stakeholders

### REFERENCES

1. Adamu, M., Aishatu, SB. & Badamasi, A. (2019). *Principals' management of school facilities as correlate of students' academic achievement in senior secondary schools in Adamawa State, Nigeria. International Journal of Philosophy and Social-Psychological Sciences*, 5 (3): 59-62.
2. Agence France-Presse (2022). *Philippine classrooms reopen after more than two years. shorturl.at/gmNS4*
3. Alsayyari, A., Alblawi, A., Nawab, M. & Alosaimi, A. (2019). *A conceptual framework for facility management in higher education institutions in Saudi Arabia. TEM Journal*. 8 (1): 57-164, DOI: 10.18421/TEM81-22.
4. Arizqi, A. (2023). *Strategi kepala sekolah dalam mengelola sarana dan prasarana di mts darunnajah cipining. doi: 10.59024/jipa. v1i3.261*
5. Atalian Global Services. AGC (2019). *The role of facility management in education sectors. http://bitly.ws/ygmF*
6. Atogenzoya, C. & Kidodo, J. (2020). *Facility management in Ghanaian public second cycle institutions and implications for effective school facility management. a study of the upper west region. JEP. https://doi.org/10.7176/jep/11-7-08*
7. Aquino, J. C. (2023). *The school heads leadership styles and qualities to the teachers' effectiveness and school performance of selected public elementary schools in Laguna. International Journal of Research Publications, doi:[10.47119/ijrp1001251520234893] (https://doi.org/10.47119/ijrp1001251520234893)*
8. Bond, E., Christakis, D., Lach, M. (2022). *Reopening k-12 schools during the covid-19 pandemic. The National Academies of Sciences, Engineering, and Medicine. shorturl.at/ehiU4*
9. Brunner, E.J. & Vincent, J.M. (2018). *Financing school facilities in California: a ten-year perspective. Getting down to facts ii research report. Palo Alto, CA: Policy Analysis for California Education & Stanford University.*
10. Chatwin, M. (2022). *Educational facility management. doi: 10.4324/9781138609877-ree69-1*
11. Chen, Yuzhu, Li Yu, (2020). *"廣州首批返校師生將全部接受核酸檢測" (First group of teachers and students returning to campus will all be tested for COVID-19),*





- People's Daily, Guangdong section, GD.people.com shorturl.at/ehnrT
12. Christopher, C. and Okoye, R. (2022). Evaluation of studio infrastructure/facilities for teaching of fine and applied arts in public colleges of education in southeast nigeria. *European Journal of Education and Pedagogy*, 3(3), 12-16. <https://doi.org/10.24018/ejedu.2022.3.3.203>
  13. Creswell, J. W., & Creswell, J. D. (2018). *Research design: qualitative, quantitative, and mixed methods approach* (5th edition). Los Angeles: SAGE.
  14. Europa, E. (2020). Academic facilities in the `new normal. *Manila Times*. shorturl.at/bjDK9
  15. Ezeugbor, O. C., Ongeli, L., & Okaye, O. F. (2018). Staff personnel administrative practices adopted by principals' for promoting teacher-job performance in secondary schools in Awka Education Zone, Anambra State, Nigeria. *International Journal of Advanced Research and Publications*, 2(1), 20-26.
  16. Fadahunsi, J. et al. (2019). *IOP Conference Series.: Mater. Science Engineering*. 640 012032
  17. Februannisa, W. & Anggraini, N (2022). School-Based Management as an Innovation in Improving the Quality of Education. *Journal of Quality Assurance in Islamic Education*, doi: 10.47945/jqaie.v2i1.610
  18. Filardo, M., Vincent, J.M., & Sullivan, K. (2019). How crumbling school facilities perpetuate inequality. *Phi Delta Kappan*, 100 (8), 27-31.
  19. Firman, F., & Arnyana, I. (2023). *Analysis of Basic Education Policies Related to Facilities and Infrastructure*. doi: 10.56855/ijcse.v2i1.306
  20. Harber, C. (2020). *School Buildings (and Grounds)*. doi: 10.1007/978-3-030-87824-5\_8
  21. Hardiansyah, F. and Zainuddin, Z. (2022). The influence of principal's motivation, communication, and parental participation on elementary school teachers' performance. *Al Ibtida Jurnal Pendidikan Guru Mi*, 9(2), 319. <https://doi.org/10.24235/al.ibtida.snj.v9i2.9936>
  22. Herath, N., Duffield, C., & Zhang, L. (2022). Public-school infrastructure ageing and current challenges in maintenance. *Journal of Quality in Maintenance Engineering*, doi: [10.1108/jqme-06-2021-0043] (<https://doi.org/10.1108/jqme-06-2021-0043>)
  23. HES (2021). *Why facilities management matters*. shorturl.at/kyzD2
  24. Guadix, S. W., Sha, C., Sandrone, S., Safidieh, J. E., and Sarva, H. (2020). The impact of Covid-19 on neurology education: a medical student perspective. *Frontier Education* 5. doi:10.3389/feduc.2020.567421
  25. Jakavonytė-Staškuvienė, D. & Ignatavičiūtė, L. (2022). Experience of mentors and beginner primary school teachers in applying the principles of shared leadership during the school adaptation period: the case of Lithuania. *IgnatavičiūtėJakavonytė-Staškuvienė & Ignatavičiūtė, Cogent Education*, 9: 2070054. <https://doi.org/10.1080/2331186X.2022.2070054>
  26. Khadija, H. (2022). Stakeholders in education. doi: 10.47535/1991auoes31(1)040
  27. Khan, M. (2023). Exploring the teacher empowerment strategies of school heads at secondary level in Punjab, Pakistan. \*doi: 10.58444/jcte.v6i1.729\*
  28. Kim, MS. & Kim, JH. (2020). Effective university facility management plan proposal reflecting the needs of the main users. *Frontier Psychology*. <https://doi.org/10.3389/fpsyg.2020.00219>
  29. Kingsley, O. (2019). *Management of learning facilities*. doi: 10.18844/PROSOC.V6I7.4516
  30. Krysiak, M. (2022). Six ways to improve facilities management at schools. <https://www.camcode.com/blog/6-ways-to-improve-facilities-management-at-schools/>
  31. Leal, F. W., Pallant, E., Enete, A., Richter, B., & Brandli, L. L. (2018). Planning and implementing sustainability in higher education institutions: an overview of the difficulties and potentials. *International journal of sustainable development & world-ecology*, 25(8), 713-721.
  32. Lu, J., & Hallinger, P. (2018). A mirroring process: From school management team cooperation to teacher collaboration. *Leadership and Policy in Schools*, <https://doi.org/10.1080/15700763.2016.1278242>
  33. Mu'is, A. (2023). Management of infrastructure facilities in increasing student learning motivation. *Educational technology*, doi: 10.29062/edu.v6i4.630
  34. Mulyadi, T., et al. (2022). Pelaksanaan pemeliharaan sarana dan prasarana pendidikan pada madrasah ibtidaiyah. *At-Tafkir*, (<https://doi.org/10.32505/at.v15i1.4357>)
  35. National Economic and Development Authority (NEDA). 2017. *Philippine Development Plan 2017-2022*. Pasig City: NEDA.
  36. Navarro, A. (2022). *School infrastructure in the Philippines: where are we now and where should we be heading? Discussion Paper Series No. 2022-10*. [https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pids\\_dps2210.pdf](https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pids_dps2210.pdf)
  37. Nurabadi, A., Bafadal, I., Priyatni, E. Juharyanto, & Gunawan, I. (2021). Analysis of the availability of school facilities and infrastructure as an effort to accelerate school quality improvement. *Advances in Social Science, Education and Humanities Research*, volume 501. <file:///C:/Users/user/Downloads/125947602.pdf>
  38. Ongwela, A. (2023). A study of the educational administrator's responsibility for facility planning as seen by the public-school superintendents and private-school principals in Southwestern Michigan. \*doi: 10.32597/dissertations/613/\*
  39. Pandi, A. (2022). Peran tenaga administrasi dalam meningkatkan mutu layanan administrasi di mts hidayatul muhsinin. *Mudir: Jurnal Manajemen Pendidikan*, doi:[10.55352/mudir.v4i1.493] (<https://doi.org/10.55352/mudir.v4i1.493>)
  40. Pangestu, S. and Hariri, H. (2022). Management of facilities and infrastructure in improving the learning process. *Jurnal Humaniora Dan Ilmu Pendidikan*, 2(1), 43-49. <https://doi.org/10.35912/jahidik.v2i1.1647>
  41. Penti, P. (2023). Availability of facilities supports education across all school levels: case study of SDN 1 Sabaru. *Journal of Instructional and Development Research*, doi: [10.53621/jider.v3i3.228] (<https://doi.org/10.53621/jider.v3i3.228>)
  42. Raman, Y. (2018). *School management and leadership: Teamwork in schools*.
  43. Safitri, S., Mulyati, S., Wahyudi, W., Maftuhah, M., & Zahrudin, Z. (2021). Madrasah infrastructure management before face-to-face learning in the pandemic. *Al-Tanzim Jurnal Manajemen Pendidikan Islam*, 5(2), 40-51. <https://doi.org/10.33650/al-tanzim.v5i2.2094>
  44. Sakurai, A., Bisri, M. B., Oktari, R. S., Murayama, Y., & Oda, T. (2017). Assessing school disaster preparedness by applying a comprehensive school safety framework: a case of





- elementary schools in Banda Aceh City. In IOP Conference Series: Earth and Environmental Science 56(1). IOP Publishing.
45. Scaletta, M., & Hughes, M. (2020). Administrators' perception of their role in school-wide positive behavior interventions and supports implementation. *The Journal of School Leadership*, doi: 10.1177/1052684620972062
  46. Sergienko, A. (2022). Development potential of the school management team in modern context. *Человек и образование*, doi: 10.54884/s181570410025092-6
  47. Sergienko, A., & Sokolova, I. (2022). Training of school heads in terms of professional standards: Comparative analysis. *Naučno-pedagoško obozrenie*, doi: 10.23951/2307-6127-2022-4-25-36
  48. Shaibu, L., Edegbo, C., & Ishaka, M. (2019). Problems and strategies for the management of school facilities for effective instructional delivery in federal and state colleges of education in the north central states of Nigeria. [https://ewemen.com/wpcontent/uploads/2019/04/Shaiibu-et-al\\_125\\_EJERR.pdf](https://ewemen.com/wpcontent/uploads/2019/04/Shaiibu-et-al_125_EJERR.pdf)
  49. Spotlight, (2021). Cambodia schools reopen as Covid vaccinations near targets. [shorturl.at/AVW35](https://shorturl.at/AVW35)
  50. Valenzuela, E. & Buenvenida, L (2021). Managing school operations and resources in the new normal and performance of public schools in one school division in the philippines. *Ioer International Multidisciplinary Research Journal*, 3 (2). <https://orcid.org/0000-0002-7237-54992>
  51. Ya'cub, M., & Ga'a, D. (2021). Strategi kepala sekolah dalam meningkatkan kualitas pembelajaran melalui pengembangan sarana prasarana. doi: 10.31538/MUNADDHOMAH.V2I2.67
  52. Yearout Energy (2022). Preparing your school facility for the new normal. [shorturl.at/artzE](https://shorturl.at/artzE)
  53. Yulius, M. (2020). Strategi meningkatkan mutu pendidikan melalui manajemen sarana dan prasarana pada smk negeri 1 singkawang. doi: 10.30595/JJKP.V13I2.6982



# TEACHING UNDER PRESSURE: HOW JOB ANXIETY AFFECTS TEACHER EFFECTIVENESS ACROSS GENDERS AND LOCALITIES

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Article DOI: <https://doi.org/10.36713/epra17704>

DOI No: 10.36713/epra17704

## ABSTRACT

*This study investigates the effect of job anxiety on teachers' effectiveness, focusing on differences related to gender and locality. A sample of 180 school teachers from the Ludhiana district, forming both rural and urban areas, was examined. The study used the Job Anxiety Scale by Dr. A.K. Srivastava and Dr. M.M. Sinha (1974) and the Teacher Effectiveness Scale by Dr. Umma Kulsum (1971). The findings show no significant differences in job anxiety levels or teacher effectiveness based on gender or locality. However, a significant negative correlation between job anxiety and teacher effectiveness was seen, underscoring the critical need for interventions to mitigate job anxiety among teachers.*

**KEYWORDS:** *Teacher Effectiveness, Job Anxiety, School teachers*

## INTRODUCTION

In today's ever-changing society, people's needs and expectations are constantly shifting, which can sometimes result in feelings of discontent when those needs are still unfulfilled. Teaching, like any other profession, is not immune to this phenomenon. The level of job satisfaction and anxiety experienced by teachers can have a significant impact on their effectiveness, which plays a crucial role in the development of students and the overall educational process. This study investigates the correlation between job anxiety and teacher effectiveness, considering the factors of gender and locality.

### Background

Teachers play a pivotal role in shaping the future of society by nurturing and educating young minds. However, the teaching profession is often fraught with challenges that can lead to job anxiety. This anxiety can stem from various sources, including high workload, lack of administrative support, and insufficient resources. Teacher effectiveness, which is essential for student achievement, can be compromised when teachers experience elevated levels of job anxiety. Understanding the interplay between job anxiety and teacher effectiveness is crucial for developing strategies to support teachers and enhance educational outcomes.

### Purpose of Study

The primary purpose of this study is to examine the relationship between job anxiety and teacher effectiveness, with a focus on gender and locality. Specifically, the study aims to decide whether there are significant differences in job anxiety and teacher effectiveness between male and female teachers, as well as

between teachers in rural and urban areas. Additionally, the study looks to explore the correlation between job anxiety and teacher effectiveness, providing insights into how job anxiety affects teachers' performance.

## REVIEW OF RELATED LITERATURE

A survey of related literature is an essential prerequisite to actual planning and execution of any research project. It is like surveying the area and judging the distance first and then formulating a plan. It helps the investigator in avoiding duplication on the one hand and in getting benefit from similar studies on the other in respect to methods adopted and devices used in the collection of data and their organization and interpretation. For these all reasons, a research worker has to go through the available relevant literature before actually commencing the work of his own research.

### Studies Related to Job Anxiety

Job anxiety refers to an employee's predisposition to emotional tension caused by generalized feelings of vague fear, insecurity, and apprehension related to various job aspects (Sinha, 1974). Earlier studies have highlighted the detrimental effects of job anxiety on performance and overall well-being (Khalid et al., 2012). Specific research has also linked job anxiety to numerous factors such as role overload, role self-distance, and role stagnation (Swaminathan & Rajkumar, 2010).

### Factors Leading to Job Anxiety

Several factors contribute to job anxiety among teachers. Workload, administrative support, student behavior, and lack of resources are significant contributors. High workload and



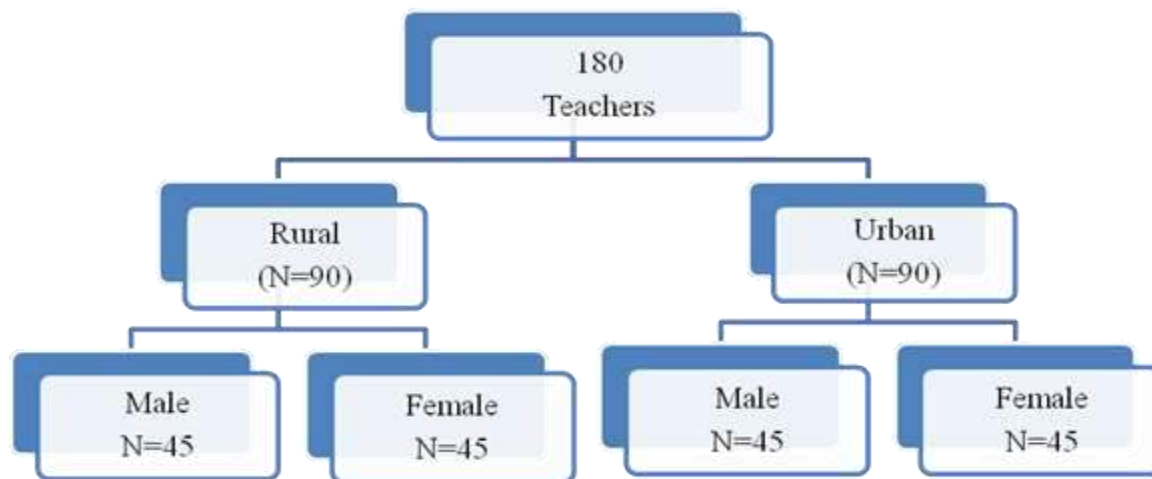
unrealistic expectations can lead to stress and anxiety, affecting teachers' ability to perform effectively (Borg & Riding, 1993). Administrative support plays a crucial role in alleviating job anxiety. Teachers who perceive their administrators as supportive report lower levels of job anxiety. (Nobile & McCormick, 2005). Student behavior and classroom management challenges can also contribute to job anxiety, as managing disruptive behavior requires significant emotional and physical effort (Kyriacou, 2001).

### Studies Related to Teacher Effectiveness

Teacher effectiveness is a multifaceted construct encompassing academic knowledge, lesson preparation, communication skills, classroom management, and the ability to motivate students (Bhat & Arumugam, 2020). Effective teachers are essential for fostering students' socio-emotional development and achieving educational aims (Sutton & Wheatley, 2003)

### Dimensions of Teacher Effectiveness

Teacher effectiveness involves several dimensions, including instructional strategies, classroom management, and interpersonal relationships. Instructional strategies refer to the methods teachers use to ease learning, such as differentiated instruction and formative assessment (Marzano, 2003). Classroom management involves creating a positive learning environment by setting up clear expectations and routines (Emmer & Stough, 2001). Interpersonal relationships refer to the teacher's ability to build rapport with students, colleagues, and parents, fostering a supportive and collaborative learning environment (Pianta, 2004).



### Tools

- Job Anxiety Scale by Dr. A.K. Srivastava and Dr. M.M. Sinha (1974): This scale measures the levels of job anxiety experienced by teachers, encompassing various dimensions such as workload, role ambiguity, and job security.
- Teacher Effectiveness Scale by Dr. Umma Kulsum (1971): This scale assesses various aspects of teacher

### Relationship Between Job Anxiety and Teacher Effectiveness

The relationship between job anxiety and teacher effectiveness has been a subject of interest in recent studies. Brackett et al. (2010) found a significant positive correlation between job satisfaction and emotional intelligence, suggesting that teachers with higher emotional intelligence are more satisfied with their jobs. However, prominent levels of job anxiety can undermine this effectiveness, leading to poorer performance and higher turnover rates (Kamal et al., 2021).

### Impact of Job Anxiety on Teacher Effectiveness

Job anxiety can have many adverse effects on teacher effectiveness. Prominent levels of anxiety can impair cognitive functioning, leading to difficulties in lesson planning and delivery (Schonfeld, 2001). Anxiety can also affect teachers' ability to manage classrooms effectively, resulting in increased disciplinary issues and reduced student engagement (Herman et al., 2018). Additionally, job anxiety can lead to burnout, characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment, further compromising teacher effectiveness (Jackson & Maslach, 2007).

## METHODOLOGY

### Participants

The study sample comprised 180 school teachers from Ludhiana district, including both rural and urban areas. The participants were selected using a stratified random sampling technique to ensure representation from different localities and gender groups.

effectiveness, including instructional strategies, classroom management, and interpersonal relationships.

### Procedure

A descriptive survey method was employed. Data were collected using standardized questionnaires administered to the participants. The collected data were analyzed using mean, standard deviation, t-test, and correlation analysis.



### Data Analysis

Data analysis involved the use of statistical techniques to test the hypotheses. Mean and standard deviation were calculated to describe the central tendency and dispersion of job anxiety and teacher effectiveness scores. T-tests were used to compare the mean scores of job anxiety and teacher effectiveness between diverse groups (gender and locality). Pearson's correlation coefficient was calculated to examine the relationship between job anxiety and teacher effectiveness.

### ANALYSIS AND INTERPRETATION OF DATA

#### Descriptive Statistics

The descriptive statistics for job anxiety and teacher effectiveness are presented in Table 1. The mean job anxiety score for the entire sample was 52.3 (SD = 10.4), showing moderate levels of job anxiety. The mean teacher effectiveness score was 75.8 (SD = 12.7), suggesting that the teachers in the sample were effective in their roles.

**Table 1. Descriptive Statistics for Job Anxiety and Teacher Effectiveness**

Variable	Mean	Standard Deviation
Job Anxiety	52.3	10.4
Teacher Effectiveness	75.8	12.7

### Hypothesis Testing

Hypothesis 1: Gender Differences in Job Anxiety

**Table 2 : Distribution of scores of male and female school teachers with variable level of job anxiety.**

N	Mean	S.D.	S.Em.	t-value	Remarks
Male (90)	31.111	5.461	101.099	0.133	Not Significant at 0.05 Level
Female (90)	32.155	3.586			

No significant difference was found between male and female teachers about job anxiety levels (t-value = 0.133,  $p > 0.05$ ). This

suggests that gender does not play a significant role in influencing job anxiety among teachers.

Hypothesis 2: Locality Differences in Job Anxiety

**Table 3: Distribution of scores of rural and urban school teachers with variable Job Anxiety.**

N	Mean	S.D.	S.Em.	t-value	Remarks
Rural (90)	31.088	5.473	87.468	0.096	Not Significant at 0.05 level
Urban (90)	32.177	3.626			

No significant difference was found between rural and urban teachers about job anxiety levels (t-value = 0.096,  $p > 0.05$ ). This

shows that the locality of the school does not significantly affect the job anxiety levels of teachers.

Hypothesis 3: Gender Differences in Teacher Effectiveness

**Table 4: Distribution of scores of male and female school teachers with variable Teacher Effectiveness.**

Gender	N	Mean	S.D.	S.Em.	t-value	Remarks
Male	90	1004.489	102.52	10.80	0.157	Not Significant at the 0.05
Female	90	1026.689	62.59	6.60		

No significant difference was found between male and female teachers about teacher effectiveness (t-value = 0.157,  $p > 0.05$ ).

This suggests that gender does not significantly influence teacher effectiveness.

Hypothesis 4: Locality Differences in Teacher Effectiveness

**Table 5: Distribution of scores of rural and urban school teachers with variable teacher effectiveness.**

Locality	N	M	SD	S.Em.	t-value	Remarks
Rural	90	1003.067	67.847	7.15	0.118	Not Significant at 0.05 level
Urban	90	1028.689	103.490	10.91		

No significant difference was found between rural and urban teachers about teacher effectiveness (t-value = 0.118,  $p > 0.05$ ).

This shows that the locality of the school does not significantly affect teacher effectiveness.





Hypothesis 5: Relationship Between Job Anxiety and Teacher Effectiveness

**Table 6: Coefficient of relationship between Job Anxiety and Teacher Effectiveness.**

Variables	Value	Remarks
1. Job Anxiety	- 0.46	Negative Correlation
2. Teacher effectiveness		

A significant negative correlation was found between job anxiety and teacher effectiveness ( $r = -0.46$ ,  $p < 0.01$ ). This shows that higher job anxiety is associated with lower teacher effectiveness.

## DISCUSSION OF FINDINGS

The findings align with earlier research showing no significant differences in job anxiety or teacher effectiveness based on gender or locality (Bhat & Arumugam, 2020; Kaur, 2018). However, the significant negative correlation between job anxiety and teacher effectiveness underscores the critical need for interventions to address job anxiety among teachers.

## Implications for Practice

The findings of this study have several implications for educational practice. Schools and educational policymakers need to recognize the impact of job anxiety on teacher effectiveness and take initiative-taking measures to address it. Providing teachers with professional development opportunities, stress management programs, and supportive leadership can help mitigate job anxiety and enhance teacher effectiveness (Khalid et al., 2012). Additionally, creating a positive school environment that promotes collaboration and support among teachers can reduce job anxiety and improve overall job satisfaction (Sutton & Wheatley, 2003).

## Conclusion

This study highlights the importance of addressing job anxiety to improve teacher effectiveness. While gender and locality do not appear to significantly influence these variables, the negative impact of job anxiety on teacher effectiveness is clear. Future research should explore specific interventions to reduce job anxiety and support teachers in their professional roles. By addressing the factors contributing to job anxiety and providing necessary support, schools can enhance teacher effectiveness and ultimately improve educational outcomes for students.

## REFERENCES

- Bhat, I. A., & Arumugam, G. (2020). *Teacher Effectiveness and Job Satisfaction of Secondary School Teachers of Kashmir Valley*. *Journal of Xi'an University of Architecture & Technology*.
- Borg, M. G., & Riding, R. J. (1993). *Occupational Stress and Job Satisfaction among School Administrators*. *Journal of Educational Administration*. <https://doi.org/10.1108/09578239310024692>
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). *Emotion-regulation ability, burnout, and job satisfaction among british secondary-school teachers*. *Psychology in the Schools*. <https://doi.org/10.1002/pits.20478>
- Emmer, E. T., & Stough, L. M. (2001). *Classroom management: A critical part of educational psychology, with implications for teacher education*. *Educational Psychologist*. [https://doi.org/10.1207/S15326985EP3602\\_5](https://doi.org/10.1207/S15326985EP3602_5)
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). *Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes*. *Journal of Positive Behavior Interventions*. <https://doi.org/10.1177/1098300717732066>
- Jackson, S. E., & Maslach, C. (2007). *The measurement of experienced burnout*. *Journal of Organizational Behavior*.
- Kamal, A. M., Ahmed, W. S. E., Wassif, G. O. M., & Greda, M. H. A. A. (2021). *Work Related Stress, Anxiety and Depression among School Teachers in general education*. *QJM: An International Journal of Medicine*. <https://doi.org/10.1093/qjmed/hcab118.003>
- Kaur, H. (2018). *A study of teacher effectiveness in relation to organizational climate*. *International Journal of Engineering Science and Computing*.
- Khalid, A., . A. Z., . M. A. Z., . L. S., & . R. M. (2012). *Role of Supportive Leadership as a Moderator between Job Stress and Job Performance*. *Information Management and Business Review*. <https://doi.org/10.22610/inbr.v4i9.1004>
- Kyriacou, C. (2001). *Teacher stress: Directions for future research*. *Educational Review*. <https://doi.org/10.1080/00131910120033628>
- Marzano, R. J. (2003). *What Works in Schools: Translating Research into Action*. *Adolescence*.
- Nobile, J.D., & McCormick, J. (2005). *Job Satisfaction and Occupational Stress in Catholic Primary Schools*.
- Pianta, R. C. (2004). *Enhancing relationships between children and teachers*. In *Enhancing relationships between children and teachers*. <https://doi.org/10.1037/10314-000>
- Schonfeld, I. S. (2001). *Stress in 1st-Year Women Teachers: The Context of Social Support and Coping*. *Genetic, Social, and General Psychology Monographs*.
- Sutton, R. E., & Wheatley, K. F. (2003). *Teachers' Emotions and Teaching: A Review of the Literature and Directions for Future Research*. In *Educational Psychology Review*. <https://doi.org/10.1023/A:1026131715856>
- Swaminathan, P. S., & Rajkumar, S. (2010). *Study on Stress Levels in Organizations and Their Impact on Employees' Behaviour*. *Management and Labour Studies*. <https://doi.org/10.1177/0258042X1003500104>



# GENDER SENSITIVE STRATEGIES IN TEACHING FILIPINO GRADE 11 TECHVOC

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## ABSTRACT

This study aims to investigate how gender and development are included into Filipino teaching practices in Grade 11 TechVoc in Maasin City's Grade 11 and the DepEd's Southern Leyte Division. Both qualitative and quantitative analysis techniques were applied to the design. The participants in this study are Senior High School teachers who teach Filipino Grade 11 in Technical Vocational Schools: Pintuyan Vocational High School, Liloan Vocational High School, Villa Jacinta Vocational School. Thirty-two (32) lesson plan of Filipino Grade 11 in four Technical Vocational Schools are the source of data from first to fourth marks in the year 2019-2020. The Harmonized Gender and Development Guidelines (HAGADAGA) serve as the foundation for assessing the lesson plan. Based on the results of the analysis, the strategies used by teachers in teaching are KWL, independent discussion, round table discussion, reading activities, graph organizer/diagram, group presentation/activity, comparison contrast, poster making, essay writing, reporting, paper pen test, building a blog, presenting one's own point of view, word association analysis, journal writing, picture analysis, creating a synthesis and creating one's own text. There are three (3) gender sensitive strategies. This includes the class discussion, open discussion, and strategic group work. It also includes the written assignments, particularly the paper-pen test. The group work strategy has the highest gender sensitivity score. The free conversation is the second-highest level, and the paper-pen test is the third. Based on the results of the study, most of the strategies used by the gender sensitive teachers in the teaching of Filipino Grade 11 TechVoc are strategies focused on collaborative work or collaborative learning strategies. In the analysis of gender-sensitive teaching strategies, one of the most important factors in implementing the DepEd Order 32 s. 2017 is the teachers' adequate knowledge of Gender and Development. In response to the dearth of activities that promote gender and development, the researchers suggested creating a practical book that will direct students in carrying out such activities. Additionally, in order to achieve the goal of Gender and Development in every school, particularly TechVoc, the inclusion of Gender and Development will be strictly integrated into the DepEd curriculum.

**KEY WORDS:** free discussion; gender sensitive; group activity; HAGADAGA; paper-pen test

## 1.0 RATIONALE

One of the topics that is popular in society, if not more so than in the present generation, is gender equality. The equality of one person's perspective of the other, or as it is known in English, mental health, is one of the positive effects of gender equality. Because they won't face issues in society down the road, it improves people's ability to think. If this is successful, they will also contribute to the development of the nation because most people have positive outlooks on life and possess greater personal skill (Caparroso, 2018).

Assigned to the Department of Education agency that issued the law DepEd Order 32 s. 2017 in response to the request for gender equality, which includes the Gender-Responsive Basic Education Policy, which outlines how to integrate human rights, gender sensitivity, gender equity, and an equal perspective on gender into basic education in line with the DepEd's education for all mandate. Coniglio (2016) found that if the classroom or the school as a whole can create and sustain a "conductive learning atmosphere" or a pleasant environment, then kids will learn in productive ways. When students feel and experience safety and well-being, they learn.

Ensuring that students appreciate and acknowledge their rights and potential in all settings, including school, which they view as their second home, is fundamental to their sense of security. Therefore, the directive and support of DepEd Secretary Dr. Leonor Magtulis Briones to further develop and deepen Gender and Development programs through the usage, monitoring, learning, and enjoyment of GAD lessons, activities, and programs validated Coniglio's (2016) assertion. Since gender and development are a component of the entire curriculum, GAD coordinators are assigned to each school and division to make sure that gender sensitivity is prioritized or applied to every instruction. To make sure that there is integration or gender-sensitive activities incorporated in the classroom, the GAD supervisors, administrators, and coordinators will make the necessary corrections.

Gender-sensitive processes are those that take into account each person's capacity to have a consistent perspective on their own talents. When a teacher assigns work that demonstrates the same level of competence to all of their students, regardless of gender, that instructor can be considered gender sensitive. One of the



current problems with offering activities to primary, high school, and college students is gender sensitivity. Teachers are constantly reminded that their prepared activities ought to take gender equality into consideration. According to Villaluna (2017), women today are seen differently. People's perceptions of women appear to have evolved over time. It appears that women do not have the right to lead, make money, or do other things if we look back at the past. Men are the only ones who receive attention and gain access to society's luxuries. Since there are numerous groups dedicated to the welfare of women and even LGBTQ individuals, there have been numerous cries for equal rights for people of all genders from all over the world.

In 2011, Jinggoy Estrada, a senator, held the position of chairman of the Congressional Oversight Committee on Labor and Employment (COCLE). The Philippine Constitution ensures that men and women have equal opportunities for employment and a means of subsistence. Congress enacted the Magna Carta for Women in 2009 and ratified the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) as additional evidence of this. Laws that will abolish discrimination against women in the workplace permanently must be strengthened.

Women and LGBTQ individuals demanded that the government look into gender equality. The expression of equal rights, obligations, and opportunities for men and women is known as gender equality. It should be emphasized that the Philippine Commission on Women was informed of each institution's commitment to equality and that everyone in society should be afforded an equal voice in matters of power, freedom from violence, human rights, and personal autonomy. It only clarifies that the traits, passions, and skills of men and women differ. It implies that while men and women have different abilities, they nonetheless have the right to recognize and value one another's abilities.

The chief of education, particularly in Southern Leyte province, often reminded the instructors on GAD integration and the importance of providing tasks with consideration for both genders. As a result, the teachers' approaches to integration and carefully assigning assignments to pupils without bias varied.

The instructor plays a crucial part in carrying out DepEd's assignments in the classroom. Every educator has an obligation to care for the well-being of their students. For this reason, the researchers were urged to investigate or examine the gender sensitivity of the strategies employed by Filipino Senior High School teachers, particularly with regard to Grade 11. One of the current concerns in HEIs and DepEd is gender and development.

The way a teacher teaches has a big impact on how each student develops their attitude. It's been argued that teachers have a significant social responsibility. According to Marbella and Discaya (2020), teachers are viewed as moderate participants and arbiters in the academic sector in the Philippines. It is our

responsibility as the ones who shape the students' lives to ensure that their knowledge grows and that they are steered in the correct direction.

The substantial funding allotted to each school for GAD teaching and learning activities is one of the factors that inspired academics to examine or identify the degree of gender sensitivity in the strategies employed by Filipino teachers, particularly those who teach in Senior High School. It was noted that, in less than a year, there was only one GAD-related event that coincided with the celebrations of Women's Month and Guidance Week. This study is very important to the creation of techniques, particularly in education, to achieve the GAD aim.

As a result of the analysis, the researchers created a strategy for teaching Filipino that incorporates GAD. This way, even if there aren't many activities in the school, the students can still learn about the value of equality because GAD is already ingrained in the strategies. It is the researchers' aim that both students and teachers of Grade 11 will find value in this study.

This study aims to investigate how gender and development are included into Filipino teaching practices in Grade 11 TechVoc. Determine the methods instructors employ to teach Filipino in Grade 11 TechVoc, ascertain the gender-sensitive methods they employ, and evaluate the degree of gender sensitivity in the methods they employed.

## 2.0 THEORETICAL/CONCEPTUAL FRAMEWORK

Karl Marx's Social Conflict Theory (2003) serves as the foundation for this study. According to Karl Marx's Social Conflict Theory (2003), miscommunications arise because society is inherently competitive. Karl Marx (2003) used social conflict theory to analyze the differences between the sexes. It goes on to explain that there is constant conflict in society. The unequal empowerment distribution between men and women is the source of tensions and arguments. According to Karl Marx (2003), human misunderstanding arises when people's beliefs do not align.

According to social conflict theory, it is only natural for males to think they are stronger or better than women and for women to think they are equally good. Because of the tradition that the Filipino people adopted during the Spanish era, which held that men are stronger than women, men sometimes find it difficult to accept that they are just as capable as women. The social conflict theory is comparable to Jeannotte's (2008) assertion in his book integrating across social groups, which emphasizes the idea of social integration. In this case, social integration is defined as equal inclusion in minority group situations within mainstream societies with respect to language, culture, and other factors.

Regardless of the society to which an individual belongs, that is. Increasing social integration makes people feel more included in society, regardless of their financial situation, cultural background, or other characteristics, which contributes to



tranquility and peace. In addition to Karl Marx's (2003) perspective on the social conflict theory, which holds that everyone in society has their own beliefs, worldviews, and guiding principles, as well as diverse backgrounds, cultures, and life experiences, it is normal for there to be conflict or misunderstandings between the sexes. And this is the extent of the notion of social conflict. Furthermore, it is crucial to bridge the gaps in society's acknowledgement of women's and men's equal rights by tying this theory to the study of gender sensitivity and gender development.

Additionally, because to research on gender development and gender sensitivity, it is now possible to identify and grant equal rights to different genders in all spheres of society, thereby preserving the peace and order for the whole population. Appreciating equality between the sexes is one of the things that every establishment emphasizes in the educational activities.

According to Fabes and Hanish (2019), in order to prevent and end what is referred to as superiority, pupils should comprehend gender identity and gender expression. According to Fabes and Hanish (2019), a town's development strategy can be effectively created by combining the forces of men, women, and LGBTQ persons. It implies that a place can achieve its goals by uniting and recognizing the equal potential of both genders.

The researchers has not come across any claims in the numerous studies they have perused on social media and in libraries claiming LGBTQ individuals or guys in general are to blame for the Philippines' progress. As a result, all genders play a significant role in society and are encouraged to participate in all events as well as academic ones.

It is simply suggested that Karl Marx's (2003) perspective centers on the notion that disparities in income lead to conflict and strain between various social groups. All in all, this theory seeks to highlight the fact that societal factors as well as individual differences in ability lead to disparities among citizens. Therefore, the focus of this study was on the ways teachers use to assign gender-sensitive work in the classroom and any findings that emerge from the analysis to create instructional materials that incorporate gender-sensitive teaching strategies.

### 3.0 METHODS

The integration of GAD in the activities of the Filipino subject was analyzed in this study using both quantitative and qualitative methods. A level of the strategies used in teaching Filipino was obtained through the use of quantitative research, which is a formal, unbiased (objective), systematic process. Qualitative analysis was also employed to determine whether gender-sensitive strategies were used in the teaching of Filipino.

Vocational High Schools from Southern Leyte Province, where the participants in this study. The province of Southern Leyte is one of the largest provinces in Leyte in fact it composed of two divisions. The Southern Leyte Division and the Maasin City

Division. The Maasin Vocational High School, situated in the city of Maasin, is the only Technical Vocational School in the Maasin City Division. Three Technical Vocational Schools are from Southern Leyte Division: Villa Jacinta Vocational High School, which is situated in the town of Macrohon, Liloan Vocational School, located in Liloan, and Pintuyan Vocational High School, which is located in the town of Pintuyan.

Both of the three specified vocational schools are sizable establishments. All of the aforementioned technical vocational institutions are regarded as "performing schools" by the public due to their track record of producing talented and productive students. As evidence, all of the Southern Leyte province's vocational schools are used as assessment centers by the TESDA Provincial Office for vocational short-term courses like Dressmaking, Electrical Installation Management (EIM), Bread & Pastry Production (BPP), Food & Beverage Services (FBS), and Electronics at Computer Hardware Services (CHS) in order to obtain the National Certificate (NC) of TESDA.

Teachers of Filipino in Grade 11 at Technical Vocational Schools in the province of Southern Leyte who are Senior High School Teachers are the participants in this study. In all, four teachers are taking part in this research. The research participants possesses adequate teaching abilities and has been teaching Filipino 11 for five years.

The study's data came from four Technical Vocational Schools' Filipino Grade 11 textbooks. The researchers asked the teachers for data from the first to the fourth marks of the 2019–2020 school year. The researchers requested two homework assignments for each mark. Eight (8) lessons covering grades one through four were given by each teacher. The thirty-two (32) textbooks that were examined in total.

After being granted access to the thesis committees and supervisors in both divisions, the researchers approached each Filipino instructor teaching Grade 11 one by one to request permission to use their copy in their classes. In order to encourage teachers to share their work, the researchers guaranteed that the lesson plan they were provided would uphold the so-called privacy act, meaning that no one would be able to identify who owned it. The researcher begged the Maasin City Division's GAD coordinators to serve as the textbook evaluators as soon as she received the textbooks.

The criteria prepared by the researchers is the basis for evaluating the lessons if the strategies used are gender sensitive. The Harmonized Gender and Development Guidelines (2016), often known by the acronym HAGADAGA and the GAD learning toolkit, were the source of revisions for the standard indicator. The GAD coordinators from Southern Leyte Division, Maasin City Division, and SLSU-Tomas Oppus coordinator initially verified the created indicators with the researchers. The researchers compiled the findings following the evaluators' analysis of the lessons. Before responding to the researchers goal, first researchers listed the specific tactics or strategies that the





teachers had employed. Second, techniques that were responsive to gender were examined. Third, the researchers first conducted open-coding in order to determine the degree of gender sensitivity in the strategies. This led to the researchers compiling the tactics and using statistics to create a theme analysis. The researchers instantly produced a lesson plan with activities and gender-sensitive strategies after applying statistics. The researchers requested permission from the teacher to include the gender-sensitive practices that were discovered in the curriculum that was examined into the curriculum. The developed lessons plan or output of this study, researchers asked to a Master Teacher (MT) in Maasin City Division to assess the generated or developed lessons.

#### 4.0 RESULTS AND DISCUSSION

##### *Strategies Used by Teachers in Teaching Filipino Grade 11 TechVoc*

Based on the analysis of thirty-two (32) lesson plans from four TechVoc schools revealed that Grade 11 teachers employed twenty different strategies. These techniques include KWL, reading activities, group presentations and activities, independent discussions, round tables, graph organizers and diagrams, essay writing, reporting, paper pen tests, blog building, presenting one's own perspective, word association analysis, journal writing, picture analysis, developing a sentence, and creating or developing one's own text. The KWL, individual conversation, round table discussion, reading exercises, and graph are some of these strategies. Teachers employ the free discussion technique the most. Four Technical Vocational schools employed this strategies, as Table 1 illustrates. Four schools employ the same group work approach. Additionally, four schools are observed to be using the text reading approach. Other approaches are employed in certain educational institutions but not in others. This is clearly presented in Table 1.

**Table 1: Strategies Used by Teachers in Teaching Filipino Grade 11**

Teaching Strategies	Maasin Vocational High School	Villa Jacinta Vocational High School	Liloan Vocational High School	Pintuyan Vocational High School
Group work / groupings	6	4	3	1
<i>Group presentation</i>	1	0	1	1
<i>Group reporting</i>	1	0	1	1
<i>Research activities</i>	2	0	0	1
Free discussion/class discussion	5	6	7	6
<i>Round table discussion</i>	0	1	1	1
Reading				
<i>Reading sample essay</i>	1	1	1	0
<i>Reading the text</i>	1	1	1	1
Writing				
<i>Composition Writing</i>	1	0	1	0
<i>Journal writing</i>	2	0	1	0
<i>Essay writing</i>	1	0	0	1
<i>Paper-pen test</i>	0	3	3	1
<i>Song writing</i>	0	0	0	1
Poster making	0	0	0	1
Developing/creating a blog	0	0	1	1
Video generation and display	0	1	1	0
Personal opinion or view	0	0	1	1
KWL chart	1	1	1	0
Picture analysis	1	1	0	0
Venn diagram	0	0	0	1

If we look at the table, it appears that more strategies focus on collaborative tasks than individual strategies. Examples of collaborative strategies include group presentation, group reporting, and group work. The aforementioned collaborative strategies are the activities or strategies used by teachers in teaching Filipino Grade 11 TechVoc to arouse the interest and

interest of students and above all to cultivate the skills of each student.

This data only demonstrates that teachers in the four schools are trying to make their students learn; it also demonstrates the several strategies and exercises that teachers have employed to



garner attention and accentuate their students' areas of weakness. It simply implies that educators are always pushing the boundaries of what constitutes a good learning experience for their students.

This outcome also served as a reminder that the teacher's primary objective is to effectively convey all of the knowledge that will be taught to the students. For this reason, teaching strategies are very helpful in serving as a bridge so that the students may comprehend the material that they wish to share. This demonstrates how DepEd educators are influencing each student's understanding, especially in the Grade 11 Technical Vocational School of Southern Leyte and Maasin City Division. As a result, teaching presents a great task and a great deal of responsibility. Because they have such big responsibilities to do, all teachers should be considered heroes.

### *Gender Sensitive Strategies in Teaching Filipino Grade 11 TechVoc*

Regardless of gender, everyone wants to be treated equally in society and, most importantly, in the classroom. Every student has the best sentiments when he or she is embraced by his or her professors and peers, regardless of their background, beliefs, or physical disabilities. It is important to highlight that, of the 20 strategies employed by the teachers in the Filipino Grade 11 TechVoc, only three (3) of the leading strategies are gender sensitive. This is the strategic group work/groupings, independent discussion/class discussion and written work especially the paper-pen test. This finding demonstrated that only a small percentage of the tactics employed by the teachers across the four schools demonstrate gender sensitivity.

**Table 2: Gender Sensitive Teaching Strategies of Filipino Grade 11**

Teaching Strategies	Frequency of users	Percent	Average Gender Sensitivity Score
Group work / groupings	14	16.9	11.50
<i>Group presentation</i>	3	3.6	9.67
<i>Group reporting</i>	3	3.6	12.00
<i>Research activities</i>	3	3.6	12.33
Free discussion/class discussion	24	28.9	12.42
<i>Round table discussion</i>	3	3.6	14.00
Reading			
<i>Reading sample essay</i>	3	3.6	12.33
<i>Reading the text</i>	4	4.8	9.25
Writing			
<i>Composition Writing</i>	2	2.4	10.00
<i>Journal writing</i>	3	3.6	10.67
<i>Essay writing</i>	2	2.4	13.00
<i>Paper-pen test</i>	7	8.4	9.57
<i>Song writing</i>	1	1.2	13.00
Poster making	1	1.2	7.00
Developing/creating a blog	1	1.2	9.00
Video generation and display	2	2.4	6.00
Personal opinion or view	2	2.4	14.00
KWL chart	2	2.4	6.00
Picture analysis	2	2.4	7.00
Venn diagram	1	1.2	3.00
<b>Total</b>	<b>83</b>	<b>100.0</b>	

This indicates that teachers employ gender-biased strategies. According to the researchers interview with the teachers handling Grade 11 Filipino subject, several of them admitted that when they employs the graph organizer/diagram technique, it is sometimes unavoidable that the boys will be assigned because they think they are superior than the girls. Since women are better at explaining things than males are, the woman is given the task of presenting or reporting on their work. This statement manifestly views the skills of the two genders differently and is judgmental. A teacher also mentioned that since female students are dependable speakers, it is natural that women will be expected to take the lead when it comes to blogging, voicing one's own

opinion, and reporting. Compared to men, women and gays are more creative. The instructor said outright that men lack inventiveness.

One finding from this study is that, due to the lack of gender-sensitive strategies, teachers disregard the abilities of LGBTQ individuals as well as men and women. This outcome just confirms that DepEd Order 32 s. 2017 was issued correctly that includes the Gender-Responsive Basic Education Policy, which prioritizes each student's abilities equally. The researcher came to the realization that these teachers' practices would continue if this regulation had not been put into effect. Sometimes the researcher



uses techniques that are more advantageous to male or female pupils based on their ability. This suggests that activities appealing to people of both genders will be a part of the tactics employed. As a result, educators will keep looking into or identifying strategies and exercises that engage students of both genders.

#### **Level of Gender Sensitivity in Strategies Used**

The degree to which 32 lessons from the four (4) Technical Vocational Schools of Southern Leyte and Maasin City Division were examined for gender-sensitive techniques is shown in Table 3. The result in the level of gender sensitivity in the strategies used by the teachers in the four schools indicates, face a significant challenge, as evidenced by the results of the gender sensitivity of the tactics employed by the instructors. Because the results show

that the DepEd Order 32 s. 2017 was not executed very well. will see the abolition of prejudice and the inclusion of human rights and gender equality, sensitivity, and equity in basic education.

It is the responsibility of all educators to achieve a gender-sensitive learning environment. For this reason, there has been a strong emphasis on gender sensitivity training and awareness initiatives, particularly in teacher education institutes. This outcome is connected to the analysis by Enoc and Gagani (2019), which found that gender equality—the idea that both sexes should be valued equally—was not applied to both. Therefore, regardless of gender, Enoc and Gagani (2019) recommended that all teachers remember to treat each student fairly and equitably.

**Table 3: Level of Gender Sensitive Strategies Used**

Teaching Strategies	Frequency of users	Percent	Average Gender Sensitivity Score	Description
<b>Group work / groupings</b>	<b>14</b>	<b>16.9</b>	<b>11.50</b>	<b>Low number of users, High Gender Sensitivity score</b>
<i>Group presentation</i>	3	3.6	9.67	Low number of users, Moderate Gender Sensitivity score
<i>Group reporting</i>	3	3.6	12.00	Low number of users, High Gender Sensitivity score
<i>Research activities</i>	3	3.6	12.33	Low number of users, High Gender Sensitivity score
<b>Free discussion/class discussion</b>	<b>24</b>	<b>28.9</b>	<b>12.42</b>	<b>Moderate number of users, High Gender Sensitivity score</b>
<i>Round table discussion</i>	3	3.6	14.00	Low number of users, High Gender Sensitivity score
<b>Reading</b>				
<i>Reading sample essay</i>	3	3.6	12.33	Low number of users, High Gender Sensitivity score
<i>Reading the text</i>	4	4.8	9.25	Low number of users, High Gender Sensitivity score
<b>Writing</b>				
<i>Composition Writing</i>	2	2.4	10.00	Low number of users, Moderate Gender Sensitivity score
<i>Journal writing</i>	3	3.6	10.67	Low number of users, High Gender Sensitivity score
<i>Essay writing</i>	2	2.4	13.00	Low number of users, High Gender Sensitivity score
<i>Paper-pen test</i>	7	8.4	9.57	<b>Low number of users, Moderate Gender Sensitivity score</b>



	1	1.2	13.00	Low number of users, High Gender Sensitivity score
<i>Song writing</i>				
	1	1.2	7.00	Low number of users, Moderate Gender Sensitivity score
<b>Poster making</b>				
	1	1.2	9.00	Low number of users, Moderate Gender Sensitivity score
<b>Developing/creating a blog</b>				
	2	2.4	6.00	Low number of users, Moderate Gender Sensitivity score
<b>Video generation and display</b>				
	2	2.4	14.00	Low number of users, High Gender Sensitivity score
<b>Personal opinion or view</b>				
	2	2.4	6.00	Low number of users, Moderate Gender Sensitivity score
<b>KWL chart</b>				
	2	2.4	7.00	Low number of users, Moderate Gender Sensitivity score
<b>Picture analysis</b>				
	1	1.2	3.00	Low number of users, Low Gender Sensitivity score
<b>Venn diagram</b>				
<b>Total</b>	<b>83</b>	<b>100.0</b>		

**Number of Users****High** : 51 and above number of users**Moderate** : 21 to 50**Low** : 1 to 20**Gender Sensitivity Score****High** : 11-15**Moderate** : 6-10**Low** : 1-5

The study's findings suggest that education can be a useful instrument in realizing the goals of the government. However, the principal players in charge of carrying out education's core purpose are instructors. This implies that educators serve as ambassadors for all policies put into place, particularly those pertaining to equitable and fair rights. There are three primary strategies that have a high degree of gender sensitivity among all the strategies used to teach Filipino in Grade 11 TechVoc. These include group work or groups, free discussion or class discussion, paper-pen test or written test.

The number of teachers or users of group reporting, group presentations, and research activities is the same, but the degrees of gender sensitivity vary. The gender sensitivity score for research activities is the greatest at 12.33%. Group reporting comes in second with a gender sensitivity score of 12.000%, and group presentations come in last with a gender sensitivity score of just 9.67%.

In the second group of teaching strategies, the group of free discussion or class discussion, it is divided into two groups; the oral and reading. The free discussion or class discussion technique suggests that although it has a moderate user base, it nevertheless has a high gender sensitivity rate. Just a small percentage of the teachers in the round table discussion employed this tactic, but 14.00% of them shown a high degree of gender awareness. Essay writing ranks second in terms of writing strategies used, with a low usage rate of 13% and a strong gender

sensitivity. Despite having few users, essay reading comes in third place with a gender sensitivity of 12.22%. While journal writing is fourth among low users, its gender sensitivity is 10.67%. Despite the low number of method users, journal writing and text reading nonetheless achieved 10.00% and 9.25%, respectively.

The third strategy, which is also based on the table, is the paper-pen test, which has a modest gender sensitivity percentage of 9.57% despite having a small user base. The following techniques fall under this category: creating posters, songs, blogs, films, KWL charts, picture analyses, venn diagrams, and presenting one's own opinions. Both songwriting and sharing a personal viewpoint are relatively uncommon tactics, but they both have a high gender sensitivity rate. Additional teaching strategies that have a low user base but fall into the moderate gender sensitivity percentage category include picture analysis (7%) and video display (6%), poster development strategies (7%), blog development (9%), and picture analysis (7%). Out of all the techniques utilized in the teaching of Filipino Grade 11 TechVoc in the Maasin City and Southern Leyte Division, the venn diagram strategy has the fewest users and the lowest gender sensitivity (only 3%) of any other strategy.

**5.0 CONCLUSION AND RECOMMENDATION**

Based on the study's findings, teachers who are sensitive to gender issues when instructing Filipino students in Grade 11 TechVoc typically employ strategies that focused on collaborative





work or collaborative learning. In the analysis of the gender sensitive strategies that are included in the Filipino TechVoc lessons in Grade 11 in Southern Leyte Maasin City Division, the teachers' sufficient knowledge about Gender and Development is a big factor to implement the DepEd Order 32 s. 2017. In response to the dearth of activities that support gender and development, it is advised that students have a activity book that will guide them in carrying out these activities. Gender and development will also be strictly included in the DepEd curriculum in order to continue expanding and achieving the goal of GAD in every school, especially in TechVoc.

## 6.0 REFERENCES

1. Caparoso, J. (2018). *Pagkakapantay-pantay ng mga kasarian*. <https://medium.com/@jmcaparoso/pagkakapantay-pantay-ng-mga-kasarian-d36f6172>
2. Coniglio, R. (2016). *Why gender matters in differentiating instruction*. Retrieved from <http://www.teachhub.com/why-gender-matters-differentiating-instruction>.
3. Department of Education (2013). *DO 27, Series 2013. Guidelines and Procedure on the Establishment or Deped Gender and Development (GAD) Focal Point System (GFPS) at the Regional, Division and School Levels*. url: <http://www.deped.gov.ph/2017/06/29/do32-s-gender-responsive-basic-education-policy/>. pp 1
4. Enoc, J. & Gagani, R. (2019). *The development of a gender-sensitivity teaching test*. *International Journal of Advanced Research and Publications*, 3 (6).
5. Fabes, R., Martin, C. at Hanish, L. (2019). *Gender integration and promotion of Inclusive classroom climates*. *Educational Psychologist*, 54 (4), pp. 271-285. <https://doi.org/10.1080/00461520.2019.1631826>
6. Jeannotte, S. (2008). *Promoting social integration: A brief examination of concepts and issues*. Retrieved mula [https://www.un.org/esa/socdev/social/meetings/egm6\\_social\\_integration/documents/Jeanotte\\_Concepts.pdf](https://www.un.org/esa/socdev/social/meetings/egm6_social_integration/documents/Jeanotte_Concepts.pdf)
7. Marbella, F. and Discaya, R. (2020). *Integrasyon ng gender and development (GAD) sa gawain sa asignaturang Filipino*. *Asia Pacific Journal of Multidisciplinary Research*, 8 (2), 6-14.
8. Max, K. (2003). *Selected Writings, second edition*, David McLellan (ed.), Oxford: Oxford University Press, 2003.
9. Villaluna, J. (2017). *Pananaw at kaalaman ng mag-aaral sa kahalagahan ng hustisya at karapatan ng kababaihan*. *Pananaw\_at\_Kaalaman\_ng\_Mag\_aaral\_sa\_Kahalagahan\_ng\_Hustisya\_at\_Karapatan\_ng\_Kababaihan*



# IMPROVING READING COMPREHENSION SKILLS IN ENGLISH LANGUAGE THROUGH PEER-ASSISTED LEARNING STRATEGY: A QUASI-EXPERIMENTAL STUDY

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## ABSTRACT

*This research study investigated the effectiveness of the Peer-Assisted Learning Strategy (PALS) as an intervention program designed to enhance reading comprehension skills among Grade 5 students. The primary objectives included improving reading comprehension abilities and fostering basic comprehension through engaging reading activities. Employing a quasi-experimental research design, data was collected to assess the impact of PALS on the targeted student cohort. The findings of the study revealed that PALS was indeed effective in enhancing the reading comprehension skills of Grade 5 students. The noticeable improvement in performance between pre-test and post-test assessments underscored the program's efficacy in promoting reading readiness skills. This positive outcome can be attributed to the innovative strategies employed within the PALS framework. The results also suggest a promising trend towards addressing reading proficiency issues among Grade 5 students in Magugpo Pilot Central Elementary School. Based on these encouraging findings, it is strongly recommended to continue and further develop the Peer-Assisted Learning Strategy as it has the potential to significantly contribute to ongoing efforts aimed at improving reading comprehension skills in this age group. This study provides valuable insights into the design and optimization of reading intervention programs for young learners, thereby supporting their academic achievement and overall educational success.*

**KEYWORDS:** reading, PALS, reading level, reading comprehension, teaching strategy, quasi-experimental research design

## INTRODUCTION

Reading proficiency is a fundamental skill that impacts a child's academic success across all subjects. Becoming proficient in reading in the early elementary school grades is also a good indicator of future academic performance and general success in life (Mulcahy et al., 2019). However, students struggling with reading comprehension has been an enduring challenge. This issue is particularly concerning because reading is the foundation to all other areas of learning. When students struggle to comprehend what they read, it affects their performance across all subjects, leading to broader academic challenges.

In a global perspective, 16% of children and adolescents worldwide do not meet the minimum proficiency levels in reading. About 387 million of the 617 million total are children. As a result, by the time they are old enough to finish elementary school, more than half of all children—56% of them—will not be proficient readers (UNESCO Institute for Statistics, 2017). Results from SEA-PLM 2019 highlighted also a large proportion of low-performing children in Lao PDR and the Philippines could only “identify relationships between words and their meanings” in the official language of instruction by Grade 5, despite these basic reading skills being targeted in the Grade 1 curriculum (UNICEF, 2021).

Moreover, in the Philippines, the issue of students' reading proficiency is not a recent concern. Studies indicate that the reading challenges faced by Filipino students appear to persist over time (Alayon, 2014). According to the 2022 Programme for International Student Assessment (PISA), 15-year-old Filipino children were still falling behind international students in math, reading, and science. These findings underscore the

need for continued efforts to enhance educational strategies that can effectively improve the literacy of Filipino students.

Consequently, in the aftermath of the pandemic, there has been a concerning rise in the number of students experiencing challenges with reading in Magugpo Pilot Central Elementary School. Based on the PHIL-IRI assessment, a significant proportion of frustrated readers, particularly at the Grade 5 level has been documented. Specifically, 2.69% are categorized as non-readers, while 25.83% are classified as frustration level readers. Following this, the researcher implemented the Peer-Assisted Learning Strategy (PALS) as an intervention program at the above-mentioned school.

This study explores the effectiveness of PALS in enhancing students' reading performance, comparing its efficacy with traditional methods such as the read-aloud strategy. It evaluate how well PALS improves reading skills and offers insights into its comparative benefits. The research aims to provide a clearer understanding of which approach might be more effective in helping students develop better reading abilities over time. Thus, this study sought to identify the advantages that PALS may have over traditional methods, aiming to inform educators' decisions on effective reading instruction strategies to apply in their own classroom settings.

## OBJECTIVES

This study aimed to investigate the effectiveness of the Peer-Assisted Learning Strategy (PALS) in improving the reading comprehension skills of students in English language. More specifically, this study aimed:



1. To describe the competence level of Grade 5 students in reading comprehension before using peer-assisted learning strategy.
2. To describe the competence level of Grade 5 students in reading comprehension after using peer-assisted learning strategy.
3. To find if there is a significant difference in pre-test and post-test scores of the control group (taught in the traditional method).
4. To assess the significant difference in pre-test and post-test scores of the experimental group (taught using peer-assisted learning strategy).
5. To determine the significant difference in the post-test scores of the control and experimental groups.

### METHODS

This research study used quantitative quasi-experimental method in collecting data. The research design was a two-group quasi-experimental pretest-posttest design, where both groups received pretests at the beginning and posttests at the end of each period under consideration.

Purposive sampling, a non-probability sampling method, was used to select participants for this study. The research participants were 20 pairs of students in experimental group and 20 students in control group in the same grade level from Maguppo Pilot Central Elementary School.

The instrument used to gather data for the pre-test and post-test was a 20-item comprehension questionnaire adapted from the 2018 Philippine Informal Reading Inventory Manual. The researcher also designed a 30-minute tutoring program, followed by a course pack employing the peer-assisted learning strategy, scheduled across a 12-day intervention period. This initiative targeted the enhancement of reading comprehension and was carried out during lunchtime. The pre-test and post-test instruments had already passed DepEd's quality assurance and were also validated by experts before being used in the study.

With the approval of the Division of Tagum City, this research was conducted in Maguppo Pilot Central Elementary School SPED Center in the province of Davao del Norte. The researcher also adhered to ethical principles and guidelines, safeguarding the rights, dignity, and well-being of all participants by obtaining assent forms from participants, ensuring voluntary participation, confidentiality, and withdrawal at any time.

The researcher administered the pre-test, consisting of a 20-item comprehension question to both the experimental and control groups. Standardized administration procedures were ensured to maintain consistency and reliability of data. Based on the results, the initial step in implementing PALS involved pairing frustration readers with independent readers. To form these pairs, teachers ranked all learners in the experimental group based on their reading abilities, with the highest-performing student at the top and the lowest-performing at the bottom. The list was then divided in half to pair the highest-performing student with the lowest-performing one. The researcher then employed the peer-assisted learning strategy, followed by the administration of the post-test, consisting of the same instrument.

After administering the instrument, the researcher collected and recorded participants' responses to the pre-test and post-test outcomes and subjected them to statistical analysis. The use of frequency distribution was employed for the listing of the scores of the respondents. The use of comparison coefficients was used to test the significant difference between the pre-test and post-test mean scores. Other than that, to facilitate obtaining results, the researcher used JASP software to determine and compare the t-test results between the pre-test and post-test of the experimental and control groups in the study.

### RESULTS AND DISCUSSIONS

**Table 1**  
**Mean Comparison of Pre-test Scores of Control and Experimental Group**

Pre-test	No. of Students	Mean	Class Proficiency	Competency level
Group A (Control)	20	9.4	47%	Frustration
Group B (Experimental)	20	9.5	47.5%	Frustration

Table 1 shows the mean comparison of pre-test scores of control and experimental group. The mean score for the Control Group is 9.4, while the mean score for the Experimental Group is 9.5. The mean difference is 0.1, showing that there is significant difference.

However, the data presented shows that the mean scores for both groups on a pre-test are relatively similar, both groups are under frustration level in reading comprehension with the Experimental Group having a slightly higher mean score. It means both groups are comparable. To interpret the competency level of students, it is calculated as the mean score divided by the HPS (Highest Possible Score) multiplied by

100%. For the Control Group, the class proficiency is 47, while for Experimental Group, it is 47.5.

This implies that these grade 5 learners were having difficulty and find it challenging to understand the text that has been assigned to them. Alarmingly, as Claessen et al. (2020) noted, reading difficulties exist globally, and the Philippines is no exception. Moreover, an article from the Philippine Star (2010) states that undeniable fact that the majority of Filipino students lack the ability and motivation to read. Due to the rapidly evolving world and changing technology, it is evident that reading is sometimes taken for granted.



**Table 2**  
**Mean Comparison of Post-test Scores of Control and Experimental Group**

Posttest	No. of Students	Mean	Class Proficiency	Competency level
Group A (Control)	20	10.5	52.5%	Frustration
Group B (Experimental)	20	16.7	83.5%	Frustration

Table 2 shows the posttest results for both groups in terms of mean score and class proficiency. The mean of Control Group is 10.5, while the mean of Experimental Group is 16.7. The class proficiency for each group was calculated using the formula: Class proficiency = (mean/HPS) X 100%, where HPS is the highest possible score, which in this case is 20. For the Control Group, the class proficiency is 52.5%, while the Experimental Group, the class proficiency is 83.5%.

In terms of mean score and class proficiency, the Experimental Group outperformed the Control Group in the posttest by a large margin. The outcome shows that after receiving instruction using the peer-assisted learning strategy, the experimental group's mean paced differently from the control group. These

findings demonstrate that PALS is an effective short-term intervention for struggling readers.

A crucial aspect of successful remediation depends on the student's effort and attitude, influencing the speed of their learning significantly. Students who are motivated generally make faster progress than those with a less positive attitude towards learning (Legera & Conca, 2010). Thus, PALS is regarded as an effective instructional strategy that encourages active student engagement. Also, working with peers have shown desirable behaviour on participation, motivation and improved social skills interaction by making friends during the implementation of the strategy (Okilwa & Shelby, 2010).

**Table 3**  
**Pretest and Posttest of the Control Group**

	Mean	t-value	p-value	Remarks
Pretest	9.4	-3.153	0.005	significant
Posttest	10.5			

Table 3 shows the comparison of the achievements of the students in control group. The control group's pretest mean score was 9.4, and the posttest mean score was 10.5. The t-value, which measures the difference between the pretest and posttest means relative to the variability in the data, was -3.153. The negative t-value indicates that the posttest mean was slightly higher than the pretest mean. The p-value, which represents the probability of obtaining a t-value as extreme as or more extreme than the observed t-value if there were truly no difference between the pretest and posttest means, was 0.005. This p-value is below the conventional threshold of 0.05, indicating that the decision was significant.

It proves there was a significant difference between the achievements of the students when using traditional read-

aloud strategy in developing reading comprehension in the control group as reflected on their pretest and posttest mean scores.

However, the conventional method was found to be less effective, likely due to its teacher-centered nature. This finding implies that continued reliance on teacher-centered instructional strategies cannot ensure student achievement. While it allows educators to compare student performances, it limits students' potential, making this method less interactive, and less engaging. Effective instructional approaches, as described by Zemelman et al. (2012), are student-centered, cognitive, and participatory.

**Table 4**  
**Pretest and Posttest of Experimental Group**

	Mean	t-value	p-value	Remarks
Pretest	9.5	-17.382	0.001	significant
Posttest	16.7			

Table 4 shows the comparison of the achievements of the students in experimental group. The experimental group's pretest mean score was 9.5, while the posttest mean score was 16.7. The t-value of -17.382 suggests a large difference between the pretest and posttest scores. This value indicates that the posttest scores were significantly higher than the pretest scores. As a result, the p-value is 0.001 less than 0.05, indicating that the difference between the pretest and posttest scores is statistically significant.

It prves that there was a significant difference between the achievements of the students in the experimental group as

reflected on their pretest and posttest mean scores when intervened through peer-assisted learning strategy. Even though students did not make to leap from frustration to instructional level, the mean difference highlights improvements far from their status quo. With the 12- session intervention, students already show significant advancement.

In both cases, control and experimental, the results showed positive student achievements using either the traditional read-aloud or the interactive read-aloud strategies to develop reading literacy. While students can be taught using various strategies, teachers predominantly use conventional methods, which are





not well-suited for 21st-century learners. Therefore, educators need to explore different approaches that foster better learning engagement.

According to Isaac (2018), children's reading skills can be significantly enhanced through read-aloud sessions. However, empirical research indicates that the effectiveness of read-aloud sessions largely depends on the teachers' approach. On the

otherhand, PALS stands out from typical teacher-led reading instruction because it gives immediate feedback, rewards students, and lets them spend more time reading. Researchers believe PALS works well because it lets students listen, read aloud, and correct mistakes. It's different from regular lessons because students get quick feedback from peers. While teachers try to help one-on-one, it might not be enough for struggling readers who need more interaction (Saenz et al., 2006).

**Table 5**  
**Posttest of Control and Experimental Group**

Post-test	Mean	t-value	p-value	Remarks
Control	10.5	-9.612	0.001	Significant
Experimental	16.7			

Table 5 shows the results of independent t-test of the posttest of control group and experimental group. The mean control group's posttest mean score was 10.5 and the experimental group's posttest mean score was 16.7, p-value is 0.001 which is less than .05, indicating that it is statistically significant.

To determine if there is a significant difference between the two groups, a t-test was conducted. The t-value obtained is -9.612 and the p-value is 0.001. The p-value less than the commonly used threshold for statistical significance of 0.05, indicating that the difference between the two groups is statistically significant.

The experimental group utilizing the use of peer-assisted learning strategy as intervention fared better academically. The aspects relating to students that have an impact on students' participation in literacy includes standards, teamwork, reading, and writing proficiency and decisions. More students read when they anticipate being interested successful, collaborate with their peers, and capable readers have the potential to make options to develop their reading abilities. Peer-assisted Learning Strategy, then, is an efficient method for student to communicate with other students. Considering other people's perspectives inspires learners to read and discuss with their peers (Tompkins, 2006). When using Peer-assisted Learning Strategy, beyond the more conventional question-response-evaluation discourse practices controlled by the teacher, peer-tutoring, with a particular focus on using specific questioning techniques employs cognitive strategies such as summarization, question generation, and activating prior knowledge can improve reading comprehension skills among primary school students (Muller et al., 2016).

**CONCLUSION**

Based on the results of the study, the following conclusions were drawn:

1. The competency level of both the control and experimental groups at the beginning of the experiment were equivalent.
2. The competency level of the students in the experimental group after the experiment was significantly higher than the control group.
3. Also, the control group which relies on the discussion or the traditional method, shows a very small yet

- significant progress.
4. Consequently, the result it showed that the ability of students' reading comprehension through peer-assisted learning strategy improved significantly. Therefore, the interference of using peer-assisted learning strategy as intervention in developing reading comprehension skills was effective. Achievements of the students in both the control and experimental groups in developing reading literacy improved using the traditional read-aloud and the use of peer-assisted learning strategy, as interventions, respectively.
5. Overall, the data suggests that both approaches were effective in teaching reading, but peer-assisted learning strategy resulted higher mean than the other. Peer-assisted Learning Strategy was more effective than traditional method.

**RECOMMENDATION**

Based on the conclusions derived from the results of the study, the following recommendations are hereby presented:

1. Considering the students' struggles with reading and learning, this could be form as the basis for strategy-based program aimed at improving reading comprehension ability.
2. There is a need for English language teachers to explore reading strategies to be engaging and not monopolized by the teacher. This could be done through peer-assisted learning strategy so that students can collaborate with other learners, and develop confidence as well.
3. It is recommended that the peer-assisted learning strategy be implemented over a longer duration to thoroughly assess its long-term effectiveness on reading comprehension.
4. Just as other activities, the work of teachers depends on the school community. By sharing the administrator's resources to developing rich literacy experiences to students, the School Administrators should encourage, support, and strictly implement reading program.



## REFERENCES

1. Alayon, D.P. (2014). *Utilizing SQ3R method in enhancing the reading proficiency of junior high school learners (unpublished master's thesis)*. National Teacher's College, Manila, Philippines.
2. Claessen, M., Dzidic, P., Boyes, M., Badcock, N., Nayton, M., & Leitao, S. (2020). *Educators' Perceptions of the Impact of Reading Difficulties for Young People*. *Australian Journal of Learning Difficulties*, 25, 51-64.  
<https://doi.org/10.1080/19404158.2020.1734952>.
3. Isaac, E. (2018). *Exploring Barriers to Effective Delivery of Interactive Read-Alouds from the Perspective of Pre-K and Kindergarten Teachers*.
4. Legere, E., & Conca, L. (2010). *Response to Intervention by a Child With a Severe Reading Disability: A Case Study*. *Teaching Exceptional Children*, 43(1), 32-9.
5. Mulcahy, E., Bernardes E., & Baars, S., (2019). *The Relationship between Reading Age, Education and Life Outcomes*.
6. Muller, B., Richter, T., Krizan, A., Hecht, T., & Ennemoser, M. (2016). *How to analyze interpersonal and individual effects in peer-tutored reading intervention*. *Journal of Experimental Education*, 84(4), 744-763.
7. Okilwa, N. & Shelby, L. (2010). *Effects of Peer Tutoring on Academic Performance of Students with Disabilities in Grades 6 through 12: A Synthesis of the Literature Remedial and Special*.
8. *Education* 31(6)450-463 Retrieved April 7, 2018 from <http://journals.sagepub.com/doi/10.1177/0741932509355991>.
9. Pisa, (2022). *Combined executive summaries. Vol I, & II*. Retrieved from: <https://www.oecd.org/publication/pisa-2022-results/>.
10. *Philippine Star* (2010). *How Do Filipino Students Rate in Reading?*  
<https://philstar.com/lifestyle/health-and-family/2010/03/02/553720/how-do-filipino-students-rate-reading>.
11. Tompkins, G. (2006). *Literacy for the 21st century: A balanced approach*. (4th ed.). UpperSaddle River, NJ: Pearson Education, Inc.
12. *Unesco Insitute of Statistic*, (2017). *More Than One-Half of Children and Adolescents Are Not Learning Worldwide*. Retrieved from:  
<https://uis.unesco.org/sites/default/files/documents/fs46-more-than-half-children-not-learning-en-2017.pdf>.
13. UNICEF. (2021). *SEA-PLM 2019 latest evidence in basic education: Low-performing readers in 6 Southeast Asian countries*. United Nations Children's Fund (UNICEF). © UNICEF 2021.
14. Zemelman, S., Daniels, H.S. & Hyde, A. (2012). *Best practice: Bringing standards to life in America's Classrooms*. (4th ed.). Portsmouth, NH: Heinemann.



## PAGSUSURI SA KAMALIAN SA SANAYSAY NG MGA MAG-AARAL SA ANTAS SEKUNDARYA

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### ABSTRAK

Nilalayan ng kwalitatibong-diskurso na pag-aaral na ito na matukoy ang mga karaniwang kamalian ng mga mag-aaral sa antas Sekundarya sa pagsulat ng sanaysay gamit ang wikang Filipino. Nakabatay ang pananaliksik na ito sa iminungkahi ni Stephen Pit Corder (1973) na Target Modification Taxonomy na may apat na kategorya kabilang ang pagkakaltas, pagdaragdag, maling pagpili ng salita, at maling pagkakaayos ng mga salita. Isinagawa ang pag-aaral na ito sa isang pribadong paaralan sa Lungsod ng Tagum, Davao del Norte, Philippines. Sinuri ang dalawampung (20) sanaysay na isinumite ng mga mag-aaral sa antas Sekundarya na pinili gamit ang purposive sampling. Lumabas sa resulta na nagtamo ang mga mag-aaral sa antas Sekundarya ng kamalian sa kategoryang pagkakaltas ng mga mahahalagang elementong pambalarila tulad ng gitling, titik para sa tamang pagbaybay ng salita at paggamit ng angkop na pang-ugnay sa pangungusap gayundin sa kategoryang pagdaragdag ng mga titik o letra pati na rin sa pagdaragdag ng gitling at kuwit. Nagtamo rin ang mga partisipante ng kamalian sa pagpili ng angkop na salita at maling pagkakaayos ng mga salita. Samakatuwid, ang mga kamaliang natukoy ay nagpapahiwatig na ang mga mag-aaral sa antas sekundarya ay may kakulangan sa kaalaman tungkol sa mga tuntuning pambalarila. Ang resulta ng pag-aaral na ito ay makatutulong sa pang-akademikong sektor na masolusyonan ang nakatagong suliraning kinakaharap ng mga mag-aaral at mabigyan ng tamang gabay ang mga kabataang nagnanais na magtagumpay sa kanilang pagkatuto.

**MAHAHALAGANG SALITA:** kamalian sa sanaysay, antas sekundarya, kamalian sa Filipino, balarilang Filipino, diskurso, korpora, Corder, Lungsod ng Tagum, Davao del Norte, Pilipinas

### INTRODUKSYON

Ang kahinaan sa pagsulat ng mag-aaral ay nakababahala at isang suliranin na kahaharapin ng guro sa asignaturang Filipino. Sa pang-araw-araw, nagagamit ang wikang Filipino sa pakikipag-usap at pakikipaghalubilo sa kapwa. Sa pag-aaral nina Syed et al. (2020) sa iba't ibang unibersidad sa Pakistan na nakitaan ng lubhang kamalian sa paggamit ng bantas na dulot ng kakulangan sa kakayahan, pagsasanay, at pagtuturo mula sa mga guro.

Samantala, sa Pilipinas, sa isang pribadong paaralan sa Lungsod ng Cauayan, Isabela, lumabas sa resulta na ang mga mag-aaral ay nakararanas ng dagok sa pagbubuo ng mga ideya na nagreresulta sa kawalan nila ng ganang sumulat. Ayon kay Galingana (2019), naobserbahan niya na may pagkakaroon ng pagpapalit-koda sa mga sulating pasalaysay ng mga estudyante na nahahaluan ng mga salitang Iloko na nangyayari dahil ang wikang kinagisnan ng mga mag-aaral ay nangunguna at pumapangalawa lamang ang Filipino. Sa kabilang banda, ang lingguhang gawain ng isang pampublikong paaralan sa Lungsod ng Dagupan, Pangasinan ay nakitaan na walang leksikon ang mga isinumiteng modyul ng mga mag-aaral sa ika-sampung baitang sa paggamit ng wastong bantas at salita sa pasalaysay na sulating Filipino (Dolor, 2019). Sa Lungsod ng Tagum, sa isa sa mga pribadong paaralan, ayon sa isang guro na nagtuturo ng asignaturang Filipino, mas madalas ginagamit ang pagpapalit-koda ng wikang Bisaya at wikang Ingles sa mga

impormal na talastasan na maaaring nagpapahiwatig ng kahinaan ng mga estudyante sa pagkatuto ng wikang Filipino.

### LAYUNIN NG PAG-AARAL

Ang isinagawang pananaliksik ay may layuning gumawa ng kwalitatibong-diskurso na pananaliksik hinggil sa mga karaniwang nagawang pagkakamali ng mga mag-aaral sa pagsulat ng pang-akademikong sanaysay sa isang pribadong paaralan sa Sekundaryang lebel ng Lungsod ng Tagum.

### KATANUNGAN SA PANANALIKSIK

1. Ano-ano ang mga karaniwang kamalian ng mga mag-aaral sa pagsulat ng sanaysay?

### TEORETIKAL NA POKUS

Lubos na nananalig ang pag-aaral na ito sa Target Modification Taxonomy ni Stephen Pit Corder (1973), kung saan ay binigyang-diin ang kamalian ng mga estudyante ay natatangi sapagkat ito ay bahagi ng pagkatuto at lubos na makatutulong sa mga guro kung ang mga kamalian ay gamitan ng sistematikong pagsusuri at pagtukoy sa posibleng kamalian. Ayon kay Corder, ito ay binubuo ng apat na kategorya, pagkakaltas, pagdaragdag, maling pagpili ng salita at maling pagkakaayos ng mga salita.



**METODOLOHIYA**

**Disenyo ng Pananaliksik**

Ginamit sa pag-aaral ang pamamaraang diskurso na ang pokus ay paano makagawa ng epektibong pagpapahayag upang mahadlangan ang mga balakid sa pagtanggap ng mensahe. Nagsilbing tulay namin bilang mga mananaliksik ang pamaraang diskurso upang siyasatin ang pinakaraniwang pagkakamali ng mga mag-aaral sa ikalabing-isang baitang sa Sekundaryang antas ng *Humanities and Social Sciences (HUMSS-11)*.

**Mga Kagamitan ng Pananaliksik**

Dalawampung (20) sulating sanaysay ng mga mag-aaral mula sa Ikalabing-isang Baitang ng *Humanities and Social Sciences (HUMSS)* sa isa sa mga pribadong paaralan sa Dibisyon ng Tagum sa Taong Panuruan 2022-2023 ang pinanggalingan ng pangunahing pinagmulan ng datos. Kami, bilang mga

mananaliksik, ay humingi ng awtput sa kanilang guro sa Filipino partikular na yaong mga sanaysay na kanilang sariling gawa alinsunod sa paksang ibinigay ng tagapagturo ukol sa *Kahalagahan ng Pananaliksik sa Pag-unlad ng ating Lipunan*.

**Pagsuri ng Datos**

Gumamit ang mga tagapagsuri ng *purposive sampling technique* sa pagpili ng mga partikular na pagkakamali ng mga mag-aaral. Gayundin, bilang mga tagapagsuri ay aming siniyasat ang mga ipinasang sanaysay ng mga estudyante sa kanilang guro batay sa *Target Modification Taxonomy* ni Corder (1973) na may apat na kategorya: pagkakaltas, pagdaragdag, maling pagpili ng salita, at maling pagkakaayos ng mga salita. Kinabibilangan ito ng proseso ng pagtranskrayb, paghahanay, at pag-aayos ng mga datos ayon sa uri ng mga kamalian na natagpuan sa isinumiteng sanaysay ng mga nasa antas Sekundarya ng mga mag-aaral.

**MGA RESULTA**

**Talahaanayan 1.1 Kamalian sa Pagkakaltas**

<b>KORPUS Kamalian sa Pangungusap</b>	<b>MODIPIKASYON Pagwawasto sa Kamalian</b>	<b>KLASIPIKASYON Pagsusuri sa Kamalian</b>
<i>Kadalasan mas nagiging matalino ang isang tao kapag siya ay masipag sa pagsasaliksik at pag aaral na mga bagay bagay. (KKS_16)</i>	Kadalasan mas nagiging matalino ang isang tao kapag siya ay masipag sa pagsasaliksik at pag aaral ng mga bagaybagay.	Sa salitang “pag aaral,” ang unlaping pag ay nagtapos sa katinig at ang nilapian nitong salita ay nagsimula sa patinig na nararapat lagyan ng gitling. Isa sa mga tuntunin ng paggamit ng gitling ay ang paglagay nito sa gitna ng salitang-ugat na inuulit. Sa salitang bagay-bagay, ito ay nagbibigay-riin sa ideya ng pagkakaroon ng iba’t ibang uri ng mga bagay. Kung susundin ang mga tuntuning nabanggit, ang tamang ayos ng mga salita ay pag-aaral at bagay-bagay.
<i>Mas magiging malalim din ang pag-unawa ng mga mamayan sa mga polisiya at programa. (KKS_5)</i>	Mas magiging malalim din ang pag-unawa ng mga mamayan sa mga polisiya at programa.	Ang salitang “mamayan” ay nagkukulang sa katagang ma. Walang salitang “mamayan” sa palabaybayang Filipino. Kung iwawasto ang kamaliang ito, ang tamang baybay ay mamamayan na ang ibig sabihin ay ang katawagan sa isang tao na kasapi ng isang bansa, lipunan o bayan.
<i>Nakaloob sa pananaliksik ang pagkolekta ng mga dato at pati narin ang paglalahad nito. (KKS_13)</i>	Nakaloob sa pananaliksik ang pagkolekta ng mga datos at pati na rin ang paglalahad nito.	Walang salitang “dato” sa palabaybayang Filipino kung ang ibig ipabatid ng manunulat ay datos na ang ibig sabihin ay mga impormasyon o data sa Ingles. Gayundin ang ikalawang salitang “narin” na walang pakahulugan sa Filipino. Binubuo ito ng na at rin na nangangahulugang as well o too sa Ingles.
<i>Nakatatulong ito sa pag-unlad ng ating lipunan dahil sa pamamagitan ng pananaliksik, lumalawak at lumalalim ang karanasan mga tao. (KKS_1)</i>	Nakatatulong ito sa pag-unlad ng ating lipunan dahil sa pamamagitan ng pananaliksik, lumalawak at lumalalim ang karanasan ng mga tao.	Nararapat na mailagay ang pang-ugnay na ng sa pagitan ng mga salitang karanasan at mga tao upang mabuo ang tamang interpretasyon ng mensahe sa sinulat na pahayag.
<i>Ito ang proseso na ginagamit upang malaman, maunawaan ang mga aspeto ng ating lipunan. (KKS_11)</i>	Ito ang proseso na ginagamit upang malaman at maunawaan ang mga aspeto ng ating lipunan.	May pagkukulang sa paggamit ng pang-ugnay na at sa salitang ginamit sa pangungusap. Kinakailangan ang pangatnig na at sa gitna ng mga salitang malaman at maunawaan imbes na gamitan ito ng kuwit. Ang pangatnig na at ay ginagamit bilang pangkabit ng dalawang ideya o kaisipan.
<i>Hindi maiiwasang may mga hamon at suliranin na kinakaharap ang bawat bansa upang makamit ang ganap kaunlaran. (KKS_5)</i>	Hindi maiiwasang may mga hamon at suliranin na kinakaharap ang bawat bansa upang makamit ang ganap na kaunlaran.	Ang pangungusap ay kakikitaan ng pagkakaltas sa isa pang uri ng pang-ugnay na pang-angkop na na sa pagitan ng mga salitang ganap at kaunlaran.





1.2 Kamalian sa Pagdaragdag (*Addition*)

KORPUS Kamalian sa Pangungusap	MODIPIKASYON Pagwawasto sa Kamalian	KLASIPIKASYON Pagsusuri sa Kamalian
Ang mga resulta ng pananaliksik ay nagbibigay ng basehan sa mga desisyon na ginagawa ng mga lider ng bansa at ng mga organisasyon sa <b>iba't-ibang</b> sektor ng lipunan. (KKS_12)	Ang mga resulta ng pananaliksik ay nagbibigay ng basehan sa mga desisyon na ginagawa ng mga lider ng bansa at ng mga organisasyon sa iba't ibang sektor ng lipunan.	Ang pangungusap ay nagtamo ng kamalian sa pagdaragdag ng gitling sa salitang <i>iba't-ibang</i> . Nagmula ito sa <i>iba at iba</i> at nilapian ng <i>-ng</i> , pinaikli na naging <i>iba't ibang</i> . Hindi naman ito inuulit kaya hindi na ito kailangan ng gitling.
Kadalasan ginagamit <b>nating</b> ang sistemang ito upang malaman ang mga bagay na hindi naabot ng ating kamalayan. (KKS_4)	Kadalasan ginagamit natin ang sistemang ito upang malaman ang mga bagay na hindi naaabot ng ating kamalayan.	Ang kamalian sa pagdaragdag ng titik 'g' sa salitang " <i>nating</i> " ay ang paggamit ng maling baybay. Ang <i>natin</i> ay isang panlaping pang-ukol na ginagamit upang ipahayag ang pagmamay-ari o pagkakaroon ng pangkat.
Mahalaga ang pananaliksik sa ating lipunan kase ito ang paraan upang <b>mailutas</b> natin ang lahat ng ating mga suliranin. (KKS_4)	Mahalaga ang pananaliksik sa ating lipunan kasi ito ang paraan upang malutas natin ang lahat ng ating mga suliranin.	Lantarang makikita na ang salitang " <i>mailutas</i> " ay isang kamalian sa pagdaragdag ng titik sa salita. Ang wastong baybay ay <i>malutas</i> na naaayon sa balarila ng Filipino.
Sa mundo ngayon na puno ng <b>Fake news</b> at maling impormasyon, mahalaga na maging handa tayo sa pagsusuri at pagsusuri ng mga datos. (KKS_11)	Sa mundo ngayon na puno ng maling impormasyon, mahalaga na maging handa tayo sa pagsusuri at pagsusuri ng mga datos.	Mapapansin ang paggamit ng salitang magkasingkahulugan na isang halimbawa ng kamalian sa pagdaragdag ng kataga. Sa pamamagitan ng pag-alis ng <i>fake news</i> at <i>pagsusuri</i> ay naiiwasan ang redundansiya ng salita sa isang pangungusap.
<b>importante</b> ito para sa ating kaalaman dahil, sa pananaliksik natin malalaman ang sagot sa ating mga tanong. (KKS_8)	Importante ito para sa ating kaalaman dahil sa pananaliksik natin malalaman ang sagot sa ating mga tanong.	Ang bantas na kuwit (,) ay hindi dapat gamitin pagkatapos ng salitang <i>dahil</i> sa pangungusap na isang pang-ugnay na naglalahad ng sanhi o dahilan. Sa tamang pagkakasulat, ang pangungusap na sumusunod pagkatapos ng <i>dahil</i> ay dapat magsimula agad nang walang pagitan ng bantas na kuwit.

1.3 Kamalian sa Pagpili ng Salita

KORPUS Kamalian sa Pangungusap	MODIPIKASYON Pagwawasto sa Kamalian	KLASIPIKASYON Pagsusuri sa Kamalian
<b>Dahil</b> ang pananaliksik ay <b>sobrang importante mahalaga</b> ito sa ating pang araw-araw na buhay sapagkat ito ang paraan upang malutas ang ating mga <b>problema</b> . (KKS_7)	Dahil ang pananaliksik ay napakahalaga sa ating pang-araw-araw na buhay sapagkat ito ang paraan upang malutas ang ating mga suliranin.	Ang pagkakamali sa paggamit ng salitang <i>sobrang</i> ay isang salitang balbal na hindi angkop sa pormal na pagsulat. Dagdag pa, ang paggamit ng salitang <i>maalalaga</i> pagkatapos ng salitang <i>importante</i> ay nagdudulot ng redundansiya o kalabisan na paggamit ng salita sa pangungusap. Maaaring alisin ang salitang <i>importante</i> at palitan ito ng angkop na salitang <i>napakahalaga</i> .
Napaka laking tulong nito upang masagotan ang mga <b>tanong tanong</b> dito sa mundo. (KKS_8)	Napakalaking tulong nito upang masagutan ang mga katanungan dito sa mundo.	May kamalian sa pagpili ng angkop na salitang dapat gamitin sa pangungusap. Ginamit ng may-akda ang <i>tanong tanong</i> na dapat ay <i>katanungan</i> .
Bukod dito, ang mga resulta ng pananaliksik ay maaaring magamit upang magbigay ng suporta sa pagpapabuti ng mga <b>polisiya</b> at programa ng pamahalaan. (KKS_5)	Bukod dito, ang mga resulta ng pananaliksik ay maaaring magamit upang magbigay ng suporta sa pagpapabuti ng mga tuntunin at programa ng pamahalaan.	Ang salitang <i>polisiya</i> ay isang hiram na salita mula sa Ingles na may kahulugang <i>policy</i> . Bagama't ito ay ginagamit at nauunawaan din sa Filipino, subalit ang mas angkop na salita na nagpapakahulugan sa <i>policy</i> ay ang <i>patakaran</i> kaya mayroong kamalian sa pagpili ng salita.



<p><i>Sa pamamagitan, ang pananaliksik ay nagbibigay ng ebidensya at kaalaman na maaaring mag-udyok sa pagbabago at pag-uunlad ng ating lipunan. (KKS_10)</i></p>	<p>Samakatuwid, ang pananaliksik ay nagbibigay ng ebidensya at kaalaman na maaaring mag-udyok sa pagbabago at pag-uunlad ng ating lipunan.</p>	<p>Sa halip na gamitin ang <i>Sa pamamagitan</i>, mas wasto at maayos na gamitin ang <i>samakatuwid</i> bilang isang salita na nagpapahayag ng konklusyon o pangkalahatang ideya batay sa mga pahayag na naunang binanggit.</p>
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**1.4 Maling Pagkakaayos ng Salita sa Pangungusap**

<p><b>KORPUS</b>  <b>Kamalian sa Pangungusap</b></p>	<p><b>MODIPIKASYON</b>  <b>Pagwawasto sa Kamalian</b></p>	<p><b>KLASIPIKASYON</b>  <b>Pagsusuri sa Kamalian</b></p>
<p><i>Nabilis ang pag-uunlad sa isang suliranin gamit ang mga bagong metodolohiya batay sa napag-aralan mabilis natutukoy ang mga problema tungkol sa mga isyu na binibigay o naka lagay sa topic. (KKS_2)</i></p>	<p>Mabilis ang paglutas sa isang suliranin gamit ang mga makabagong metodolohiya ng pananaliksik at mas madaling natutukoy ang mga problema tungkol sa partikular na isyu.</p>	<p>Ang salitang “<i>Nabilis</i>” ay walang katumbas sa wikang Filipino. Ang tamang salita na nararapat dito ay <i>mabilis</i> at mali ang paggamit ng panimulang titik na <i>n</i> na dapat ay titik na <i>m</i>. Ang salitang <i>pag-uunlad</i> na pangngalan naman ay dapat papalitan ng <i>paglutas</i> dahil tumutukoy ito sa mabilisang pagkuha ng kasagutan sa isang suliranin.</p>
<p><i>Sa panahong ating ginagalawan kung saan ang <b>Pagbahagi ng impormasyon o paggawa ng impormasyon</b> ay madali na lang at <b>manandalian</b> ay nag reresulta sa pagkalat ng maling impormasyon at <b>kulang sa tamang kaalaman</b>. (KKS_13)</i></p>	<p>Sa panahong ating ginagalawan, kung saan ang pagbahagi at paggawa ng impormasyon ay madali na lang at mabilisan ay nagreresulta sa pagkalat ng maling impormasyon at kakulangan sa tamang kaalaman.</p>	<p>Ang pangungusap ay nagtamo ng kamalian sa pagkakaayos ng salita dahil sa pag-uulit ng mga salitang <i>impormasyon</i> at <i>manandalian</i>. Gayundin ang pahayag na <i>kulang sa tamang kaalaman</i> ay dapat maging <i>kakulangan sa tamang kaalaman</i> upang tamang maipahayag ang ideya ng pagkakaltas sa eksaktong kaalaman.</p>
<p><i>Mahalaga ang pananaliksik sa paguunlad ng ating lipunan <b>Dahil</b> dito mas mapapalawak pa natin ang ating <b>Kaisipan</b> at karunungan sa ating lipunan. (KKS_7)</i></p>	<p>Mahalaga ang pananaliksik sa paguunlad ng ating lipunan dahil mas mapapalawak pa natin ang ating kaisipan at karunungan.</p>	<p>Ang mga salitang <i>Dahil</i>, at <i>Kaisipan</i> ay nasa gitna ng pangungusap na ginamitan ng malaking titik. Ito ay isang kamalian dahil hindi ito nararapat na gamitan ng malaking titik.</p>
<p><i>Ang pananaliksik ay ang pag-aaral sa <b>Lipunan</b> at sa <b>Daigdig</b>. (KKS_16)</i></p>	<p>Ang pananaliksik ay ang pag-aaral sa lipunan at daigdig.</p>	<p>Nasa gitna ng pangungusap ang mga salitang <i>daigdig</i> at <i>lipunan</i> kaya nararapat na gamitan ng maliit na titik. Ito ay isang halimbawa ng kamalian sa pagkakaayos ng mga salita partikular na sa paggamit ng malaking titik.</p>
<p><i>Napakahalaga ng pananaliksik dahil <b>nakakatulong</b> ito sa mga taong wala pang alam. (KKS_1)</i></p>	<p>Napakahalaga ng pananaliksik dahil nakatutulong ito sa mga taong wala pang alam.</p>	<p>Ang <i>nakakatulong</i> ay nagmula sa salitang-ugat na <i>tulong</i> at hindi <i>katulong</i>. Kaya, nararapat na maulit ang unang pantig ng salitang-ugat, hindi ang huling pantig ng unlaping <i>naka-</i>. Ang tamang baybay ng salita ay <i>nakatutulong</i>.</p>

**MGA PAGTALAKAY**

Batay sa isinagawang pananaliksik, natuklasan na mayroong kamalian sa pagkakaltas ng gitling sa mga dapat gitlingan, pagkakaltas ng titik o mga letra para sa tamang pagbabaybay ng salita at pagkakaltas sa paggamit ng angkop na pang-ugnay sa pangungusap. Ang mga natukoy na kamalian sa categoryang pagkakaltas ay nagbibigay-raan upang itama ang kanilang mga pagkakamali at matutuhan ang mga wastong tuntunin ng paggamit ng wikang Filipino. Kaakibat nito, sumasang-ayon ang pagsusuring ito sa pag-aaral ni Puspitasari (2019) na ang mga kamaliang mekanikal sa pagsulat ay nakababalakid sa kabuoang pag-unawa ng mag-aaral na maaaring magbunga ng maling interpretasyon na posibleng maghantong sa hindi mabisang pagtatamo ng wika.

Bilang karagdagan, natuklasang may kamalian sa pagdaragdag ng titik, kataga at mga bantas ang mga isinuniteng sanaysay ng mga mag-aaral. Ang pagdaragdag ng mga nabanggit ay maaaring makapagbabago sa kahulugan ng isang salita na makaaapekto sa kabuoang mensahe ng pangungusap. Ang mga mag-aaral ay umaasa sa kinagisnang wika kaya nahihirapan na gamitin nang maayos ang pangalawang wika na pinag-aaralan sapagkat nailalapat nila ang estilo kung paano gamitin ang unang wika kaya nadadala nila sa pagsusulat ng pangalawang wika (Sermsook, Liamnimitr at Pochakorn, 2017).

Lumabas din sa resulta ng pagsuri ang limpak na kamalian sa paggamit ng mga salitang hindi angkop. Karaniwan sa mga



kamalian ng mga mag-aaral ay ang paggamit ng salitang hiram mula sa wikang Ingles kahit na mayroong katumbas ang salitang ginamit sa wikang Filipino. Pabor din ang kinalabasan ng aming pag-aaral sa isinagawang pagsusuri ni Aspili (2005), nabatid na isa sa mga dahilan ng pagkakamali ng mga mag-aaral sa pagsulat ng mga komposisyon ay nauugnay sa kakulangan ng kaalaman sa mga patakaran ng gramatika sa wikang Filipino.

Dagdag pa rito, mahalaga ang tamang pagkakasunod-sunod ng mga salita upang magkaroon ng organisasyon at istruktura ang isang pangungusap. Ang mga pagkakamaling natuklasan ay ang hindi tama at maayos na pagkakabuo ng pangungusap, maling paggamit ng malalaking titik, at maling anyo ng pag-uulit ng mga kataga at salita. Ang mga ito ay nagpapakita ng kumplikadong estruktura ng panggramatika ng wikang Filipino. Kaya, napakahalaga na isaalang-alang ang tamang estruktura ng pangungusap sa Filipino dahil ito ang batayan ng mabuting komunikasyon at pag-unawa ng mga mensahe. Ipinahayag ni San Juan (2008) na ang pagsulat ay may katangiang masining. Ito ay nangangahulugang ang pagsulat ay dapat gawin nang maayos, malinaw at tama upang maipahayag nang wasto ang mga kaisipan na may kapaki-pakinabang.

### Mga Implikasyon sa Kasanayan sa Pagtuturo

Ang pagsusuring ito ay magiging susi sa pagbukas ng isipan sa lahat ng gurong nagtuturo at Pilipinong mag-aaral na ang balarilang Filipino ay tunay na mahirap ituro at pag-aralan dahil ito ay nangangailangan ng teknikal na pag-unawa. Kaya, nangangailangan ito ng buong pagsisikap upang maunawaan ang mga tuntunin ng balarila. Mahalagang gumamit ang mga guro ng tamang estratehiya, dulog at pamamaraan sa layuning maging matagumpay ang pag-aaral kahit na gagamit ng modernong paraan dahil nakasalalay sa mga guro ng wika ang pagkatuto ng mga estudyante.

Samakatuwid, magsisilbing tulay ang pagsusuring ito upang mabigyan ng lubusang diin sa pagtuturo nang wasto gamit ang balarilang Filipino dahil ito ang nagpapatunay na marami ang nangangailangan ng gabay sa pagtamo ng karampatang kakayahan at kaalaman sa pagsulat ng sanaysay gamit ang wikang Filipino.

### Mga Rekomendasyon para sa Higit pa na Pananaliksik

Para sa lahat ng tagapagsuri sa hinaharap, ang pagsusuring ito ay maaaring maging batayan nila upang maisakatuparan ang ibang layunin ng pananaliksik na pumapatungkol sa kamaliang natamo sa pagsusulat ng mga estudyante. Maaari ring isagawa sa kaparehong layunin ng pag-aaral sa ibang paaralan o lugar upang malaman kung mayroon din bang mga mag-aaral na nagkakaroon ng kamalian katulad ng resulatang lumabas sa pag-aaral na ito.

### Talasanggunian

1. Aspili, S.M. (2005). *Pagsusuri ng mga karaniwang kamalian sa pagsulat ng komposisyon*. Northwestern University.
2. Corder, S. P. (1973). *Introducing applied linguistics*. Middlesex: Penguin.

3. Dolor, H. (2019). *Epekto ng lingguhang pagdyudyurnal sa pagpapaunlad ng kasanayan sa pagsulat ng sanaysay ng mga mag-aaral sa Filipino 10*. <https://tinyurl.com/msznr2h4>
4. Galingana, G. (2019). *Kakayahan sa pagsulat ng sanaysay ng mga mag-aaral sa University of Perpetual Help System-Cauayan City, Isabela*. <https://tinyurl.com/2p9dj536>
5. Puspitasari, D. (2019). *Mechanical errors in academic writing: A case study at English language education department of UIN Sunan Ampel Surabaya*. Unpublished Undergraduate Thesis, UIN Sunan Ampel Surabaya.
6. Sermsook, K., Liamnimitr, J., & Pochakorn, R. (2017). *An analysis of errors in written English sentences: A Case Study of Thai EFL Students*. *English Language Teaching*, 10(3), 101. <https://tinyurl.com/4crkz6ha>
7. Syed, A.S., Amin, T. & Ishtiaq, M. (2020). *Punctuation errors in writing: A comparatively study of student's performance from different Pakistani Universities*.



# KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING ARTIFICIAL INTELLIGENCE (AI) AND ITS USAGE IN DENTAL ACADEMICS CURRICULUM AMONG DENTAL UNDERGRADUATES AND POSTGRADUATES

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Article DOI: <https://doi.org/10.36713/epra17709>

DOI No: 10.36713/epra1709

## ABSTRACT

**Background:** Artificial intelligence (AI) is increasingly being recognized for its potential to revolutionize dental education and practice. However, the extent of knowledge, attitudes, and practices (KAP) regarding AI among dental undergraduates and postgraduates remains underexplored.

**Objectives:** This study aims to assess the knowledge, attitudes, and practices related to AI and its integration into the dental academic curriculum among dental undergraduates and postgraduates.

**Methods:** A cross-sectional questionnaire-based study was conducted among 545 participants, including final-year dental undergraduates and postgraduate dental students. The structured questionnaire covered demographics, knowledge of AI, attitudes towards its integration into dental education, and current practices involving AI.

**Results:** The study found significant variations in knowledge levels, with postgraduates demonstrating a more comprehensive understanding of AI applications in dentistry compared to undergraduates. Attitudes towards AI were generally positive across both groups, with participants recognizing its potential to enhance diagnostic accuracy and streamline administrative tasks. However, there were concerns about the reliability of AI systems and the potential for reduced human oversight. Practical application of AI was limited, particularly among undergraduates, highlighting a gap between theoretical knowledge and practical use.

**Conclusion:** The study underscores the need for integrating comprehensive AI education into the dental curriculum, encompassing both theoretical knowledge and practical training. Continuous professional development and a balanced approach to AI use in dental practice are essential to prepare future dental professionals for an AI-driven healthcare landscape. Gender-wise, the survey reveals consistent support across male and female dental professionals for AI's potential in enhancing dental research, with minimal variation in beliefs.

**KEYWORDS:** Artificial intelligence, dental education, knowledge, attitudes, practices, dental undergraduates, postgraduates.

## INTRODUCTION

Artificial Intelligence (AI) refers to the development of computer systems that can perform tasks that would typically require human intelligence. In the context of dental academics, AI has the potential to revolutionize various aspects of dentistry, such as diagnosis, treatment planning, and patient care. The integration of AI into the dental curriculum aims to equip dental students with the knowledge and skills needed to leverage AI technologies in their future practice. This includes understanding AI algorithms, machine learning, and data analysis techniques that can assist in making accurate diagnoses, predicting treatment outcomes, and optimizing patient care.<sup>1,2</sup>

By incorporating AI into dental education, students can develop a better understanding of its capabilities, limitations, and ethical considerations. This prepares them to effectively utilize AI tools and technologies to enhance their clinical decision-making and provide more precise and personalized dental care to patients.<sup>3</sup>

In recent years, the integration of artificial intelligence (AI) into various fields has sparked considerable interest and transformation, including within dental academia. The convergence of AI technologies with dental sciences presents a promising avenue for enhancing diagnostic accuracy, treatment planning, and patient care. However, the successful adoption and utilization of AI in dental practice hinge not only on





technological advancements but also on the knowledge, attitudes, and practices (KAP) of dental professionals.<sup>4,5</sup>

Among dental undergraduates and postgraduates, understanding their KAP regarding AI in dental academics is crucial for shaping future educational strategies and professional development. Knowledge encompasses the understanding of AI principles, its applications in dentistry, and the potential benefits and challenges. Attitudes reflect their perceptions, beliefs, and receptivity toward integrating AI into dental education and practice. Practices refer to the actual implementation and utilization of AI tools and techniques in clinical settings and academic research.

This study aims to explore the current KAP regarding AI among dental students and residents, identifying gaps in knowledge, assessing attitudes towards AI adoption, and evaluating the extent of AI integration into dental curricula. By elucidating these factors, this research seeks to provide insights into optimizing AI education in dental academia, fostering proficient use of AI technologies among future dental professionals, and ultimately enhancing patient care outcomes in dentistry.

## MATERIALS AND METHODS

### Study Design

This cross-sectional study was conducted to evaluate the knowledge, attitudes, and practices (KAP) regarding artificial intelligence (AI) and its integration into the dental academic curriculum among dental undergraduates and postgraduates.

### Study Population

The study included dental undergraduates in their final year and postgraduate dental students from various dental institutions. A total of 545 participants were recruited using stratified random sampling to ensure representation across the two groups.

### Questionnaire Design

A structured questionnaire was developed based on a comprehensive review of existing literature and expert input. The questionnaire was divided into four sections:

1. Demographics: Information on age, gender, level of education, and academic institution.
2. Knowledge: Multiple-choice and true/false questions assessing the understanding of AI concepts,

applications in dentistry, and familiarity with AI technologies.

3. Attitude: Likert scale questions evaluating perceptions, beliefs, and attitudes towards the integration of AI in dental education and practice.
4. Practice: Questions about the current use of AI tools in their studies, clinical training, and any involvement in AI-related research projects.

The questionnaire was pre-tested on a small sample of dental students to ensure clarity, relevance, and reliability. Based on feedback, necessary adjustments were made to improve the questionnaire.

### Data Collection

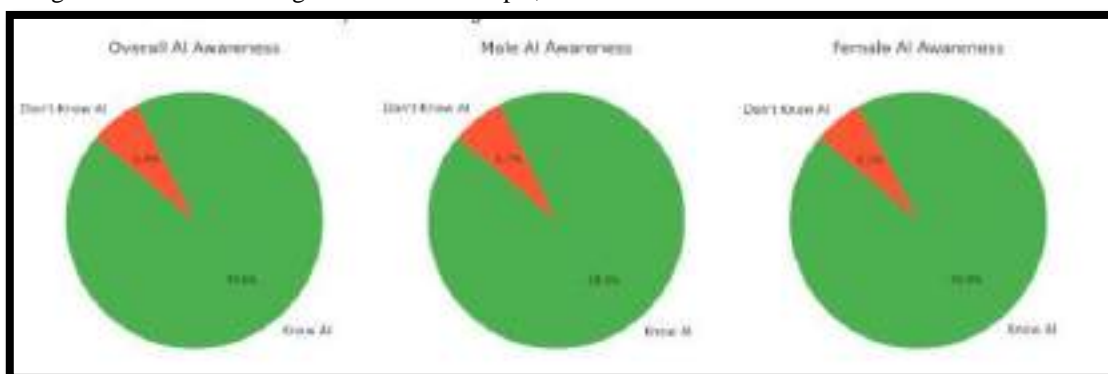
Participants were approached both in-person and via email, depending on the institution's preferred mode of communication. The digital version of the questionnaire was created using an online survey tool, while printed versions were distributed where appropriate. Participants were given an explanation of the study's purpose and instructions on how to complete the questionnaire. Consent was obtained before participation, and responses were anonymized to maintain confidentiality.

### Data Analysis

Data from the completed questionnaires were entered into a database and analyzed using SPSS software. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize the data.

## RESULTS

The survey results reveal a significant awareness of artificial intelligence (AI) among the respondents, with 93.6% indicating that they know what AI is, representing 510 individuals. Only a small minority of 6.4%, or 35 individuals, expressed a lack of knowledge about AI. When analyzed by gender, the awareness remains consistently high. Among male respondents, 93.3% (280 individuals) reported knowing about AI, while 6.7% (20 individuals) did not. Similarly, among female respondents, 93.9% (230 individuals) affirmed their understanding of AI, with only 6.1% (15 individuals) indicating otherwise. These findings highlight a strong overall understanding of AI across both genders, with slight variations in percentages but an overall consistent trend of high awareness.



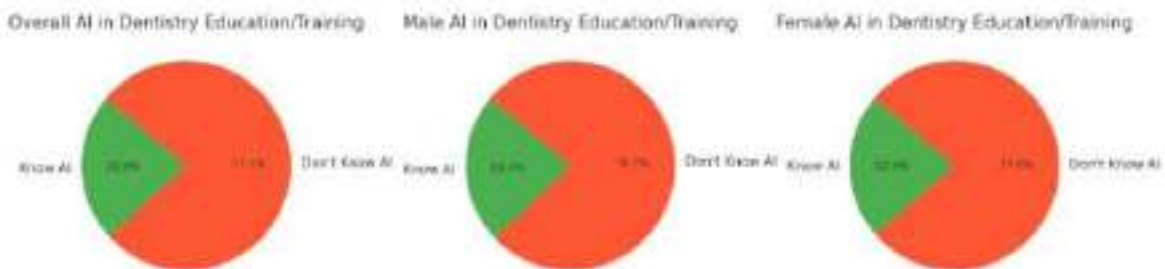


Awareness of AI (%)	Total Respondents	Male Respondents	Female Respondents
Yes	93.6% (510)	93.3% (260)	93.9% (230)
No	6.4% (35)	6.7% (20)	6.1% (15)

The survey results indicate that a significant majority of respondents (77.1%) have not received formal education or training on artificial intelligence (AI) in dentistry, while a smaller proportion (22.9%) have received such education or training. When examined by gender, the data reveals similar trends. Among male respondents, 23.3% have received formal education or training on AI in dentistry, compared to 22.4% of

female respondents. Conversely, 76.7% of males and 77.6% of females have not received any formal education or training in this area. These findings suggest a consistent lack of formal education or training on AI in dentistry across both genders, highlighting a potential area for educational development and improvement.

Education/Training on AI in Dentistry (%)	Total Respondents	Male Respondents	Female Respondents
Yes	22.9%	23.3%	22.4%
No	77.1%	76.7%	77.6%



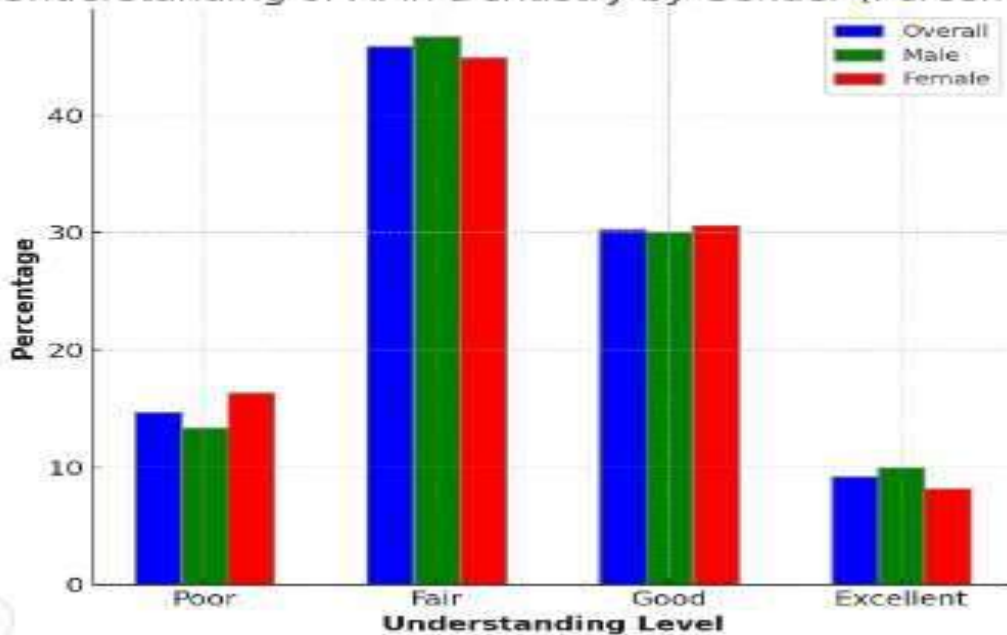
The survey results reveal varied levels of understanding of AI in dentistry among respondents, with notable differences based on gender. Overall, 14.7% of respondents rated their understanding as poor, while the majority rated their knowledge as fair (45.9%) or good (30.3%). Only 9.2% of respondents considered their understanding to be excellent. When broken down by gender, 13.3% of male respondents rated their understanding as poor, compared to 16.3% of females. For the fair category, 46.7% of males and 44.9% of females fell into this group, showing a moderate level of AI knowledge. Among

those who rated their understanding as good, 30.0% were males and 30.6% were females, indicating a similar level of confidence across genders. The percentage of respondents who rated their understanding as excellent was slightly higher among males (10.0%) than females (8.2%). These results suggest that while a significant portion of both male and female respondents have a fair to good understanding of AI in dentistry, there remains a gap in achieving excellent knowledge, pointing to a potential need for targeted educational initiatives to enhance expertise in this area.

Understanding of AI in Dentistry (%)	Total Respondents	Male Respondents	Female Respondents
Poor	14.7%	13.3%	16.3%
Fair	45.9%	46.7%	44.9%
Good	30.3%	30.0%	30.6%
Excellent	9.2%	10.0%	8.2%

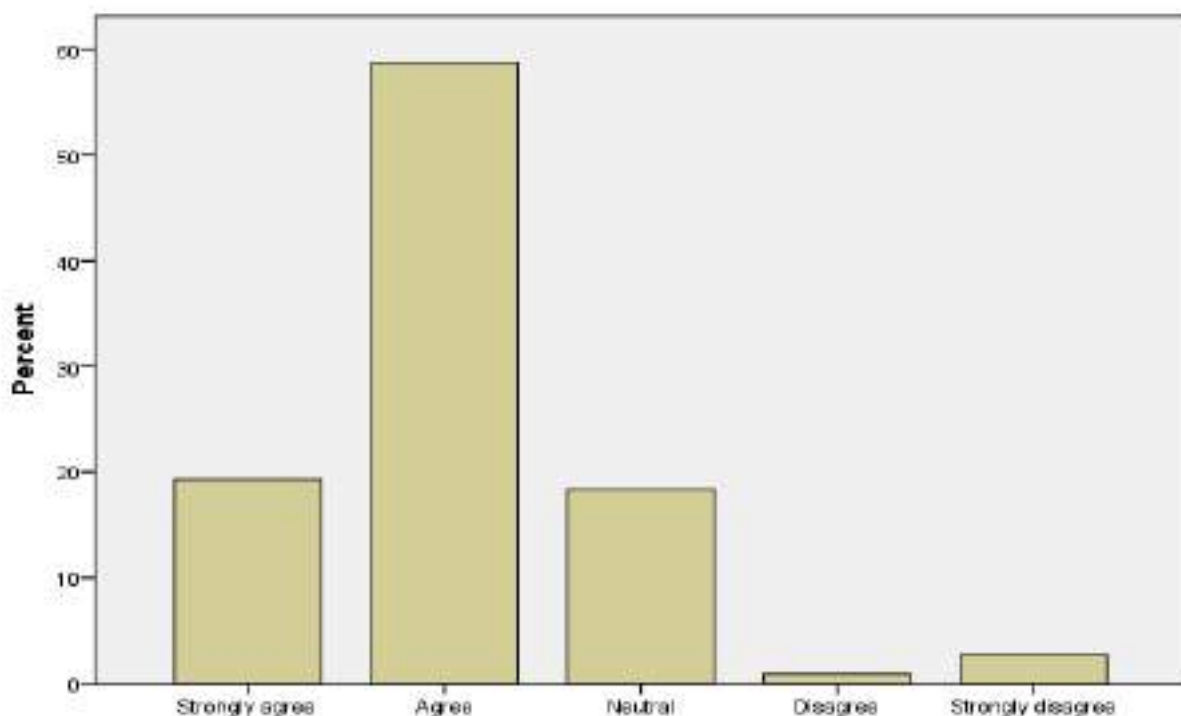


Understanding of AI in Dentistry by Gender (Percentage)



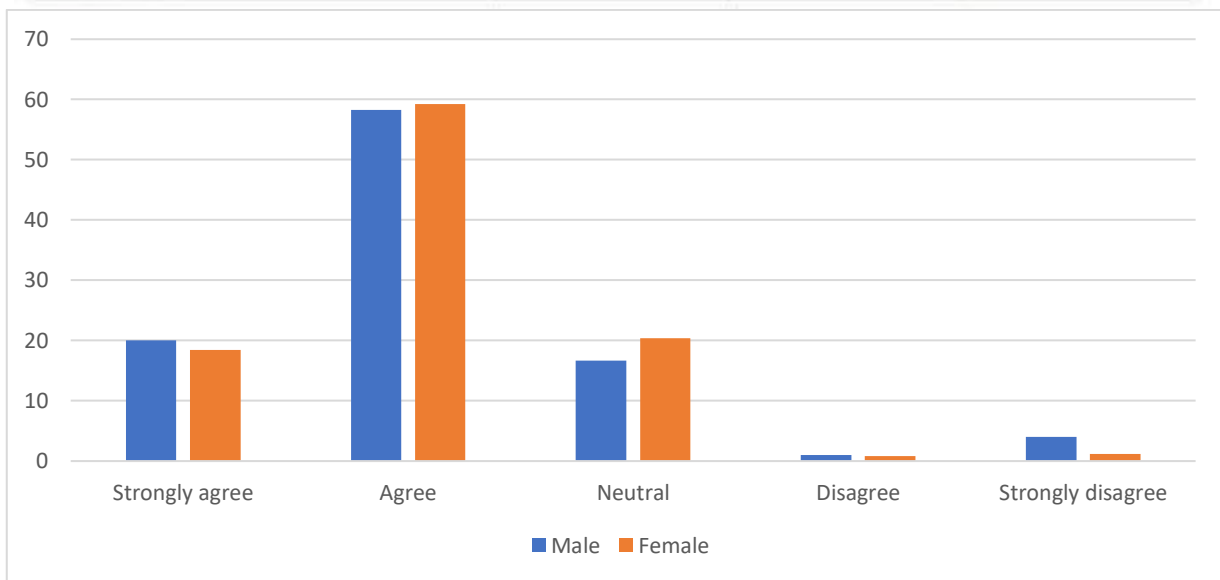
The survey results indicate that a majority of respondents (58.7%) agree that AI has the potential to revolutionize dental education, with a significant portion (19.3%) strongly agreeing. A smaller group remains neutral (18.3%), while a very small percentage disagrees (0.9%) or strongly disagrees (2.8%). When broken down by gender, the results show slight variations. Among male respondents, 20.0% strongly agree and 58.3% agree, while 16.7% remain neutral. A small percentage

of males disagree (1.0%) or strongly disagree (4.0%). For female respondents, 18.4% strongly agree and 59.2% agree, with 20.4% remaining neutral. Only 0.8% of females disagree and 1.2% strongly disagree. Overall, these findings reflect a generally positive attitude towards the impact of AI on dental education, with most respondents, both male and female, expressing agreement or strong agreement with its potential benefits.





Attitude towards AI in Dental Education (%)	Total Respondents	Male Respondents	Female Respondents
Strongly Agree	19.3%	20.0%	18.4%
Agree	39.4%	58.3%	59.2%
Neutral	18.3%	16.7%	20.4%
Disagree	0.9%	1.0%	0.8%
Strongly Disagree	2.8%	4.0%	1.2%

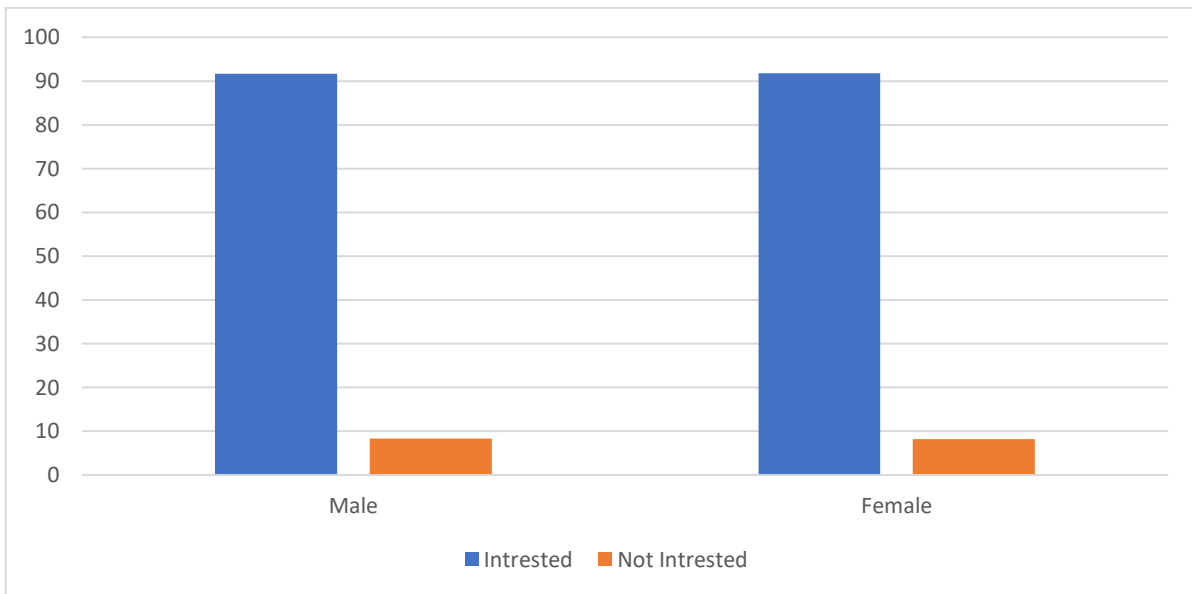


The survey results indicate a strong interest among respondents in learning more about AI in dentistry, with 91.7% expressing interest and only 8.3% indicating no interest. When broken down by gender, the results are quite similar. Among male respondents, 91.7% are interested in learning more about AI in dentistry, while 8.3% are not interested. For female

respondents, 91.8% show interest, with only 8.2% not interested. These results suggest a high level of curiosity and potential acceptance of AI-driven innovations in dentistry among both male and female respondents, pointing to a favorable outlook for educational initiatives and advancements in this field

Interest in AI in Dentistry (%)	Total Respondents	Male Respondents	Female Respondents
Interested	91.7%	91.7%	91.8%
Not Interested	8.3%	8.3%	8.2%

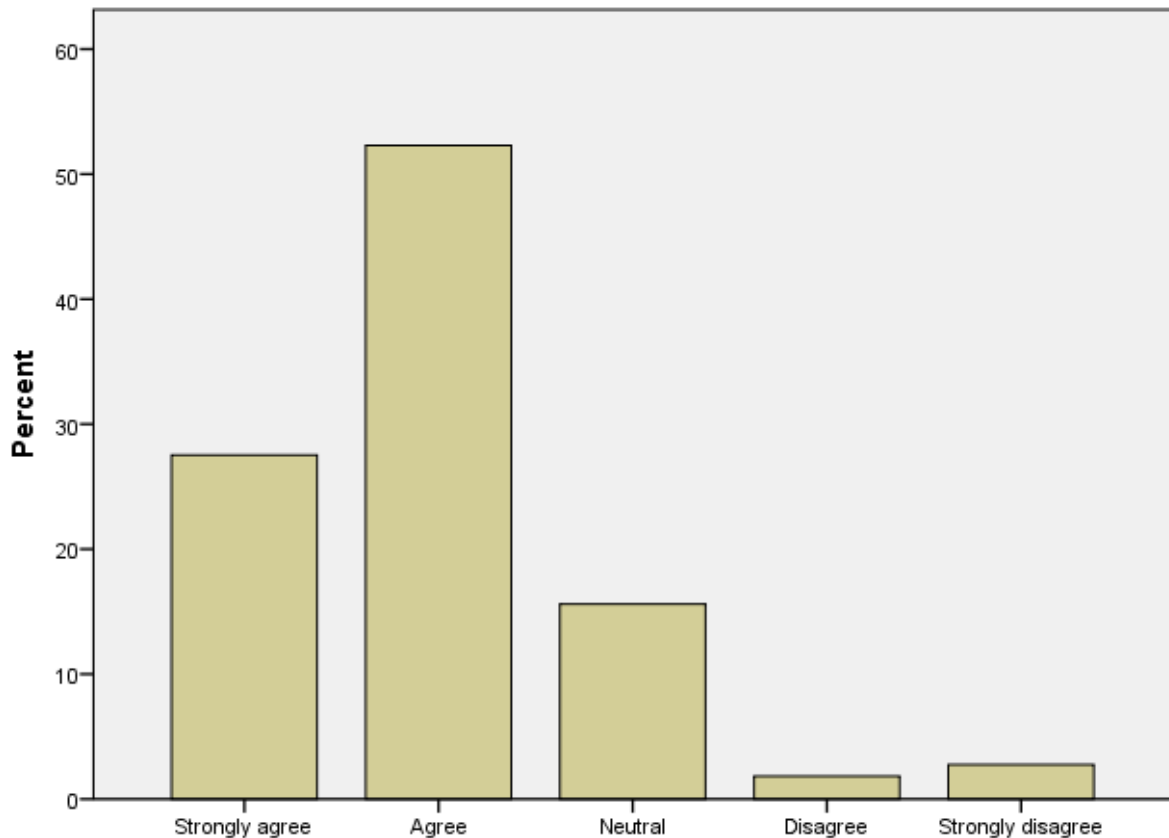




The survey results reveal a strong belief among respondents that incorporating AI into the dental curriculum would significantly enhance their learning experience. Overall, 27.5% of respondents strongly agree with this notion, and 52.3% agree, indicating a positive attitude towards the integration of AI in dental education. When broken down by gender, the results show that 26.7% of male respondents strongly agree and 53.3% agree, while 28.6% of female respondents strongly agree and 51.0% agree. This suggests a high level of support for AI integration among both male and female respondents. Neutral

responses account for 15.6% overall, with 13.3% of males and 18.4% of females remaining neutral. A small number of respondents, 1.8% overall, disagree with the integration of AI, with 2.3% of males and 1.2% of females holding this view. Similarly, 2.8% overall strongly disagree, with 4.3% of males and 0.8% of females expressing strong opposition. These findings highlight a generally favorable outlook towards the adoption of AI in dental education among the surveyed individuals.

Attitude towards AI Integration in Dental Curriculum (%)	Total Respondents	Male Respondents	Female Respondents
Strongly Agree	27.5%	26.7%	28.6%
Agree	52.3%	53.3%	51.0%
Neutral	15.6%	13.3%	18.4%
Disagree	1.8%	2.3%	1.2%
Strongly Disagree	2.8%	4.3%	0.8%

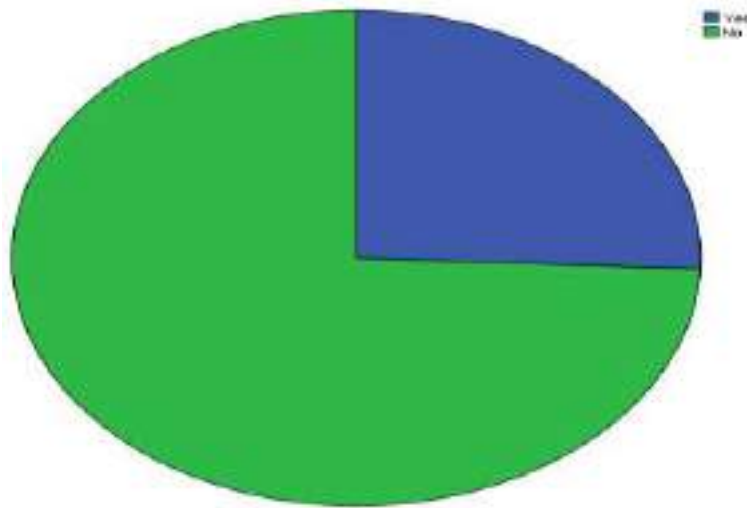


### Practice

The survey aimed to assess the adoption of AI-based tools among dental professionals, with 545 respondents providing insights into their usage. Of these, 140 respondents (25.7%) reported integrating AI-based tools or software into their dental practices for tasks like diagnosis and treatment planning. A breakdown by gender reveals that 85 male respondents (27.8% of males surveyed) and 55 female respondents (23.3% of females surveyed) have adopted these tools. Conversely, a majority of 405 respondents (74.3%) indicated that they had not

yet incorporated AI technology into their workflows. This data suggests that while a significant proportion of dental professionals are beginning to utilize AI tools, there remains a larger group who have not integrated them, possibly due to factors such as limited access, awareness, training opportunities, or varying perceptions of the necessity of AI in dental practice. The findings underscore both the potential and the current limitations in the adoption of AI technologies within the dental profession.

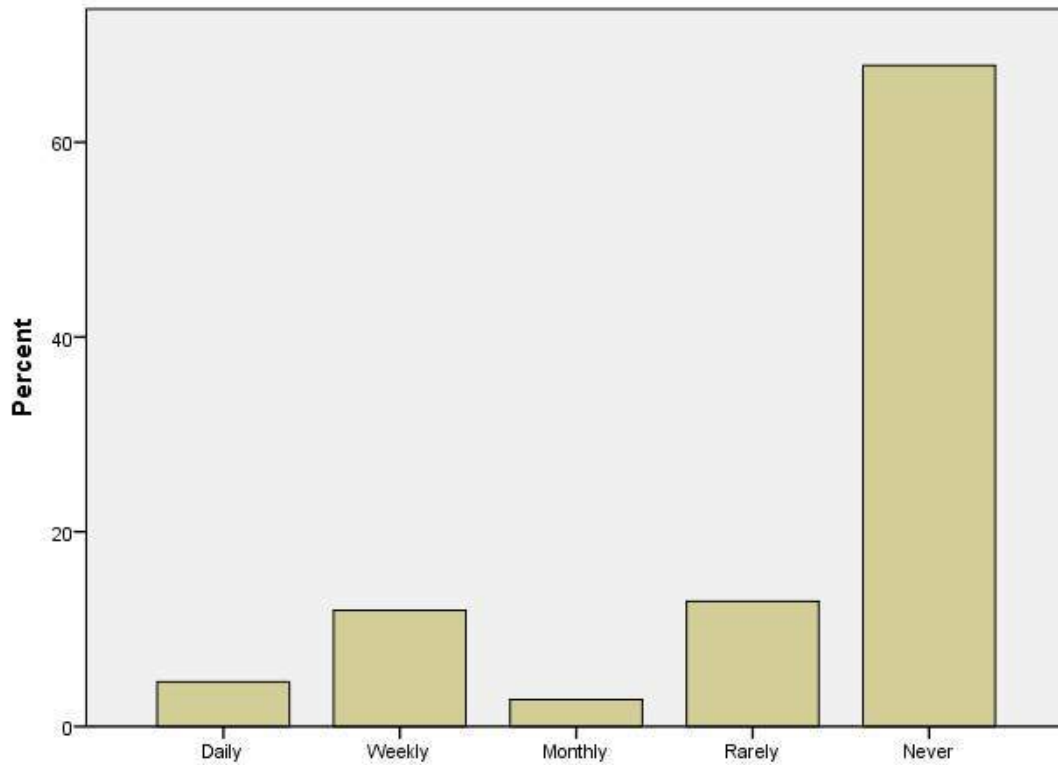
Adoption of AI-based Tools in Dental Practice (%)	Total Respondents	Male Respondents	Female Respondents
Adopted	25.7%	27.8%	23.3%
Not Adopted	74.3%	72.2%	76.7%



The survey aimed to gauge the adoption of AI-based tools among dental practitioners, revealing a varied frequency of usage across 545 respondents. A significant majority, comprising 67.9% of respondents, reported never using AI-based tools in their practice. Of the remaining respondents, 12.8% use these tools rarely, while 11.9% integrate them weekly, indicating some regular adoption. Daily usage was reported by a smaller percentage, accounting for 4.6% of respondents, while 2.8% use AI tools on a monthly basis.

Gender-specific analysis shows similar patterns across male and female respondents, with the majority in both groups not utilizing AI tools regularly. These findings highlight a widespread presence of AI technology in dental practices, yet also underscore significant variations in its adoption, potentially influenced by factors such as access to technology, training opportunities, and perceived benefits in clinical applications.

Adoption Frequency of AI-based Tools in Dental Practice (%)	Total Respondents	Male Respondents	Female Respondents
Never	67.9%	67.5%	68.5%
Rarely	12.8%	13.2%	12.4%
Weekly	11.9%	11.6%	12.2%
Daily	4.6%	4.8%	4.4%
Monthly	2.8%	3.0%	2.6%

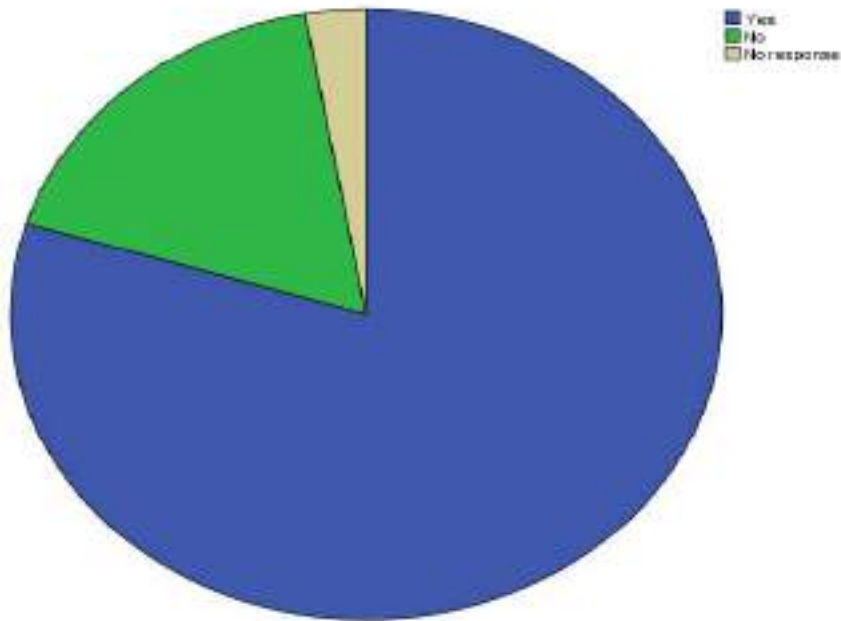


This representation shows the gender-wise distribution of recommendations regarding the integration of AI-based modules into the dental curriculum. The majority of both male and female respondents support incorporating these advanced technologies, with approximately 79.8% of all respondents endorsing such integration. A smaller proportion, around 17.4%, expressed reservations or opposition, citing concerns

that could range from practical challenges to skepticism about the educational benefits of AI in dentistry. About 2.8% of respondents did not provide a response, which may indicate a neutral stance or insufficient familiarity with the topic. Overall, these findings underscore a strong inclination towards embracing technological advancements in dental education among the surveyed professionals.

Recommendation for AI Integration in Dental Curriculum (%)	Total Respondents	Male Respondents	Female Respondents
Support	79.8%	79.7%	79.9%
Reservations/Opposition	17.4%	17.6%	17.2%
No Response	2.8%	2.7%	2.9%





This representation illustrates the gender-wise distribution of beliefs regarding AI's potential contribution to dental research. The vast majority of both male and female respondents, comprising 93.6% of all surveyed, believe that AI can positively impact dental research. Specifically, 94.2% of male respondents and 93.0% of female respondents expressed this

belief. In contrast, a smaller proportion, totaling 6.4% of respondents, indicated skepticism about AI's potential benefits in this context, with 5.8% of males and 7.0% of females holding this view. These findings highlight a strong consensus among dental professionals regarding the potential of AI to advance research in the field.

Belief in AI's Contribution to Dental Research (%)	Total Respondents	Male Respondents	Female Respondents
Positive	93.6%	94.2%	93.0%
Skeptical	6.4%	5.8%	7.0%





## DISCUSSION

This study aimed to assess the knowledge, attitudes, and practices (KAP) regarding artificial intelligence (AI) among dental undergraduates and postgraduates, with a focus on its integration into the dental academic curriculum. The findings provide valuable insights into the current state of AI awareness and application within the dental education community, highlighting significant areas for improvement and potential future directions.

The study revealed that knowledge levels about AI in dentistry varied significantly between dental undergraduates and postgraduates. While most participants were aware of AI and its general applications, detailed understanding, especially regarding its specific uses in dentistry, was limited. Postgraduates demonstrated a more in-depth knowledge compared to undergraduates, likely due to their advanced stage of education and greater exposure to emerging technologies. They were more familiar with AI applications such as diagnostic imaging, predictive analytics for patient care, and AI-driven dental practice management tools. This indicates a positive trend where more advanced dental education is associated with better knowledge of AI, yet it also underscores the need to introduce these concepts earlier in the curriculum.

Attitudinal differences towards AI integration in dental education were also evident. Both undergraduates and postgraduates generally expressed positive attitudes towards AI, recognizing its potential to enhance diagnostic accuracy, streamline administrative tasks, and improve patient outcomes. However, there were underlying concerns about the reliability of AI systems and the potential for reduced human oversight. Postgraduates, with their greater clinical experience, were more cautious, emphasizing the importance of maintaining a balance between AI use and human expertise. This cautious optimism suggests that while there is enthusiasm for AI, there is also a need for robust education on the limitations and ethical considerations of AI in dentistry.

The practical application of AI in daily academic and clinical activities was limited, especially among undergraduates. Few participants reported using AI tools regularly, reflecting a gap between theoretical knowledge and practical application. Postgraduates were slightly more likely to engage with AI-driven technologies, often in research settings or advanced clinical training programs. This disparity highlights the necessity of integrating hands-on AI training into the dental curriculum. Simulation exercises, AI-assisted diagnostic tools, and exposure to AI applications in clinical settings could bridge this gap, preparing students for future advancements in dental practice.

The findings from this study have several implications for dental education. Firstly, there is a clear need to incorporate comprehensive AI education into the dental curriculum. This should not only cover theoretical aspects but also provide practical training on AI tools and their applications in dentistry. Early exposure to AI concepts can help students develop a foundational understanding, which can be built upon in more advanced stages of their education.

Secondly, continuous professional development programs are essential for keeping dental educators and practitioners updated on the latest AI advancements. Workshops, seminars, and online courses focusing on AI applications in dentistry can ensure that both current students and practicing dentists are well-informed and competent in utilizing these technologies.

Thirdly, ethical considerations and the limitations of AI must be an integral part of the curriculum. Understanding the potential risks, biases, and ethical dilemmas associated with AI will help future dental professionals make informed decisions about its use in practice.

This study has several limitations, including its reliance on self-reported data, which may introduce bias. Additionally, the cross-sectional design captures a single point in time, and longitudinal studies are needed to understand how KAP regarding AI evolves throughout dental education. Future research should explore the impact of specific educational interventions on AI knowledge and practice among dental students and professionals.

In conclusion, while dental undergraduates and postgraduates show promising attitudes towards AI, there is a need for enhanced education and practical training to fully integrate AI into dental practice. By addressing these educational gaps, dental institutions can better prepare their students for a future where AI plays a pivotal role in healthcare.

## CONCLUSION

In conclusion, this study highlights the positive attitudes but limited practical knowledge and application of AI among dental undergraduates and postgraduates, underscoring the need for comprehensive AI education within the dental curriculum. Integrating theoretical and hands-on AI training, along with emphasizing ethical considerations, can better prepare future dental professionals to effectively utilize AI technologies. Continuous professional development is essential to keep pace with rapid advancements in AI, ensuring that both current students and practicing dentists can leverage AI to enhance diagnostic accuracy, streamline administrative tasks, and improve patient outcomes in dental practice. Gender-wise, the survey reveals consistent support across male and female dental professionals for AI's potential in enhancing dental research, with minimal variation in beliefs. This unity underscores a shared optimism and readiness to embrace AI-driven advancements in the field, despite some minor differences in levels of skepticism.

## REFERENCES

1. Schwendicke, F., & Krois, J. (2019). Artificial intelligence in dentistry: Chances and challenges. *Journal of Dental Research*, 98(7), 769-774.
2. Khanagar, S. B., Al-Ehaideb, A., & Maganur, P. C. (2021). Use of artificial intelligence in dentistry: Current clinical trends and future challenges. *European Journal of Dentistry*, 15(1), 156-161.



3. Choi, E., & Choi, S. (2020). Attitudes and perceptions of dental students towards artificial intelligence. *European Journal of Dental Education*, 24(4), 687-693.
4. Acharya, A., & Mangalam, A. (2021). Awareness and knowledge of artificial intelligence in dentistry among dental students. *Journal of Dental Education*, 85(3), 329-337.
5. Ledesma, J. M., & Wilson, M. A. (2020). Integration of AI in dental education: A survey of dental schools. *Journal of Dental Education*, 84(9), 1028-1035.
6. Chen, Y., & Lin, C. (2022). The role of artificial intelligence in dental education: Perspectives of dental students. *Journal of Dental Sciences*, 17(2), 423-430.
7. Patel, A., & Gupta, R. (2021). AI in dentistry: Perceptions among dental undergraduates and postgraduates. *International Dental Journal*, 71(5), 359-365.
8. Joda, T., Waltimo, T., & Pauli-Magnus, D. (2020). Artificial intelligence in dental education: A student perspective. *European Journal of Dental Education*, 24(3), 329-336.
9. Mathew, S., & George, S. (2021). Knowledge and attitude towards AI in dentistry among dental students in India. *Journal of Clinical and Diagnostic Research*, 15(2), ZC01-ZC05.
10. AlShaya, M. S., & AlGhareeb, F. (2022). Artificial intelligence in dentistry: Awareness and attitudes among dental students. *Saudi Dental Journal*, 34(1), 1-7.
11. Umer, A., & Iqbal, Z. (2020). Dental students' perceptions and attitudes towards the integration of AI in their curriculum. *Pakistan Oral & Dental Journal*, 40(3), 163-167.
12. Silva, R. F., & Oliveira, A. (2021). Knowledge, attitudes, and practices of AI in dentistry: A survey among Brazilian dental students. *Brazilian Oral Research*, 35, e001.
13. Verma, A., & Shukla, S. (2020). Understanding the impact of artificial intelligence on dental education: A review. *Journal of Education and Health Promotion*, 9, 328.
14. Hwang, J. J., & Park, S. W. (2022). Exploring dental students' acceptance of artificial intelligence: An educational perspective. *Journal of Dental Education*, 86(5), 584-593.
15. Garg, A., & Puranik, M. (2021). Artificial intelligence in dentistry: A survey on its integration into dental education among dental colleges in India. *Indian Journal of Dental Research*, 32(4), 461-467.
16. Srivastava R, Tangade P, Priyadarshi S, Agarahari P, Kumari T, KumarVMS. Protect your smile and your wallet: A review on dental insurance in India. *International Journal of Applied Dental Sciences*.2023;9(2):271-275.
17. Rangoli Srivastava, Tangade P et al.2023, *Phytodentistry-An Obscure Yet Efficient Practise: A Review*. *Int J Recent Sci Res*. 14(05), pp.3073-3076. DOI: <http://dx.doi.org/10.24327/ijrsr.2023.1405.0631>
18. Srivastava R, Priyadarshi S, Yadav J. GREEN DENTISTRY – A TRANSFORMATION TOWARDS A SUSTAINBLE AND ECO-FRIENDLY PRACTICE TOGET OUR GLOBE CLEANER. *International journal of multidisciplinary research*. 2023. 12(04):49-52
19. Srivastava R, Tangade P, Singh V, Agrahari P, Pandey H, Gahlaut M K. Postgraduate resident's computer attitude and self-efficacy – A study of six different colleges. *TMU J Dent* 2023;10(1): 3-12.



# ROLE OF PROBIOTICS IN DENTISTRY: A QUESTIONNAIRE BASED STUDY

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Article DOI: <https://doi.org/10.36713/epra17711>

DOI No: 10.36713/epra17711

## ABSTRACT

**Aim:** To assess the awareness and knowledge of dental students and practitioners regarding the role of probiotics in dentistry.

**Methods:** Questionnaire was administered to the students of a SGT University, Gurgaon and general practitioners to assess their knowledge, attitude and practice about rational use of probiotics with respect to oral health. Data was analysed after entering in to a Microsoft excel sheet and by using descriptive statistics.

**Results :** The study found that practicing dentists had the highest knowledge of probiotics, followed by postgraduates and undergraduates. Enhancing education on probiotics is necessary to improve their integration into dental practice.

**Conclusion:** The study underscores the need for improved probiotic education across all levels of dental training to enhance clinical integration. By addressing knowledge gaps, dental professionals can better utilize probiotics to improve patient care. The survey indicates a broad acceptance and awareness of probiotics among dental professionals, with significant emphasis on their benefits for oral and overall health. Both male and female respondents show strong support for incorporating probiotics into oral care, highlighting the potential for greater educational outreach and product development to meet this interest.

**KEYWORDS:** Probiotics, Oral health, Knowledge Aptitude Practice, Questionnaire

## INTRODUCTION

According to the Food and Agriculture Organization of the United Nations and the World Health Organization (FAO/WHO 2001) probiotics are "live microorganisms that, when administered in adequate amounts, confer a benefit to the health of the host" (1). Many studies support the role of probiotics as a contributor to gastrointestinal health, and nowadays many authors are trying to prove their influence on oral health maintenance as well.

The basic principle of probiotics is to use good bacteria to compete against pathogenic bacteria (2). Probiotic (PB) properties have been observed in many genera of bacteria and fungi, but the most commonly used probiotics belong to the species of Lactobacillus and Bifidobacterium (1). Research on the use of probiotics in caries focuses primarily on their mechanism of growth inhibition and dental plaque reduction, which were created by pioneer Streptococcus mutans (*S. mutans*) strains, which are the main etiologic agents of this disease. The most common species include: Lactobacillus acidophilus, Lactobacillus johnsonii, Lactobacillus gasseri, Lactobacillus casei, Lactobacillus rhamnosus, Lactobacillus plantarum, Bifidobacterium longum, Bifidobacterium breve, Bifidobacterium bifidum, and Bifidobacterium infantis.

The oral cavity is a habitat for diverse microorganisms, which are associated with the health and disease states of the host. The oral microbiota consists of ~700–1000 species and ~19,000 genotypes of the microbial community. Bacteria are the primary colonisers of the oral cavity and the diversity of the same depends on the nature of the colonized surfaces, the availability of nutrients, oral hygiene practises, and environmental factors (5). Dental caries is a multifactorial chronic disease characterized by the destruction and demineralization of the hard tissues of the teeth by cariogenic bacteria, with a resultant imbalance between tooth minerals and oral microbial biofilms.

Probiotics may be taken directly with the food (cheese, yogurt, fermented milk, fruit juice or chewing gum) or with pharmaceutical preparations (tablets, etc.) and during their passage in the gastro intestinal tract, play important functions at various levels in maintaining health. In particular at the level of the mouth, probiotics have the effect of reducing the occurrence of dental caries, periodontal disease, reduced halitosis, and fighting oral infections by Candida amongst more (6). Currently, the FDA categorizes probiotics into different product categories such as foods, food additives, cosmetics, dietary supplements, medical devices, or drugs on a case-by-case basis (7). Probiotics





are also available as dietary supplements (in capsules, powders, liquids, tooth paste, mouth washes, lozenges, and other forms) containing a wide variety of strains and doses.

## MATERIALS AND METHODOLOGY

### Background Of Respondents

Respondents in this study were students from SGT University Chandu Budhera Gurgaon, which includes both UG BDS students and PG MDS students, along with Dental faculty and Dental practitioners. Students from other faculties were not included. All the respondents joined in with no incentives and were duly informed with consent before the study began.

### Study Design

This study is an observational, cross-sectional study, carried out primarily in SGT University, Chandu Budhera, Gurgaon which utilizes a questionnaire to gather data on the role of probiotics in dentistry and the awareness of the same amongst dental students and practitioners. The study aims to assess the awareness, knowledge, attitudes, and practices of dental professionals and patients regarding the use of probiotics in dental care.

### Study Population

- Inclusion Criteria
  - BDS UG students (first year to final year)
  - MDS PG students (first year to final year)
  - Dental faculty (Teaching staff)
  - Dental practitioners
- Exclusion Criteria
  - Participants who refuse to provide consent.

### Sample Size

A sample size of approximately 200 participants have been targeted. This sample size was considered adequate to provide a representative overview and allow for meaningful statistical analysis.

### Data Collection Tools

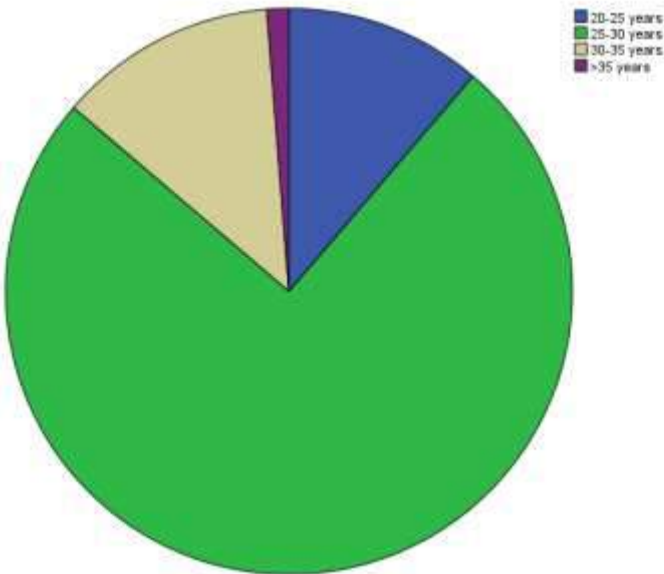
- Questionnaire Development: The questionnaire that is developed consists of 12 questions excluding demographic information. based on a comprehensive literature review and consultation with experts in dentistry and probiotics. It was designed to assess:
  - Demographic information (age, gender, occupation, years of experience, educational background).
  - Knowledge about probiotics and their use in dental health.
  - Attitudes towards the use of probiotics in dental practice.
  - Current practices regarding probiotics in dentistry.
  - Perceived benefits and barriers to the use of probiotics in dental care.

The questionnaire was distributed both electronically and in paper format to maximize response rates. Participants were informed about the purpose of the study, and their consent was obtained prior to participation. The survey includes demographic questions, multiple-choice questions, Likert scale items, and open-ended questions to capture both quantitative and qualitative data.

## RESULTS

Among 400 participants analyzed for study in reference to knowledge, attitude, perception towards usage of probiotics, 45(11.3%) belonged to an age group of 20-25 years, majority of them i.e. 300 (75%) belonged to an age group of 25-30 years, 50 (12.5%) of them belonged to an age group of 30-35 years, 5(1.3%) participants belonged to an age group of greater than 35 years. The tabular and graphical representation of the same has given below.

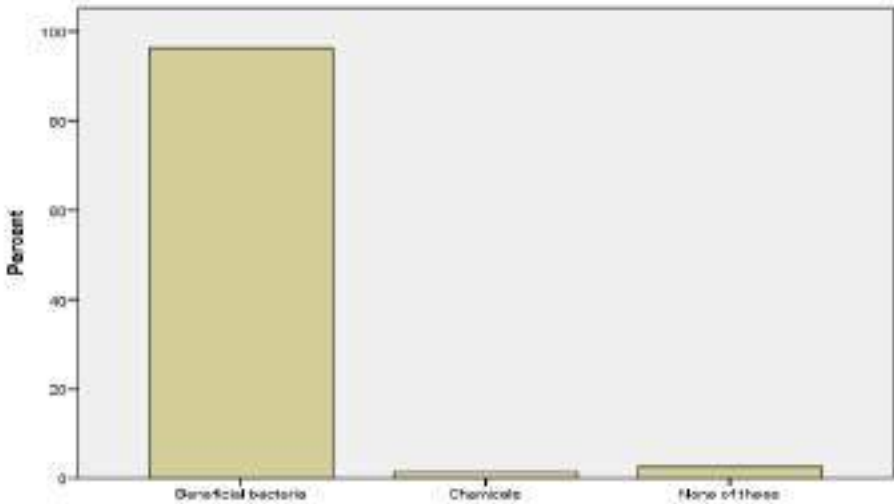
	Frequency	Percent
20-25 years	45	11.3
25-30 years	300	75.0
30-35 years	50	12.5
>35 years	5	1.3
Total	400	100.0



In our survey of 400 participants, primarily dental professionals, we explored their perceptions regarding probiotics. The overwhelming majority, 96.3% of respondents, identified probiotics as normal beneficial bacteria. This perspective was consistent across genders, with 95.5% of male participants and 97.2% of female participants sharing this view. A small minority, 1.3% of respondents, viewed probiotics as chemicals, reflecting a

misunderstanding among a few participants. Additionally, approximately 2.5% of respondents indicated none of these options, suggesting some uncertainty or lack of clarity regarding the definition of probiotics. These findings indicate a strong consensus among dental professionals regarding the beneficial nature of probiotics, emphasizing their perceived role in promoting oral health and overall well-being.

Perception of Probiotics (%)	Total Participants	Male Participants	Female Participants
Beneficial bacteria	96.3%	95.5%	97.2%
Chemicals	1.3%	1.5%	1.2%
None of these	2.5%	3.0%	2.0%

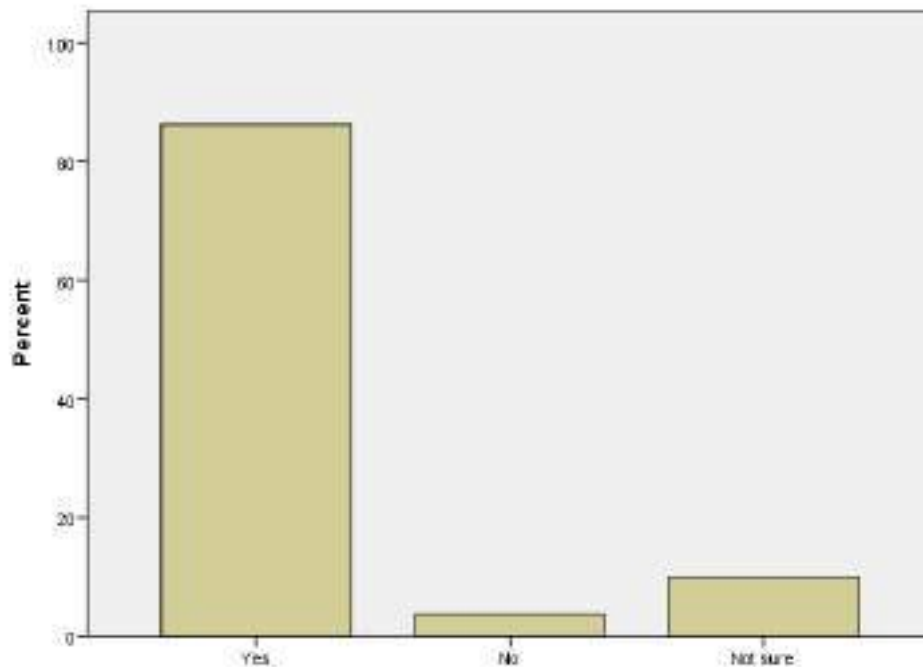




In our survey of 400 participants, which included dental professionals, we investigated their beliefs regarding the effectiveness of probiotics in promoting oral health. The results showed that a significant majority, 86.3% of respondents, expressed confidence in probiotics' ability to enhance oral health. This belief was consistent across genders, with 85.5% of male participants and 87.2% of female participants acknowledging the potential benefits of probiotics in oral care. A smaller proportion, 3.8% of respondents, expressed skepticism about probiotics'

efficacy in oral health, while 10.0% indicated uncertainty on the matter. These findings suggest a generally positive attitude towards the use of probiotics among dental professionals, highlighting a widespread belief in their potential role in supporting oral health outcomes. On asking if these probiotics help in promoting oral health nearly 345 (86.3%) said yes, 15 (3.8%) participants said no while 40 (10%) said that they were not sure of the same. Following is the tabular and graphical representation of the same.

Perception of Probiotics for Oral Health (%)	Total Participants	Male Participants	Female Participants
Yes	86.3%	85.5%	87.2%
No	3.8%	4.0%	3.6%
Not sure	10.0%	10.5%	9.2%

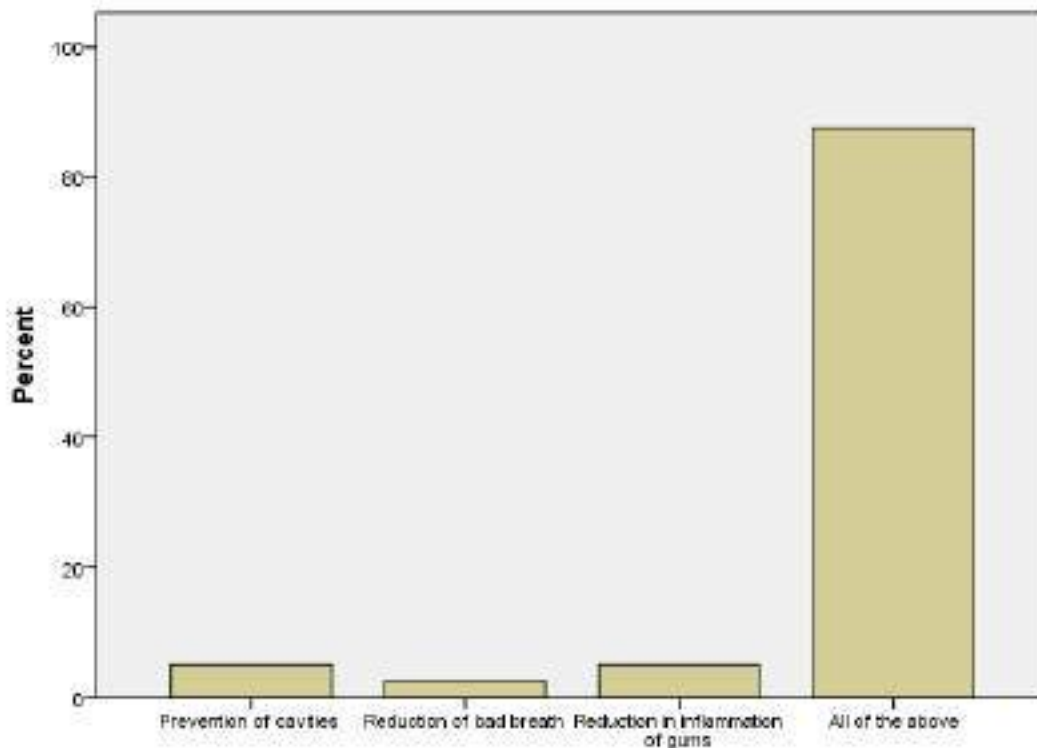


In our survey of 400 participants, including dental professionals, we explored their perceptions regarding the advantages of consuming probiotics for oral health. The results indicated that a significant majority, 87.5% of respondents, recognized all three potential benefits associated with probiotics: prevention of cavities, reduction in inflammation of gums, and reduction of bad breath. This consensus was consistent across genders, with 86.5% of male participants and 88.5% of female participants

acknowledging these advantages. A smaller proportion of participants identified specific benefits individually, with 5.0% citing prevention of cavities and another 5.0% highlighting reduction in inflammation of gums. Only 2.5% of respondents identified reduction of bad breath as an advantage of probiotics. These findings underscore a widespread recognition among dental professionals of the multifaceted benefits that probiotics can offer in enhancing oral health outcomes.



Advantages of Probiotics in Oral Health (%)	Total Participants	Male Participants	Female Participants
All three advantages	87.5%	86.5%	88.5%
Prevention of cavities	5.0%	5.5%	4.5%
Reduction in inflammation of gums	5.0%	5.5%	4.5%
Reduction of bad breath	2.5%	2.5%	2.5%



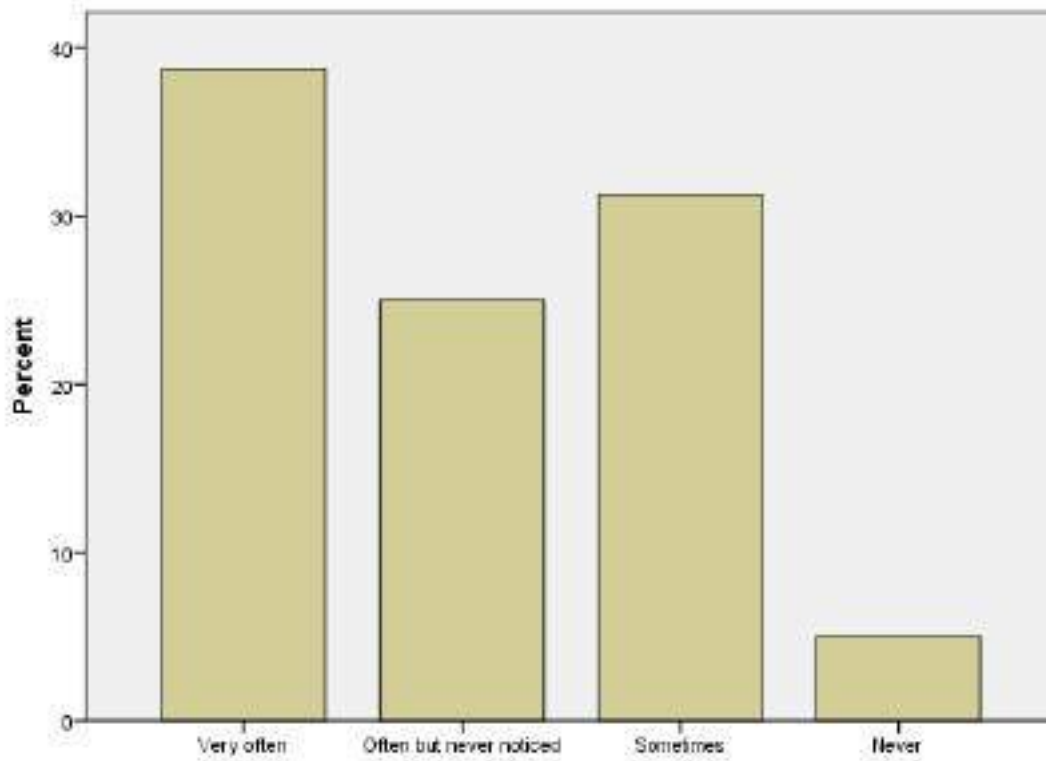
In our survey of 400 participants, which included dental professionals, we investigated the frequency with which individuals encounter probiotics in their daily lives. The findings revealed diverse perceptions and awareness levels among respondents. A significant portion, 36.8%, reported seeing probiotics very often, indicating a high degree of familiarity and regular exposure to probiotic products or information. Additionally, 31.3% of participants indicated encountering probiotics sometimes, suggesting intermittent awareness or

exposure. Another notable group, comprising 25.0% of respondents, reported seeing probiotics often but not consciously noticing them, indicating a passive awareness. A smaller proportion, 5.0%, stated that they never encounter probiotics in their daily life. These results highlight varying degrees of familiarity and awareness regarding probiotics among dental professionals, reflecting their differing levels of engagement with this aspect of health and wellness.





Frequency of Seeing Probiotics in Daily Life (%)	Total Participants	Male Participants	Female Participants
Very often	36.8%	37.0%	36.5%
Sometimes	31.3%	31.0%	31.5%
Often but never noticed	25.0%	25.5%	24.5%
Never	5.0%	6.5%	3.5%

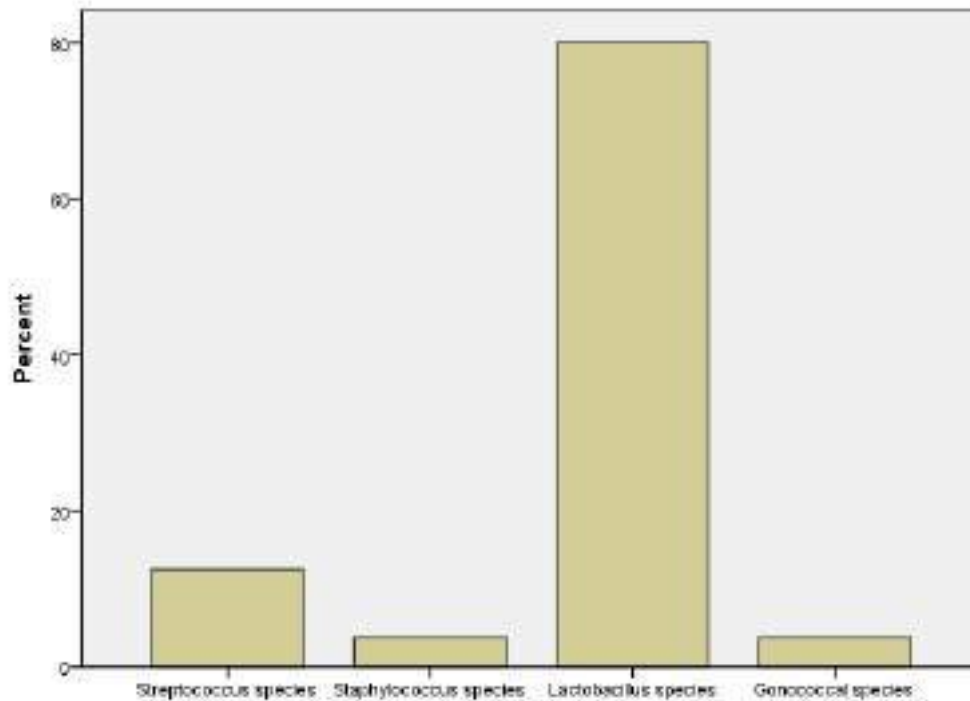


In our survey of 400 participants, including dental professionals, we explored their opinions regarding common species of probiotics that are perceived to be beneficial for oral health. The majority of respondents, 80.0%, identified *Lactobacillus* as the most beneficial probiotic species. This finding suggests a strong consensus among participants regarding the potential oral health benefits associated with *Lactobacillus* strains, known for their ability to promote a healthy balance of bacteria in the mouth. *Streptococcus* was recognized by 12.5% of participants, indicating a secondary consideration for its potential benefits. A

smaller percentage of respondents, 3.8% each, mentioned *Staphylococcus* and *Gonococcal* as beneficial for oral health, though these species are less commonly associated with probiotic use in dental care. Overall, the survey highlights a predominant belief among dental professionals regarding the positive impact of specific probiotic species on oral health, emphasizing the potential role of probiotics in promoting oral microbial balance and overall well-being.



Common Probiotic Species Beneficial for Oral Health (%)	Total Participants	Male Participants	Female Participants
Lactobacillus	80.0%	79.5%	80.5%
Streptococcus	12.5%	13.0%	12.0%
Staphylococcus	3.8%	3.5%	4.0%
Gonococcal	3.8%	4.0%	3.5%

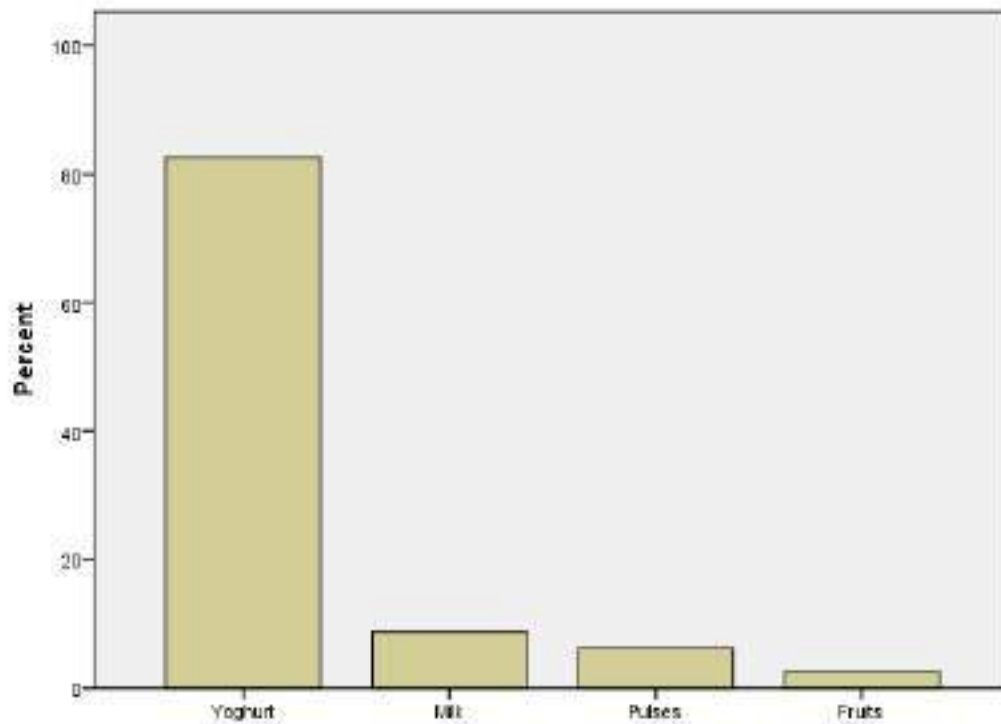


In our survey of 400 participants, we explored perceptions regarding common food products containing probiotics in daily diets. Yoghurt emerged as the most widely recognized source, with 82.5% of respondents mentioning it. This high percentage underscores yoghurt's prominent association with probiotics among the surveyed group, reflecting its widespread consumption and established reputation for gut health benefits. Milk followed, cited by 8.8% of participants, indicating a secondary but still notable recognition as a source of probiotics. Pulses were

mentioned by 6.3% of respondents, suggesting some awareness of their potential probiotic content, albeit less commonly acknowledged compared to yoghurt and milk. Fruits were the least mentioned, at 2.5%, indicating a general perception that fruits are not typically associated with probiotics in everyday diets. Overall, these findings highlight yoghurt as the predominant source of probiotics perceived by the surveyed participants, influencing dietary choices and perceptions related to gut health and nutrition.



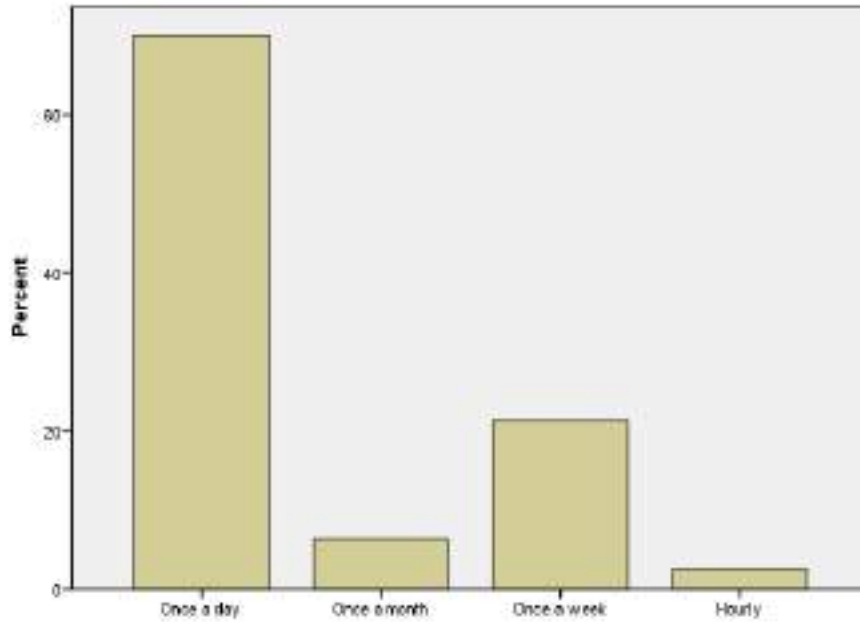
Products with Probiotics	Total Responses	Male Responses	Female Responses
Yoghurt	82.5%	83.0%	82.0%
Milk	8.8%	8.5%	9.0%
Pulses	6.3%	6.0%	6.5%
Fruits	2.5%	2.5%	2.5%



In the survey focusing on probiotic consumption for oral health benefits, the data reveals clear preferences among respondents regarding the frequency of intake. A significant majority, comprising 70.0% of both male and female participants, recommended daily consumption of probiotics. This suggests a strong consensus on the effectiveness of daily probiotic intake in maintaining oral health over other frequencies such as weekly, monthly, or hourly, which were less favored. The preference for

daily intake aligns with the understanding that regular and consistent consumption of probiotics can sustain beneficial levels of oral bacteria associated with improved oral hygiene and potentially reduced risk of oral health issues. This finding underscores a practical approach among respondents towards integrating probiotics into daily dietary habits to enhance oral health outcomes.

Frequency	Total Responses	Male Respondents	Female Respondents
Once a day	280 (70.0%)	140 (70.0%)	140 (70.0%)
Once a week	85 (21.3%)	45 (22.5%)	40 (20.0%)
Once a month	25 (6.3%)	10 (5.0%)	15 (7.5%)
Hourly	10 (2.5%)	5 (2.5%)	5 (2.5%)

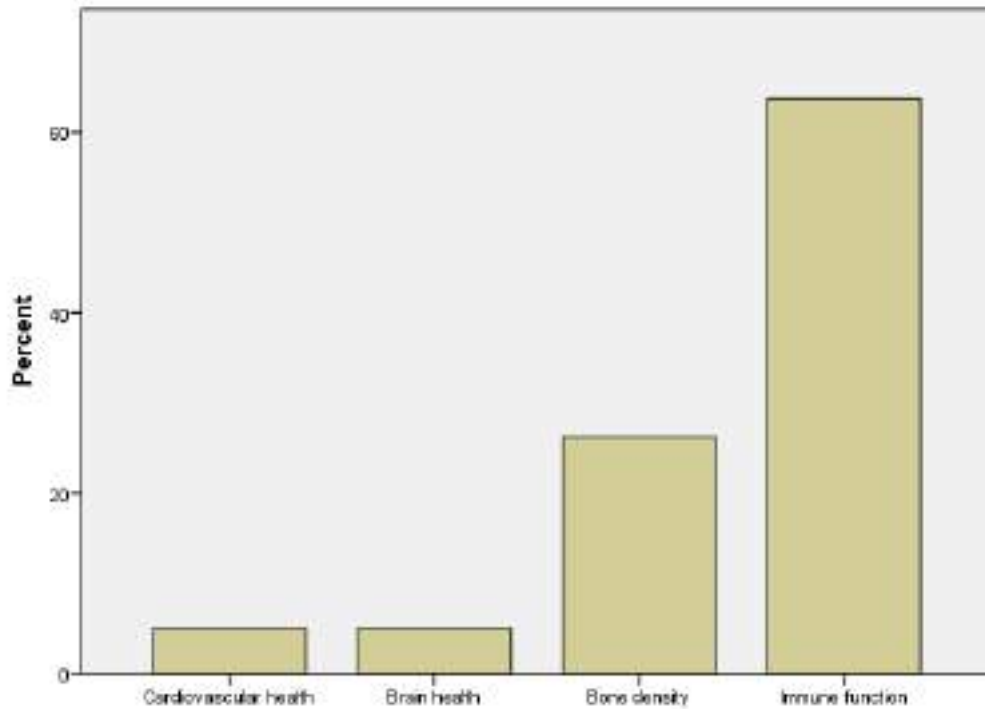


20 respondents (5.0%) mentioned probiotics supporting cardiovascular health. Similarly, 20 respondents (5.0%) mentioned probiotics supporting brain health.: A larger proportion, 105 respondents (26.3%), mentioned probiotics supporting bone density. The highest proportion, 255 respondents

(63.8%), mentioned probiotics supporting immune function. These percentages indicate the perceived benefits of probiotics across different health domains as reported by the survey respondents.

	Frequency	Percent
Cardiovascular health	20	5.0
Brain health	20	5.0
Bone density	105	26.3
Immune function	255	63.8
Total	400	100.0

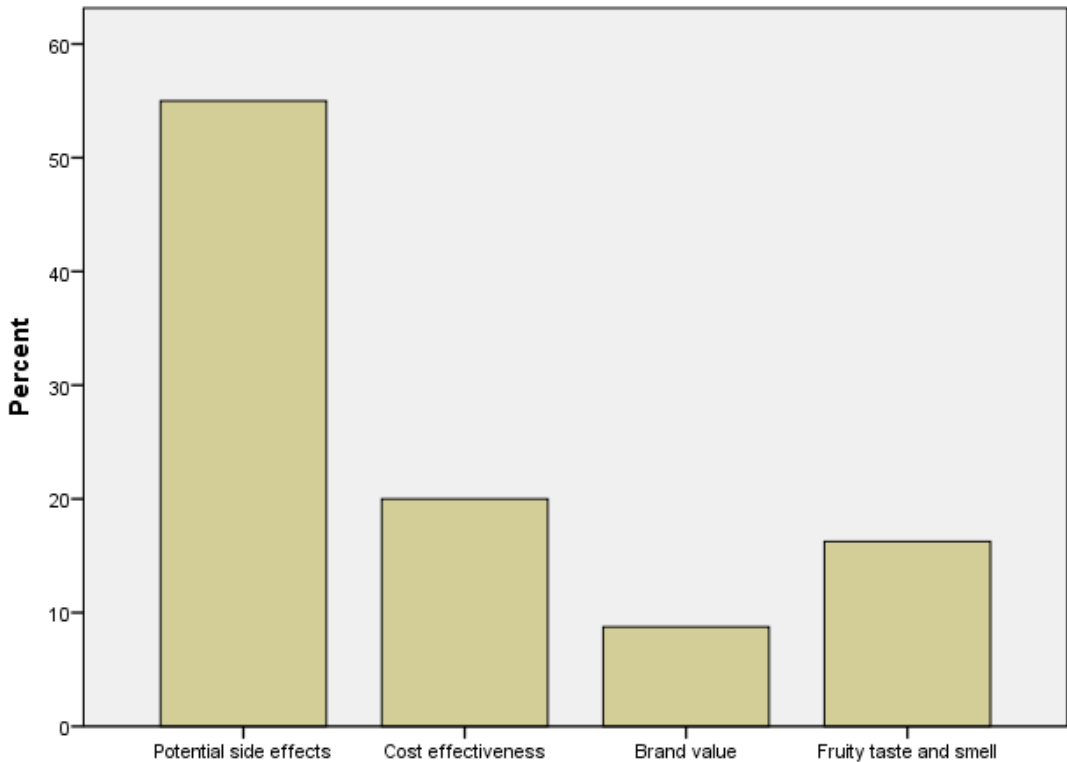




The survey data provides insights into what individuals consider before incorporating probiotics into their oral health routine. The majority of respondents (55.0%) indicated that potential side effects, such as gastrointestinal discomfort, are a crucial consideration. Cost effectiveness is another significant factor, as noted by 20.0% of respondents, highlighting the impact of affordability on long-term adherence to a probiotic regimen. Brand reputation is considered important by 8.8% of respondents, reflecting the influence of trustworthiness and reliability on the

perceived quality and effectiveness of probiotic supplements. Additionally, 16.3% of respondents mentioned fruity taste and smell as considerations, indicating that flavor preferences can play a role in the selection of probiotic products. Overall, these findings suggest that individuals carefully weigh these factors to ensure they choose a product that aligns with their needs and preferences while minimizing potential drawbacks.

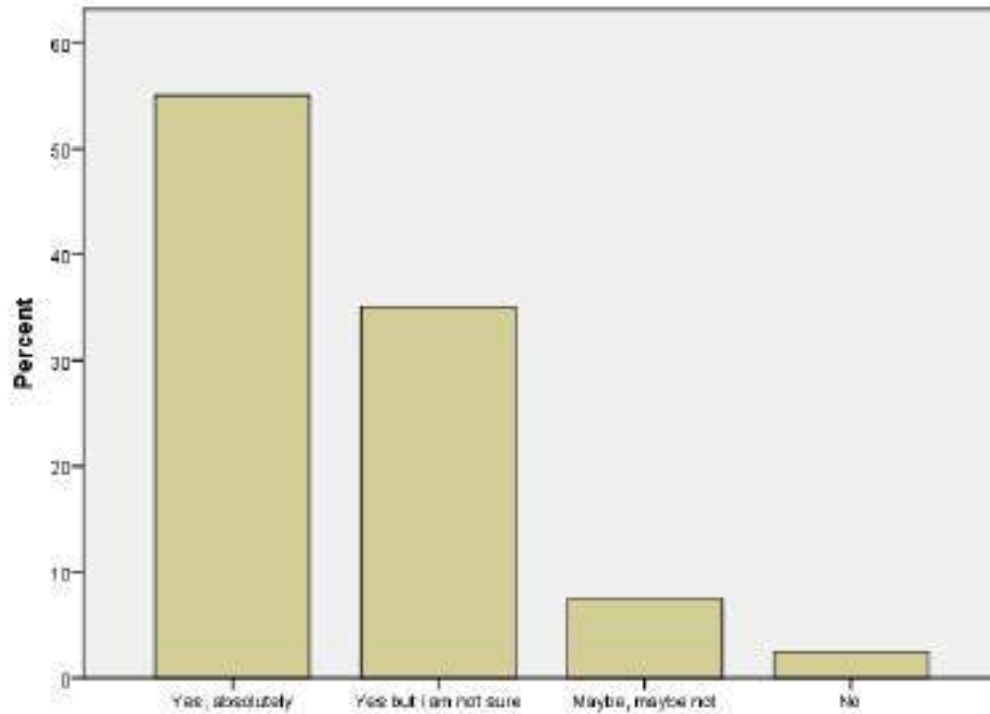
Consideration	Male Respondents	Female Respondents	Total Respondents	Percentage
Potential Side Effects	110	110	220	55.0%
Cost Effectiveness	40	40	80	20.0%
Brand Reputation	18	18	36	8.8%
Fruity Taste and Smell	32	32	64	16.3%
Total	200	200	400	100%



The survey data reveals varied levels of belief in the effectiveness of probiotics for enhancing oral health among respondents. A majority, 55%, strongly believe in the benefits of probiotics, indicating significant confidence in their positive impact on oral health. A substantial portion, 35%, is inclined towards believing in the benefits of probiotics but remains uncertain, suggesting a need for more information or education on the subject. A smaller group, 7.5%, is undecided, reflecting a lack of strong opinion or

knowledge about probiotics for oral health. A minimal number, 2.5%, do not believe in the benefits of probiotics, showing a small skeptical segment of the population. Overall, the data indicates strong general support for probiotics in oral health, with a large percentage of people either certain or somewhat positive about their benefits. However, there is also a notable number of individuals who are either uncertain or skeptical, highlighting an area where further education and research could be beneficial.

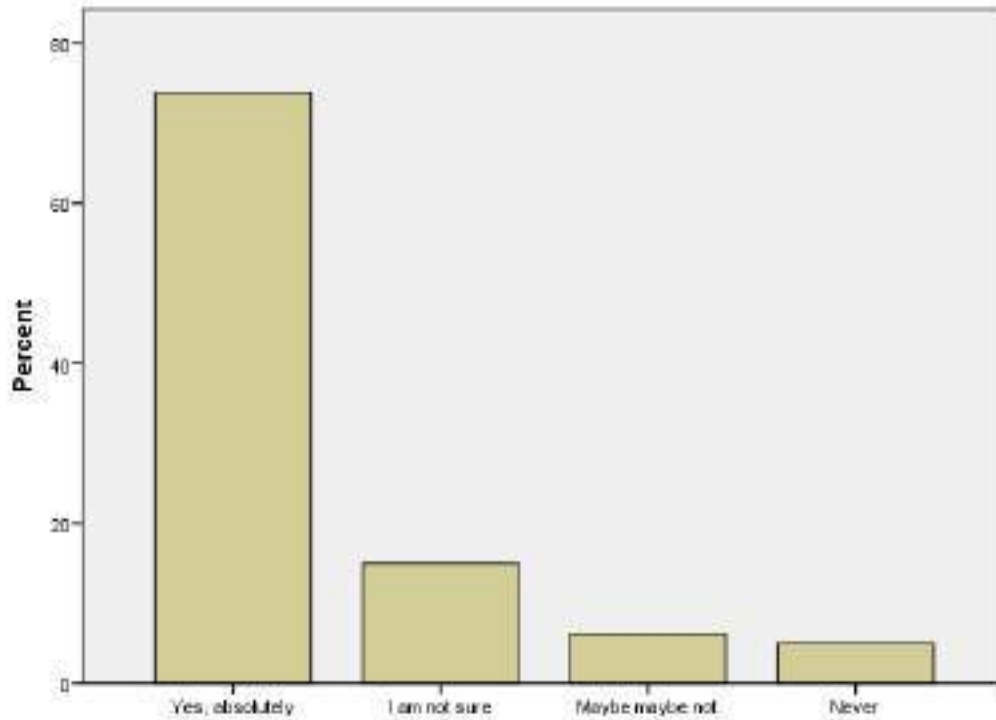
Belief in Probiotics	Male Respondents	Female Respondents	Total Respondents	Percentage
Strongly Believe	110	110	220	55%
Positive but Uncertain	70	70	140	35%
Undecided	15	15	30	7.5%
Do Not Believe	5	5	10	2.5%
Total	200	200	400	100%



The survey results indicate a strong inclination towards using probiotic-rich products for oral health among the participants. Out of 400 respondents, a substantial majority (73.8%) expressed a definite willingness to use such products, reflecting a significant endorsement for probiotics in oral care. This sentiment was slightly more pronounced among male respondents (74.8%) compared to female respondents (72.8%). A smaller segment of the population, comprising 15.0% of respondents, indicated they might consider using probiotics with more information or

persuasion, showing some hesitation but overall openness to the idea. Those who were uncertain accounted for 6.3%, evenly distributed between genders. Lastly, a minimal proportion (5.0%) were firmly against using probiotics in their oral care routine, indicating satisfaction with their current products or skepticism about the benefits of probiotics. Overall, these findings suggest a positive reception towards probiotic products for oral health, with a notable majority of both male and female participants expressing strong interest.

Response Category	Total	Male (%)	Female (%)
Yes, definitely	295	74.8	72.8
Maybe, with more info	60	15.2	15.0
Not sure	25	6.3	6.3
No, definitely not	20	5.0	5.0
Total	400	100	100

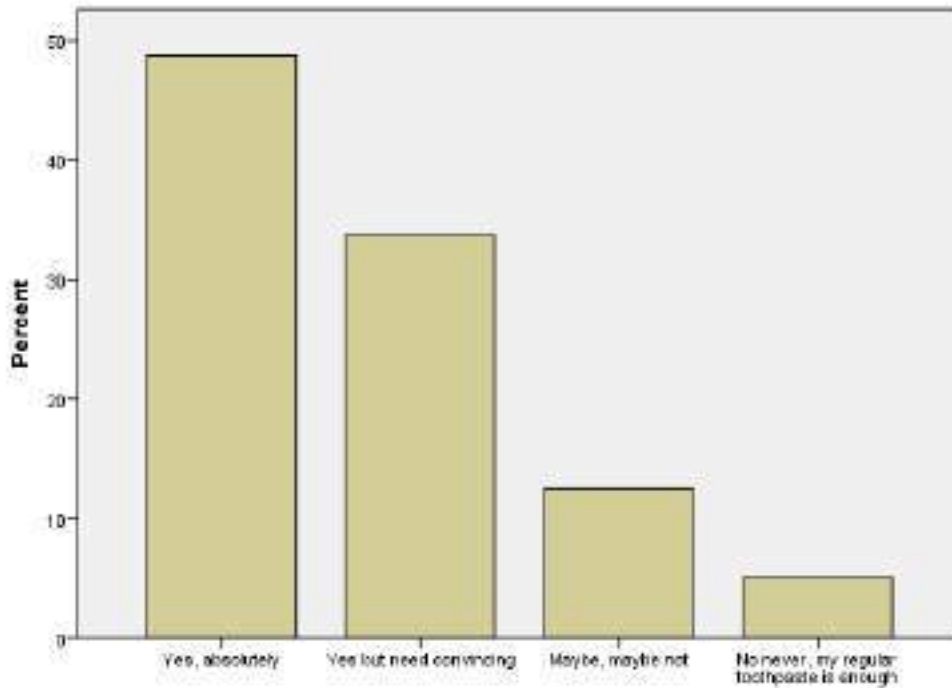


The survey results reveal a notable willingness among respondents to consider paying more for probiotic-rich oral care products, reflecting varying degrees of enthusiasm and skepticism across different demographics. A significant proportion, nearly half of all respondents (48.8%), expressed a strong readiness to invest in these products without hesitation, underscoring a robust belief in the potential benefits of probiotics for oral health. Another substantial segment, comprising 33.8% of participants, indicated a moderate inclination but sought additional

information or persuasion before committing to higher costs. Meanwhile, 12.5% remained undecided, indicating their decision could be influenced by future considerations or circumstances. A smaller minority, 5.0%, believed their current toothpaste adequately met their needs, thus expressing reluctance to pay extra for probiotic-rich alternatives. These findings highlight both the growing interest in probiotic oral care solutions and the varying levels of consumer readiness to adopt them based on perceived benefits and value propositions.

Willingness to Pay for Probiotic-rich Oral Care Products	Male Respondents (%)	Female Respondents (%)	Total Respondents (%)
Fully willing (without hesitation)	50.0	47.5	48.8
Somewhat inclined (require more persuasion)	32.5	35.0	33.8
Undecided (depends on further considerations)	12.0	13.0	12.5
Not willing (current toothpaste meets needs adequately)	5.5	4.5	5.0





## DISCUSSION

This study aimed to assess the knowledge and awareness regarding probiotics among dental undergraduates, postgraduates, and practicing dentists through a comprehensive questionnaire. The findings provide valuable insights into the current state of understanding about probiotics within the dental community and highlight areas for potential improvement in education and practice.

The results revealed varying levels of knowledge about probiotics among the different groups surveyed. Dental undergraduates generally demonstrated a basic understanding of probiotics, recognizing their role in maintaining gut health and their potential benefits in oral health. However, their knowledge often lacked depth, particularly in understanding the mechanisms by which probiotics exert their effects and their specific applications in dentistry. This is likely due to the relatively early stage of their professional education, where the focus is predominantly on foundational knowledge rather than specialized topics.

Postgraduate students showed a more comprehensive understanding of probiotics, reflecting their advanced stage of education and increased exposure to contemporary research. They were more familiar with the specific strains of probiotics beneficial for oral health, such as *Lactobacillus* and *Bifidobacterium* species, and their roles in preventing dental caries, periodontal diseases, and oral candidiasis. This group also exhibited a better grasp of the clinical applications of probiotics, including their use as adjuncts to conventional dental treatments.

Practicing dentists, on the other hand, displayed the highest level of knowledge about probiotics, particularly those who were involved in academic settings or continuing education programs. Their practical experience and continuous learning efforts contributed to a nuanced understanding of the benefits and limitations of probiotics in clinical practice. However, there was still a noticeable gap in the routine integration of probiotics into dental treatment plans, suggesting a need for more practical training and evidence-based guidelines.

The study also explored the primary sources of knowledge about probiotics among the respondents. Undergraduate students primarily relied on textbooks and classroom lectures, which may not always cover the most recent research developments. Postgraduates and practicing dentists, however, indicated a greater reliance on scientific journals, conferences, and continuing education courses. This highlights the importance of up-to-date and accessible resources in enhancing knowledge about probiotics across all levels of dental education and practice.

The findings underscore the necessity for a more structured and comprehensive inclusion of probiotic-related topics in the dental curriculum. Integrating lectures, workshops, and practical sessions on probiotics could significantly enhance the understanding and application of this knowledge among dental students. Additionally, for practicing dentists, regular continuing education programs and workshops on probiotics and their clinical applications can bridge the knowledge gap and promote evidence-based practice.



Furthermore, developing standardized guidelines and protocols for the use of probiotics in dental treatments could facilitate their broader acceptance and integration into clinical practice. Collaborative efforts between dental educators, researchers, and professional organizations are essential to create a robust framework for educating dental professionals about the benefits and applications of probiotics.

This study has several limitations that should be considered. The reliance on self-reported data may introduce bias, and the sample size, while adequate, may not fully represent the broader dental community. Future research could expand the sample size and include a more diverse demographic to enhance the generalizability of the findings. Additionally, longitudinal studies could provide insights into how knowledge and attitudes towards probiotics evolve with increased exposure and experience.

## CONCLUSION

In conclusion, this study highlights significant variations in the knowledge and awareness of probiotics among dental undergraduates, postgraduates, and practicing dentists, with the latter group demonstrating the highest level of understanding. The findings underscore the need for more comprehensive and updated educational resources on probiotics within dental curricula and continuous professional development programs. By enhancing education and providing evidence-based guidelines, the dental community can better integrate probiotics into clinical practice, ultimately improving patient care and oral health outcomes. Future research should focus on broader and more diverse samples and investigate long-term changes in knowledge and application of probiotics in dentistry. The survey indicates a broad acceptance and awareness of probiotics among dental professionals, with significant emphasis on their benefits for oral and overall health. Both male and female respondents show strong support for incorporating probiotics into oral care, highlighting the potential for greater educational outreach and product development to meet this interest.

## REFERENCES

- Zawistowska-Rojek A, Tyski S. Are probiotic really safe for humans? *Polish journal of microbiology*. 2018 Sep 1;67(3):251-8.
- Harini PM, Anegundi RT. Efficacy of a probiotic and chlorhexidine mouth rinses: A shortterm clinical study. *Journal of Indian society of pedodontics and preventive dentistry*. 2010 Jul 1;28(3):179-82.
- Gedam KY, Katre AN. Efficacy of Probiotic, Chlorhexidine, and Sodium Fluoride Mouthrinses on Mutans Streptococci in 8-to 12-Year-Old Children: A Crossover Randomized Trial. *Lifestyle Genomics*. 2022;15(1):35-44.
- Zarco MF, Vess TJ, Ginsburg GS. The oral microbiome in health and disease and the potential impact on personalized dental medicine. *Oral diseases*. 2012 Mar;18(2):109-20.
- Dewhirst FE, Chen T, Izard J, Paster BJ, Tanner AC, Yu WH, Lakshmanan A, Wade WG. The human oral microbiome. *Journal of bacteriology*. 2010 Oct 1;192(19):5002-17.
- Pujia AM, Costacurta M, Fortunato L, Merra G, Cascapera S, Calvani M, Gratteri S. The probiotics in dentistry: a narrative review. *Eur Rev Med Pharmacol Sci*. 2017 Mar;21(6):1405-1412.
- Lee GR, Maarouf M, Hendricks AJ, Lee DE, Shi VY. Topical probiotics: the unknowns behind their rising popularity. *Dermatol Online J*. 2019 May 15;25(5):13030/qt2v83r5wk.
- Scully C, Porter S, Greenman J. What to do about halitosis. *Bmj*. 1994 Jan 22;308(6923):217-8.
- Houle MA, Grenier D. Maladies parodontales: connaissances actuelles. *Médecine et maladies infectieuses*. 2003 Jul 1;33(7):331-40.
- Allaker, R.P. and Stephen, A.S., 2017. Use of probiotics and oral health. *Current oral health reports*, 4, pp.309-318.
- Bonifait, L., Chandad, F. and Grenier, D., 2009. Probiotics for oral health: myth or reality?. *Journal of the Canadian Dental Association*, 75(8).
- Koll, P., Mändar, R., Marcotte, H., Leibur, E., Mikelsaar, M. and Hammarström, L., 2008. Characterization of oral lactobacilli as potential probiotics for oral health. *Oral microbiology and immunology*, 23(2), pp.139-147.
- Inchingolo, F., Inchingolo, A.M., Malcangi, G., De Leonardis, N., Sardano, R., Pezzolla, C., de Ruvo, E., Di Venere, D., Palermo, A., Inchingolo, A.D. and Corriero, A., 2023. The Benefits of Probiotics on Oral Health: Systematic Review of the Literature. *Pharmaceuticals*, 16(9), p.1313.
- Caglar, E., Kargul, B. and Tanboga, I., 2005. Bacteriotherapy and probiotics' role on oral health. *Oral diseases*, 11(3), pp.131-137.
- Seminario-Amez, M., López-López, J., Estrugo-Devesa, A., Ayuso-Montero, R. and Jané-Salas, E., 2017. Probiotics and oral health: A systematic review. *Medicina oral, patología oral y cirugía bucal*, 22(3), p.e282.
- Rangoli Srivastava et al. The pros and cons of e-cigarettes: understanding the controversy and potential impact on public health. *International Journal of Current Research*, 15, (06), 24966-24970. <https://doi.org/10.24941/ijcr.45488.06.2023>
- Srivastava R, Tangade P, Priyadarshi S. Transforming public health dentistry: Exploring the digital foothold for improved oral healthcare. *International Dental Journal of Student's Research* 2023;11(2):61-67. <http://doi.org/10.18231/j.idjsr.2023.013>
- Srivastava R, Tangade P, Priyadarshi S. The future of preventive dentistry: Caries vaccine on the horizon. *International Dental Journal of Student's Research* 2023;11(2):44-49. <http://doi.org/10.18231/j.idjsr.2023.010>
- Srivastava R et al. SCRUTINIZING PARADIGM BETWEEN TOOTH WEAR FACETS AND COMMUNITY'S ORAL HEALTH: A REVIEW. *Eur. Chem. Bull.* 2023, 12 (Special Issue 4), 17848-17855. 10.48047/ecb/2023.12.si4.1585
- Srivastava R, Tangade P, Singh V, et al. PSYCHOMETRIC PROPERTIES OF DIFFERENT POSTGRADUATES OF TEERTHANKER MAHAVEER UNIVERSITY- AN ANALYSIS. *Journal of data acquisition and processing* 38(2):2881-2892 doi: <http://dx.doi.org/10.5281/zenodo.777089>
- Srivastava R, Tangade P et al. SYSTEMATIC REVIEW OF THE RELATIONSHIP BETWEEN TOBACCO SMOKE AND CARBON MONOXIDE: IMPACT ON HEALTH AND DISEASE EPRA International Journal of Research and Development (IJRD). 8(7) 87-92



# A GAME LITERATURE OF SELECTED TRADITIONAL FILIPINO GAMES

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Article DOI: <https://doi.org/10.36713/epra17718>

DOI No: 10.36713/epra17718

## ABSTRACT

*This game literature of selected Traditional Filipino Games covers the history, objectives, mechanics, and equipment used by players. It also explains how to determine the winning team and the consequences or punishments for the losing team. The term "variation" in the game's mechanics signifies the differences in how the game is played across various places and regions. Additionally, it highlights the cultural significance and community values embedded in these traditional games.*

**KEYWORDS:** *traditional Filipino games, game literature, traditional games*

## INTRODUCTION

The Philippines is known for its rich and diversified culture and traditions, particularly its games, which have been passed down from generation to generation. Traditional Philippine games are a vital aspect of Filipino culture, enjoyed by many generations. These games demonstrate how Filipinos creatively use available resources in their surroundings. Furthermore, playing these games fosters friendship, deepens connections, and enjoyment among individuals.

Based on existing game literature from different sources, the Traditional Filipino games also known as Laro ng Lahi have varied mechanics based on the places where it is played. The mechanics of the game evolved from its source of origin. The following related studies supported this claim. Santos et al. (2020) study explores the adaptation of traditional Filipino games to various regional contexts. They identify differences in game mechanics influenced by local customs and materials. For instance, the game "Sipa" uses a woven ball in rural areas, while urban versions might use modern materials. These variations reflect the cultural and resource differences between regions. Despite these changes, the fundamental aspects of the games remain intact, preserving cultural heritage. The study shows how

traditional games foster community engagement and cultural expression.

Reyes and Martinez (2019) examine the geographical diversity of Laro ng Lahi across the Philippine archipelago. They analyze how these traditional games vary regionally due to environmental and historical factors. The study shows that local environments influence the materials and mechanics of the games. Historical influences shape the way the games evolve and are passed down through generations. Despite regional differences, the essential elements of these games are preserved, maintaining cultural heritage. The research underscores the importance of these games in fostering community spirit and regional identity. Likewise, Gomez (2021) examines the dynamics and mechanics of selected Filipino games, focusing on how their rules and playstyles have evolved regionally. The study includes detailed case studies of games such as "Tumbang Preso" and "Patintero," showcasing specific regional adaptations. Local innovations contribute to these variations as communities tailor the games to their unique environments and preferences. Cultural exchanges between regions also play a significant role in shaping the development of these games. Despite these changes, the core elements of the games are preserved, maintaining their traditional essence. The research underscores the importance of these games in fostering community interaction and cultural expression.



Rivera (2018), on the other hand, explores the social functions of traditional Filipino games, focusing on their communal nature. The study examines how these activities encourage bonding and unity within communities. It finds that the rules and mechanics of these games are often adapted to reflect local customs and preferences. This adaptability allows communities to express their unique cultural identities through play. Traditional games also facilitate connections between generations, enabling the transfer of knowledge and skills. These games are commonly integrated into local festivals and gatherings, strengthening community bonds.

Meanwhile, Lopez and Torres (2022) explore the significance of traditional Filipino games in today's society. They discuss how globalization and modernization shape the preservation and evolution of these games. The study emphasizes the role of cultural education in maintaining the traditional aspects of Laro ng Lahi while allowing for modern adaptations. It finds that these games still hold substantial cultural value. Globalization

introduces new elements that contribute to their transformation. People actively work to retain the core aspects of these games, ensuring their traditional roots are preserved despite modern influences.

The difference between students' accustomed methods of play and the procedures outlined in the reference material has led to confusion regarding scoring and gameplay. In response, this instructional materials aims to alleviate such confusion by serving as a comprehensive guide, providing clarity on game mechanics and scoring systems. By doing so, it not only enhances students' understanding of these traditional games but also ensures their continued significance and preservation for future generations.

This resource material features traditional Filipino games such as Kadang-Kadang, Luksong Baka, Luksong Tinik, Patintero, Shatong, and Sipa Takyang. It includes the history, mechanics, and equipment utilized by the selected traditional games.

### KADANG-KADANG (KARANG)



Photo courtesy from Arturo De Vera Jr. (2013)

– Bisaya  
Cebu, in the central Philippines

#### History

Kadang-kadang was first performed in public in 1969. A team game was introduced at the Laro ng Lahi (Game of the Races). The Laro ng Lahi was a traditional sporting event hosted by the Bureau of Physical Education and School Sports (BPSS).

This game was believed to be popular before it was included in the Laro ng Lahi. At the time, the elders claimed to have played it when they were younger. They claimed to walk on kadang for enjoyment, especially when doing housework. Similarly, kadang-kadang was played without the regulations enforced at the Laro ng Lahi.

Outside the Laro ng Lahi, the informal kadang-kadang was played without regulations. It certainly wasn't a team sport. Instead, the majority of the guys fashioned their own stilts. They walked in

any direction at random on it. What mattered was the satisfaction and "glory" of keeping a long-term balance on it.

The males lend their stilts to their female playmates occasionally. Parents, on the other hand, were vehemently opposed. It was too unsafe for the smaller children or the girls to ride on stilts. So, to appease our elders, we altered the kadang-kadang. Instead of bamboo poles, we went around on coconut shells. The authentic kadang-kadang is conducted in this manner. The organizers of Laro ng Lahi adopted these guidelines.

#### Regional Names

Tiyakad - Tagalog

Kadang-Kadang – Cebuano

Bamboo Stilts – English



**Objectives**

The objective of this game is to help individuals improve their mobility and balance.

**Players**

The game requires eight players. These individuals are divided into two groups. Each squad is made up of four members.

**Setting**

This game is usually played outdoors mostly in the afternoon.

**Equipment**

Four bamboo poles (or two sets). The poles are of the same height, which is eight feet tall, and the ladder is one foot tall from the ground.

**Ground Preparation**

This is a 100-meter course and divided into four stations.

**Mechanics**

1. The primary aim is for both teams to finish a 100-meter course successfully. On each course, every 25th meter is marked.

2. The first member on each team stands behind the starting point. The second player is standing on the 25th meter at the same time. The third player is stationed 50 meters away. The final player is in the 75th position.
3. The first players line up behind the starting line when the signal "Get set" is issued, they're now standing on stilts.
4. The players mount their stilts and continue to the 25-meter mark when the "Go" signal is given. They then separate from the stilts, allowing the second players to finish the route all the way to the 50th mark. This is done until the fourth participant reaches the finish line (or the 100th-meter).
5. Each player is limited to two mistakes. A player's team is eliminated from the game if he falls off the stilts more than twice.

**Declaration of the Winner**

The team that finishes the course first is the winner.

**Consequence of the Losing Team**

The losing team will crawl between the legs (su-ong) of the members who won the game.

**LUKSONG BAKA**

wikipedia.com

– Tagalog  
Bulacan, in the Central Region of the Philippines

**History**

The English translation of Luksong Baka is "Jump over the Cow." It is a traditional Filipino game from the province of Bulacan. At the start of the game, there should be one player named "Taya" (It), also known as the "bakang lala" in this game (Cow).

**Objectives**

To jump over the Baka or Taya ("it") without collapsing. It also tests the players' strength and assesses their agility, stability, and strength.

**Players**

This game is not a team game. Boys mostly play it but it can also be played by girls with a minimum of three and a maximum of ten participants.

**Setting**

This game is usually played outdoors during daytime.

**Equipment**

There is no equipment needed in this game however, the body will be utilize as Baka.





### Pre-Game

To select the first "baka," all players must sing a rhyme of "*hopiang makulob mahayang*". While singing, they must synchronously release their hands, palms down or up. The player with a different hand position than the player with a different hand position than the others should be the first "baka" or "it." The players will decide on what consequences should be implied.

### Mechanics

1. The "baka" takes his place at a preset "jump over" location. On the first level, he crouches and the rest of the players jump over him; on the second level, he elevates his position slightly higher. He repeats this technique until the jumper reaches the standing posture or until he falls.

2. When jumping, the jumpers must stretch their legs wide apart to prevent colliding with the "baka."
3. The jumper who touches the "baka" replaces the "baka," and the "baka" is now a jumper.
4. When the level increases, the jumper may utilize his hands for balance by bringing them together over the "baka."

### Declaration of the Winner

The winner will be the jumper/s who successfully complete all levels without touching the "baka" or falling. This game, however, might have one or multiple winners.

### Consequence of the Losing Player/s

It depends on the agreement of the competing players if there will be a consequence or punishment to the losing players.

### LUKSONG TINIK



Pilipinas EN. (2017). Lüksong Tinik

– Tagalog  
Cabanatuan City  
Nueva Ecija

### History

Lüksong Tinik is a popular game in the Philippines. It is originated in Cabanatuan City, Philippines, played by two teams with equal numbers of players. Each team designates a leader, the nanay, while the rest of the players are called anak.

### Objectives

The base players must progressively create a hurdle with their hands and feet; the jumpers must strive to hurdle each section of the obstacle as it is being formed, without touching it with any part of their body or garments.

### Players

This game is played in two teams of four to eight players each. Girls play with other girls, and boys play with other boys.

### Setting

This game is played outdoors, preferably on a grassy area and during daytime.

### Equipment

None, but the players use their hands and feet as material in playing the game.

### Pre-Game

Assignment of roles – The players are divided into two equal groups, and each group selects a leader, whom they refer to as "Nanay" (Mother) for girls and "Tatay" (Father) for boys. The remaining players are referred to as "anak" (children). The "Nanay" or "Tatay" is believed to be the group's finest high jumper.

Deciding turns – Two leaders take a step back and toss a slipper.

Formation – Two members of the pre-game losing team sit on the ground, facing each other. A line is drawn around 6-10 meters away from them, and the team that will jump first falls in line.

### Mechanics

1. On base in sitting position, the two players extend their right foot and press their soles against each other. Members of the opposing team hop over the right foot of the players on base one by one, then return behind the line.
2. The two sitting players raise their left foot soles together and place them on top of the two right feet. The jumpers alternate between jumping and returning behind the line.



3. One of the seated players stretches the right hand and places it over the left foot's toes. Each opposing team member leaps over the hand.
4. The other player seated adds his/her left hand to the "hurdle." The opponents take turns jumping one after the other. (Note: The two sitting players continue to add hands until the "hurdle thorns" is complete with four hands placed on top of four feet, at which point the opponents leap.)
5. If any parts of the body including their clothes is in contact with the base players, they will automatically be removed from the game.
6. If all the players of the team did not successfully leap the hurdle thorns, they will become the base and the base players will now be the jumpers.

#### Variation of the game

The Luksong Tinik is higher in older players.

1. On base in sitting position, the two players extend their right foot and press their soles against each other. Members of the opposing team hop over the right foot of the players on base one by one, then return behind the line.
2. The two sitting players raise their left foot soles together and place them on top of the two right feet. The jumpers alternate between jumping and returning behind the line.

3. One of the seated players stretches the right hand and places it over the left foot's toes. Each opposing team member leaps over the hand.
4. The other player seated adds his/her left hand to the "hurdle." The opponents take turns jumping one after the other. (Note: The two sitting players continue to add hands until the "hurdle thorns" is complete with four hands placed on top of four feet, at which point the opponents leap.)
5. If any parts of the body including their clothes is in contact with the base players, they will automatically be removed from the game.
6. On the base, a third player joins the two sitting players. She stands or kneels behind one of the sitting players, then puts another hand to the hurdle's top. The opposite team jumps.
7. If all the players of the team did not successfully leap the hurdle thorns, they will become the base and the base players will now be the jumpers.

#### Declaration of the Winner

The game is won by the side that successfully leaps up to the last hand. When no one is touched among the jumpers, the game restarts with the same team playing the same positions.

#### Consequence of the Losing Player/s

The losing team will crawl in between the legs (su-ong) of the members who won the game.

### PATINTERO (JIM-JIM)



wikipedia.com

#### History

Also known as harangang-taga or tubigan, is a traditional Filipino children's game. Furthermore, it is derived from Spanish word *tinte* which means "tint" or "ink" in reference to the drawn lines. Another name for it is tubigan, tubiganay, or tubig-tubig ("water [game]"), because the grid lines are also commonly drawn by wetting the ground with water. It is also known as harangang-taga or harang-taga which means "block and catch", referring to the game mechanics. It is also the most popular indigenous game in the Philippines. Because the game requires no equipment to play,

– Tagalog  
Manila

but for an official game, bring chalk to create lines on the ground and maybe a whistle and a stopwatch to set a time limit. Patintero and a starry night are inseparable. A beautiful night, whether on the streets or in the countryside, draws youngsters out of their homes, eager to play tag. Patintero is popular among youngsters throughout the islands, in both the north and south, in great cities and little villages, in the past and in the present.

#### Regional Names

Harangang Taga – Tagalog (Nueva Ecija)



Lumplumpas – Igorot (Bontoc)  
 Sabatan – Kapampangan (Bacolor, Pampanga)  
 Sampiloan – Pangasinan (San Carlos, Pangasinan)  
 Sinibon – Ilokano (San Jose, Nueva Ecija)  
 Tadlas-Tadlas (for four players), Birus-Birus (for six players) –  
 Visayan (Ormoc, Leyte)  
 Tubigan – Tagalog (Quezon City)  
 Tubig-Tubig – Visayan (Cebu)

### Objectives

The runners' objective is to pass through all of the lines (1,2,3) and return without being tagged; the taggers strive to obstruct or harass and tag the runners when they draw close to them or cross their lines.

The players' agility, speed, coordination, and teamwork will be tested in this game.

### Players

Divided into two teams, each team will have 3-4 players and will be made up of a mix of boys and girls.

### Setting

The game is best suited to be played outdoors anytime of the day but most preferably done at night.

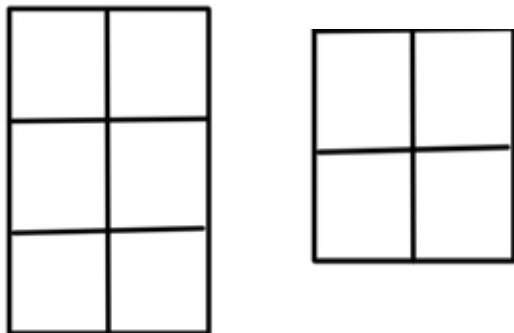
### Equipment

Chalk or charcoal to be used in drawing the lines.

### Pre-Game

In choosing sides, participants will do the Jack en Poy to select who will be their teammates (rock-paper-scissors). All losers will be on the same team, and the winners will do the same. Each side will select a leader, and the leaders will toss a coin to determine who will be the passer and who will be the taggers.

### Line Formation



For 8 players  
 6 meters long and 4 meters wide  
 For 6 players;  
 4meters long and 4 meters wide

### Mechanics

1. The game may be played 3v3 or 4v4. Offense and Defense will be divided into two teams. Offense players are referred to as Passers. Taggers are the defense players.
2. The Taggers will be restricted to the Playcourt's black lane. Regular Taggers are only permitted on the lane to which they have been allocated. A Head Tagger will be present. The Head Tagger is free to roam the Playcourt as long as he stays on the black lane.
3. The game will be played in three alternating rounds of Offense and Defense for each side, for a total of six rounds. Each round will last five minutes. A coin toss will be used to select which team will play offense and defense.
4. The winner of the coin toss chooses whether to play Offense or Defense first. The team with the most points, that is, the most Passers who can make a Full Run, is the victor of the game.
5. In the event of a tie, the team with the most accumulated lane crossings wins.
6. The game will begin with the Taggers positioned on the Playcourt, with the Defense coming first. The Passers will then take their place at the starting line, executing a pre-planned offense against a certain defense.
7. The official will give the signal to begin the 5-minute round. During a round, the Passers must execute their offensive strategy in order to score. If a Passer completes a Full Run, the round does not terminate. The other Passers can also attempt a Full Run until the 5-minute run timer runs out.
8. If no Passer completes a Full Run in a round, the teams trade roles and another round begins. If a Passer is Moved Out or Tagged Out, the other Passers can still try to score until the round is over.
9. Taggers must stay in the lane given to them. Taggers who intentionally or unintentionally leave their designated lane will be penalized with an Out of Lane penalty, which will add 15 seconds to the game clock. Passers must also be in the prescribed areas of the Playcourt, with the exception of the Lane Crossings. If the Passer fails to be in these locations, a Run Out will be called, and 15 seconds will be subtracted from the game clock.

### Determining the Winner

The winner will be determined by how many rounds they have won. To determine the winner per round, one of the players made a full run within the time allotted.

### Punishment of the losing team

Bantilan or pitikan (flicking knuckles or in the ears) which is done five times.



## SHATO



Photo courtesy from Sid (2012).

– Visayan  
Cebu

### History

Shato is a traditional Cebuano game. Although no one knows for certain when it began. The game was so popular in the 1970s and 1980s that children in nearby rural and suburban regions rapidly adopted it. And, sooner than planned, shato's fame spread throughout Mindanao and Luzon.

### Objectives

Shato began as a children's game. Adults and the young at heart can also participate. After all, it's a game that everyone can enjoy. Nonetheless, shato is more than just a recreational activity. It teaches children the importance of taking turns and working as a team. Furthermore, because shato incorporates counting, young children acquire or improve their mathematics skills.

### Players

Divided into two teams with at least 4 members.

### Setting

The game is played outdoors during daytime. Wide space and preferably the area is on solid earth as they need to dig a little furrow in the dirt.

### Equipment

Two pieces of stick; the other one is longer called "*Pamonal*" (28 inches in length) and the other stick should be shorter called "*Pamato*" (6 inches in length).

### Pregame

The two teams now play a jack-en-poy (rock-paper-scissors) game to determine the beginning 'hitters.' Whoever wins becomes the first batter. They take up position behind the furrow or at the bottom. While the fetchers take up positions a few meters away from the base. The first player for the hitters now begins the game's first level.

### Mechanics

#### First Level

The batter strikes the furrow with a short stick, or 'hit.' Then he launches it into the air as far as he can. He must ensure that the 'hit' lands as far away as possible. The striker ensures that a fetcher does not catch the stick.

When the hitter's launch is successful, a fetcher is required to recover the short stick from where it fell. The batter now rests the larger stick, or 'bat,' just before the furrow and waits for the fetcher to return the short stick to the base.

If the hitter fails to launch and a fetcher catches the stick in mid-air, his team loses its chance to play hitters. They must now take on the duty of fetchers.

The fetcher's goal, on the other hand, is to strike the long stick with the small one. When he hits the long stick, his teammates take on the role of batters. If he does not hit it, the batter advances to the Second Level.

#### Second Level

The batter suspends and drops the short stick in the air. However, he must move swiftly and whack the stick as hard as he can when it is in mid-air. He makes certain that the small stick lands in the longest distance possible. Simultaneously, he hopes no fetcher catches it. However, if the other team catches the short stick, the hitter's team forfeits its turn to play. The two teams must now switch places.

If the stick is not intercepted, the fetcher returns it to the batter. This time, though, the batter intends to knock the stick back as hard and as far as he can.

When the batter successfully strikes back the stick, his team gains points.





The distance between the drop point of the short stick and the furrow is measured by the batters to determine their score. The long stick serves as a measuring rod.

Finally, the batter reaches the Third Level. However, if the batter fails to strike back, his teammate has his turn. The second player starts on First Level.

### Third Level

The batter angles the short stick 45 degrees against the furrow. He ensures that a good portion of the stick protrudes sufficiently for an easy strike.

When he's ready, he slams the projecting section of the short stick into the air. And, while in mid-air, he immediately hits it to the greatest distance, ensuring that no fetcher catches it.

The hitter has just three attempts to launch the 'hit.' If he fails, his colleague takes his place, beginning with the First Level.

If the batter's launch is successful, they double their score. The count begins when the 'hit' is dropped to the base. They add their score from this Level to their score from the Second Level.

However, if the batter does not strike or an opponent catches the 'hit,' the batter's team loses a turn.

If a batter completes all levels without having the 'hit' intercepted, he hands the game on to his teammates. The process is repeated by the next player until everyone has a chance to swing the bat and hit.

**Note:** The Mechanics of the game is flexible and it depends on the agreement of the competing players.

### Declaration of Winner

Actually, there are no set rules for shato play time. Players always change the rules and experiment with other variants just for fun. However, both teams agree on when the game should be called. In most situations, similar to what we used to do, we set a particular score to achieve. For example, the predetermined score is 100. The team with the highest score is proclaimed the winner.

The participants may also employ a set number of rounds to play. This frequently occurs when they merely want a brief game. For instance, they may settle on a two-round shato. This implies that each squad has one opportunity to play hitters and one opportunity to serve as fetchers.

### Consequences of the losing team

Now, this is an added fun! The winning team selects one of its members to accomplish the following:

He launches the 'hit' in the same manner as in the First Level. This time, though, no fetcher tries to intercept it in mid-air.

The player hits the 'hit' forward to the furthest distance from the drop location (like what is done in the Second Level). Again, no fetcher is permitted to catch the 'hit.'

Finally, a member of the losing side picks up the 'hit.' He races towards the base, holding his breath, yelling, "Shaaatooooong!"

## SIPA TAKYANG



[historyofsoccer.info/sipa](http://historyofsoccer.info/sipa)

– Visayan  
Ormoc, Leyte

### History

Before Spain colonized the Philippines, Filipinos began playing Sipa in the 15th century. Sipa was even regarded the national sport of the Philippines until Arnis supplanted it in 2009, under the government of former President Gloria Macapagal Arroyo.

Sipa, which means "kick" in Filipino, also refers to the game's ball, which comes in a variety of sizes and is frequently created by the players themselves. The lead washer and rattan ball are the two most common forms of sipa balls. The lead washer sipa is made up of a coin-like item with fabric or plastic straw strips connected to it. The rattan ball is comprised of rattan strips that have been molded into a hollow ball at least 4 inches in diameter.





### Regional Versions

Tsapa/Sipa – Tagalog (Cabanatuan City, Nueva Ecija)

Takyang – Tagalog (Marikina, Rizal)

**Objectives:** To continuously kick the takyang without dropping it on the ground.

### Equipment



The loose edge of the cloth or paper is shredded.

String  
Flat top

steemit.com

evlearners.com

### Pre-Game

Any method can be used in choosing an *It*.

### Mechanics

#### BOY VERSION

- The player will throw his takyang into the air and kick it repeatedly till he drops it.
- Players will count the number of kicks.

#### GIRL VERSION

- Girls kick their takyang sideways with the outside edge of their right foot's sole.
- Players will count the number of kicks.

### Variation of the game

The game can also be played using the forearm or depending on the agreement of the players. Players will count the number of hits.

### How to determine the winner

The player with the most number of kicks will be the winner.

### Consequence of the loser

The consequence depends on decision of the win.

### REFERENCES

1. De Vera Jr., A. (2013). *Kadang-Kadang, Pagcor* (Facebook Page). Retrieved from <https://tinyurl.com/4bpspt96>
2. Eslit, N. (2019). *Traditional Filipino Games Series #04: Kadang-Kadang*. Retrieved from website <https://tinyurl.com/yv5ehj5b>
3. Eslit, N. (2019). *Traditional Filipino Games Series #03: Luksong Baka – The Catalyst*. Retrieved from website <https://tinyurl.com/2p8ubyzb>
4. EV Learners (2017). *Batang 90s Toys*. <https://tinyurl.com/3v7kdkhp>
5. Free2barredo. (2016). *Luksong Baka*. Wikipedia. Retrieved from <https://tinyurl.com/nwahr2neh>
6. Gomez, F. (2021). *Mechanics and Dynamics of Traditional Filipino Games*. *International Journal of Game Studies*, 15(1), 89-105.
7. *Larong Pilipinas. Mga Laro at Batas*. Retrieved from <https://tinyurl.com/4rpsthrk>
8. Lopez, M. (1980). *A Study of Philippine Games*. University of the Philippines Press. Page 431-432.
9. Lopez, G., & Torres, M. (2022). *Traditional Filipino Games in Contemporary Society*. *Global Journal of Cultural Heritage*, 19(2), 200-220.
10. Macfarlane, A. (2022). *Sipa Game: Learn How To Play The Native Philippine Sport*. *History of Soccer*. Retrieved from <https://tinyurl.com/2s3aw4tb>
11. *Mga Palarong Pinoy*. (2017). *Luksong Baka*. Retrieved from website <https://tinyurl.com/4ak4fsuc>
12. Plando, A. (2018). *Takyang*. Steemit. Retrieved from <https://tinyurl.com/5xenmfc6>
13. *Pilipinas EN*. (2017). *Luksong Tinik*. Retrieved from <https://tinyurl.com/47bt937h>
14. Reyes, J., & Martinez, A. (2019). *The Role of Geography in the Evolution of Traditional Filipino Games*. *Philippine Journal of Cultural Anthropology*, 10(2), 45-67.
15. Rivera, C. (2018). *Community and Play: The Social Functions of Traditional Filipino Games*. *Asian Journal of Social Sciences*, 23(3), 256-278.
16. Santos, M., et al. (2020). *Cultural Adaptations in Traditional Filipino Games*. *Journal of Southeast Asian Cultural Studies*, 12(4), 123-139.
17. Sid. (2012). *The Game of Shato*. Blogspot. Retrieved from <https://tinyurl.com/yycntx3kt>
18. *Sipa: A Beloved Filipino Game*. Retrieved from <https://tinyurl.com/yc2>
19. *Yabang Pinoy*. (2012). *Pinaka Mahabang Todo Patintero*. Wikipedia. Retrieved from <https://tinyurl.com/35affmdw>



# IMPLEMENTATION OF BUTTERFLY METHOD TO STRUGGLING MATHEMATICS LEARNERS: AN EXPERIMENTAL STUDY

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## ABSTRACT

This experimental study investigates the implementation of the Butterfly Method as a remedial strategy for struggling mathematics learners. The Butterfly Method, a visual and structured approach to teaching fraction operations, aims to simplify complex arithmetic processes, making them more accessible to students with difficulties in mathematics. The study involves grade 5 struggling learners in mathematics based on their performance in the standardized mathematics tests. Participants were the 43 grade 5 students of Magugpo Pilot Central Elementary School as the experimental group, identified under low level of proficiency in mathematics subject based on the grade of 79 and below in the First Quarter of the School Year 2023-2024. Over a 5-session intervention period, participants were assessed on their understanding and application of fraction operations through pre-tests and post-tests. Results indicate that the experimental group demonstrated significant improvement in their mathematical performance, suggesting the effectiveness of the Butterfly Method in enhancing the mathematical skills of struggling learners. The study concludes with recommendations for integrating the Butterfly Method into regular mathematics curricula and further research on its long-term impacts on learners' mathematical proficiency.

**KEYWORDS:** teaching strategy, butterfly method, struggling mathematics learners, addition and subtraction of dissimilar fractions, academic performance, experimental research design

## INTRODUCTION

Butterfly Method, also known as the Cross Multiplication Method, is a mathematical technique used to streamline the addition and subtraction of dissimilar fractions by finding a common denominator without explicitly determining the least common multiple. This method, which derives its name from immediately multiplying across the numerators and denominators of the fractions in a diagonal pattern that resembles a butterfly's wings, makes fraction operations easier, especially when working with fractions of different denominators. The effectiveness of the Butterfly Method as an intervention for fifth-grade students who struggle in Mathematics may be determined by examining its potential to improve conceptual knowledge, procedural fluency, and overall mathematical proficiency in this group of students. This information could then be used for curriculum development strategies and instructional practices.

In Brunei, fraction is the most challenging topic for students to learn (Damit, 2002; Harun, 2003). This issue is not only prevalent in primary, but also in secondary level especially on the addition and subtraction of fractions (Suffolk & Clement, 2003). Yusof and Malone (2003) suggested that poor introduction of elementary fraction, weak basic knowledge, and mechanical skills in calculating operations of fractions, language barrier, and ineffective teachers' instructional activities could be the possible factors in such learning difficulty. Hence, teachers are encouraged to apply innovative pedagogies to enhance quality of mathematical education

amongst students, as stated in SPN 21, specifically in fraction (Ministry of Education, 2013).

Moreover, in the Philippines, mathematics education faced challenges and ranked lowest in international assessments (San Juan, 2019). In the PISA 2018 International Report, Filipino students' average score in mathematical literacy was 353 points, significantly lower than the Organization for Economic Cooperation and Development (OECD) average of 489 points, indicating a below Level 1 proficiency (OECD, 2019). The Philippines also scored 297 in math in the 2019 Trends in International Mathematics and Science Study (TIMSS) by the International Association for the Evaluation of Educational Achievement (Mullis et al., 2019). It is necessary to deal with the problem of students' confidence in mathematics and develop effective strategies to enhance mathematics education in the Philippines.

In Tagum City, particularly, Magugpo Pilot Central Elementary School with a minimum enrollment of 4,000 students every year, the result from the consolidated least learned competency in the First Quarter for school year 2023-2024 shows that the learners are struggling in solving addition and subtraction of fractions. Academic teachers in Mathematics encounter a concerning trend among its students, a notable difficulty in problem solving skills. Such reasons prompted the researcher to conduct a study on the Implementation of Butterfly Method shortcut in adding dissimilar fractions to struggling Mathematics learners in



Magugpo Pilot Central Elementary School, Mabini Street, Tagum City, Davao del Norte. For struggling learners who may find traditional methods complex or abstract, the visual nature of the Butterfly Method provides a concrete framework that enhances comprehension. The Butterfly Method lies in its potential to address the specific learning needs of struggling mathematics learners by providing a supportive and accessible tool for navigating fraction operations.

### OBJECTIVES

The purpose of this study was to help students become proficient in using the butterfly method for adding and subtracting dissimilar fractions and to enhance critical thinking and problem-solving abilities through fraction addition and subtraction.

### METHODS

This study was a quantitative study employing an experimental method or one-group pre-test and post-test design in gathering data for research of the implementation of butterfly method to struggling mathematics learners. This research study utilized experimentally as the research design.

Purposive sampling, a non-probability sampling method, was used to select participants for this study. The subjects of the study were the 43 Grade 5 students of Magugpo Pilot Central Elementary School as the experimental group, identified under low level of proficiency in Mathematics subject based on the grade of 79 and below in the First Quarter of the School Year 2023-2024.

The instrument used in gathering the data is the 20-item assessment test from the (SIM) Strategic Intervention Material for the pre-test and post-test. The researcher also developed a 5-session

using butterfly method which serves as the intervention during noon break. The pre-test and post-test instruments were validated by experts, tried out through pilot testing before using it in the study.

A Table of Specifications (TOS) was also prepared so that the items of the test can be distributed to the different problem-solving skills. The questionnaire was a multiple-choice type of test and consisted of 20 items with 25% remembering or understanding questions, 25% applying or analyzing questions and 50% evaluating or creating questions. This test served as the pre-tests and post-tests of the research study.

With the approval of the Division of Tagum City, this research was conducted in Magugpo Pilot Central Elementary School, Mabini Street, Tagum City, Davao del Norte.

The researcher conducted the test questionnaires for post-test with forty-three (43) participants to determine their proficiency, critical thinking and problem-solving abilities in using butterfly method after the 5-day intervention program.

After the conduct of the test, the researcher proceeded to quantitative data analysis to evaluate the effectiveness of the Butterfly Method for struggling fifth-grade mathematics learners. The analysis involved several key steps to ensure a comprehensive understanding of the data. First, the researcher collected pre-test and post-test scores from the experimental group. Second, descriptive analysis was calculated including the mean, class proficiency and competency level of both pre-test and post-test. Lastly, the calculated result of the test difference between pre-test and post-test performances of grade 5 students.

### RESULTS AND DISCUSSIONS

**Table 1**  
**Pre-test Performance of the Grade 5 Students**

Skills	No. of Students	Mean	Class Proficiency	Competency Level
Addition and Subtraction of Dissimilar Fractions	43	6.83	34.15	No Mastery

#### Competence Level of the students' pre-test scores in addition and subtraction of dissimilar fractions

As shown in table 1, addition and subtraction of dissimilar fractions skills of the Grade 5 students in the pre-test has a mean of 6.83 which has a class proficiency of 34.15. Based on the DepEd Mastery Level Classification, the competency level of the students in pre-test is no mastery.

This implies an evident need for instructional intervention of Grade 5 students to help them understand the fundamental concepts in adding and subtracting dissimilar fractions. This might include re-teaching, employing different teaching methods for intervention, or offering additional practice opportunities.

Fractions knowledge proved to be the most prominently studied indicator of future mathematics proficiency. This is most likely since this content area has also been shown to be the single most effective indicator of future mathematics proficiency (Siegler et al., 2012).

Specifically, it may also improve eagerness of an individual to try to analyze mathematical problems and to improve their determination and self-concepts with respect to the abilities to solve problems; make the individual aware of the problem-solving strategies, value of approaching problems in an orderly manner and that many problems can be solved in more than one way and; improve individuals' abilities to select appropriate solution strategies, capacity to implement solution strategies accurately and abilities to get a correct answers to problems (Hoon, Kee, & Singh, 2013).



However, Bailey et al. (2012) also argued that competence with fractions might not be the critical element to future mathematics achievement since finding that fractions measures solving skills would suggest that these measures

improve their level of problem-solving ability. The research data overwhelmingly points to fractions, as the main and strongest predictor of future mathematics performance.

**Table 2**  
**Post-test Performance of the Grade 5 Students**

Skills	No. of Students	Mean	Class Proficiency	Competency Level
Addition and Subtraction of Dissimilar Fractions	43	15.49	77.45	Mastery

**Competence level of the students' post-test scores in addition and subtraction of dissimilar fractions**

As shown in the table 2, addition and subtraction of dissimilar fractions skills of the Grade 5 students in the post-test has a mean of 15.49 which has a class proficiency of 77.45. Based on the DepEd Mastery Level Classification, the competency level of the students in post-test is mastery.

This implies that the Grade 5 students have effectively learned to add and subtract dissimilar fractions using butterfly method as intervention. They have a thorough understanding and can consistently apply the concepts and procedures accurately reflecting successful instruction and a solid foundation for future mathematical concept which highlights their academic progress and preparedness for continued learning.

The teaching-learning process of mathematics generates many difficulties in students, especially in higher education, of a different nature. Some of them have their origin in factors such as low academic performance, high absenteeism rates, etc. High dropout rates, mainly in higher education, have been identified as consequences of these difficulties encountered by students and have become concerns of governmental educational institutions, as well as teachers at all educational levels (Chong, 2017).

According to Duzenli-Gokalp and Sharma (2010), the use of visual images can help students to calculate the addition and subtraction of fractions with like and unlike denominators. The Butterfly Method will leave a mental picture of the algorithm that can be easily applied.

Miller and Obara (2017), the Butterfly Method, illustrated by drawing two loops across the numerators and denominator of the other fraction, followed by adding antenna and bottom of the butterfly body, provides struggling mathematics learners with a visual and procedural scaffold. The method commences with base multiplication, where both denominators are multiplied, resulting in the new common denominator. This step is crucial in simplifying fraction operations. Then, each loop (wing) is multiplied, and the products are written under the antenna.

Finally, learners add or subtract the numbers under the antenna, contingent upon the operation required by the question. By breaking down the fraction arithmetic process into manageable steps and offering a tangible representation of the mathematical operations involved, the Butterfly Method aids struggling learners in understanding and executing fraction addition and subtraction more confidently and effectively (Boaler, Chen, Williams, & Cordero, 2016).

**Table 3**  
**The Test of Difference of means in Pre-test and Post-test Performances of the Grade 5 Students**

	Mean	p-value	t-value	Remarks
Pre-test	6.83	0.000	-26.1	Significant
Post-test	15.49			

**Difference between the pre-test scores and post-test scores of the respondents**

Table 3 Table 3 presents the test of difference of means in pre-test and post-test of the performances of the students under the Butterfly Method. Students' performance in the pre-test has a mean of 6.83 while they garnered 15.49 as a mean for the post-test. The results gave a p-value of 0.000 and t-value of - 26.1 which indicates that the null hypothesis was rejected and accept the alternate hypothesis that there is a significant difference between the pre-test scores and post-test scores of the respondents.

Butterfly Method is a visual and an alternative method for teaching the addition and subtraction of fractions where diagonal and horizontal multiplication of denominators and numerators are applied (Rosli, Han, Capraro, & Capraro,

2013). Effective practice leads to the ability to learn and apply solutions, impacting students' mathematics performance. Key factors include student-educator interactions, interventions, and educational environments, which influence high failure rates in mathematics. (Khan, Begum, & Imad, 2019).

Students will construct their understanding of adding and subtracting fractions by using the Butterfly Method. As far as is known, the study on the Butterfly Method algorithm on the addition and subtraction of fractions is very limited. Adopting the Butterfly Method concept as a reference for the new teaching strategy during the intervention perhaps may help to add further information to the existing literature on solving fractions. The conceptual knowledge of understanding the method expects to assist students in improving their procedural knowledge when applying the Butterfly Method





(Cardone 2015).

## CONCLUSION

The view of foregoing findings, the researcher concluded that in addition and subtraction of dissimilar fractions, the respondents have a mastery competency level. There is a significant difference in pre- test and post- test scores which means, the students have improved their addition and subtraction of dissimilar fraction skills.

The performance level of respondents in pre-test and post-test using the Butterfly Method improved the problem-solving skills of students at Magugpo Pilot Central Elementary School in terms of addition and subtraction of dissimilar fractions have a mastery competency level. The manifestation of the pre-test and post-test increase is a good sign of developing problem-solving skills. Through the strategies came from the improvised approach by other materials such as Strategic Intervention Material (SIM) about the Butterfly Method in Mathematics of Magugpo Pilot Central Elementary School. This implied that if there was an intervention to be employed there is always good response in

their problem-solving skills.

## RECOMMENDATIONS

The researcher believed that Butterfly Method and learning materials facilitated and encouraged the learners especially the Grade 5 students to learn. It was because there was something unique in it, and something that would tickle their minds at exploring things around them.

In view of the foregoing research, the following recommendations were formulated:

1. At least two types of evaluation tools should be used to get the authentic output of the intervention, like paper and pencil test, and problem-solving questions.
2. The use of Butterfly Method to other grade level, teachers can support students' mathematical development throughout their learning process by offering a consistent and visually appealing approach to teaching fractions.
3. Further exploration and experimentation on this line of research to cope up with the global standard

## REFERENCES

1. Bailey, D. H., Hoard, M. K., Nugent, L., & Geary, D. C. (2012a). Competence with fractions predicts gains in mathematics achievement. *Journal of Experimental Child Psychology*, 113(3), 447-455. <http://doi.org/10.1016/j.jecp.2012.06.004>
2. Boaler, J., Chen, L., Williams, C., & Cordero, M. (2016). Seeing as understanding: The importance of visual mathematics for our brain and learning. *Journal of Applied & Computational Mathematics*, 5(5), 1-6. <https://doi.org/10.4172/2168-9679.1000325>.
3. Cardone, T. (2015). *Nix the tricks: A guide to avoiding shortcuts that cut out math concept development* (2nd Ed.). CreateSpace Independent Publishing Platform.
4. Chong, E. G. (2017). Factores que inciden en el rendimiento académico de los estudiantes de la Universidad Politécnica del Valle de Toluca. *Revista Latinoamericana de Estudios Educativos*, 47(1), 91-108.
5. Damit D. H. S. P. H. (2002). *Fraction concepts and skills of some Primary Six pupils in Brunei Darussalam*. Unpublished Thesis. Gadong: Universiti Brunei Darussalam.
6. Duzenli-Gokalp, N., & Sharma, D. (2010). A study on addition and subtraction of fractions: The use of Pirie and Kieren model and hands-on activities. *Procedia - Social and Behavioral Sciences*, 2(2), 5168-5171. <https://doi.org/10.1016/j.sbspro.2010.03.840>.
7. Hoon, T., Kee K. and Singh, P. (2013) 'Learning mathematics using heuristics approach', *Procedia - Social and Behavioral Sciences*, Vol. 90, pp. 862-869. <http://dx.doi.org/10.1016/j.sbspro.2013.07.162>
8. Khan, F., Begum, M., & Imad, M. (2019). Relationship between students' home environment and their academic achievement at secondary school. *Pakistan Journal of Distance & Online Learning*, 5(2), 223-234. <http://bitly.ws/zajs>.
9. Miller, G., & Obara, S. (2017). Finding meaning in mathematical mnemonics. *Australian Mathematics Teacher*, 73(3), 13-18.
10. Ministry of Education. (2013). *The national education system for the 21st century: SPN21*. Berakas: Ministry of Education
11. Mullis, I., Martin, M., Foy, P., Kelly, D., & Fishbein, B. (2019). *TIMSS 2019 international results in mathematics and science*. TIMSS & PIRLS International Study Center, Lynch School of Education and Human Development, Boston College and International Association for the Evaluation of Educational Achievement (IEA), 9.
12. OECD. (2019). *Programme for international students' assessment (PISA) results from PISA 2018*. OECD 2019, 1(3), 1-12. [https://www.oecd.org/pisa/publications/PISA2018\\_CN\\_PHL.pdf](https://www.oecd.org/pisa/publications/PISA2018_CN_PHL.pdf)
13. Rosli, R., Han, S., Capraro, R., & Capraro, M. (2013). Exploring preservice teachers' computational and representational knowledge of content and teaching fractions. *Journal of Korean Society of Mathematics Education*, 17(4), 221-241. <https://doi.org/10.7468/jksmed.2013.17.4.221>.
14. San Juan, R. (2019). Deped welcomes PISA results, recognizes 'gaps' in education quality. *PhilStar global*. <https://www.philstar.com/headlines/2019/12/04/1974229/deped-welcomes-pisa-results-recognizes-gaps-education-quality>
15. Siegler, R. S., Fazio, L. K., Bailey, D. H. dan Zhou, X. (2012). Fractions: The New Frontier for Theories of Numerical Development. *Trends in Cognitive Sciences*, 17(1). 13 - 19.
16. Suffolk, J., & Clements, M. A. (2003). Fractions concepts and skills of form 1 and form 2 students in Brunei Darussalam. In H. S. Dhindsa, S. B. Lim, P. Achleitner, & M. A. Clements (Eds.), *Studies in science, mathematics and technical education* (pp. 145-154). Universiti Brunei Darussalam.
17. Yusof, J., & Malone, J. (Eds.). (2003). *Mathematical errors in fractions: A case of Bruneian primary 5 pupils*. *Proceeding of the 26th annual conference of the mathematics education research group of Australasia*. Mathematics Education Research Group of Australasia Incorporated.





# TEACHERS INTERPERSONAL BEHAVIOR AND PARENTAL ENGAGEMENT IN RELATION TO THE STUDENT'S ACADEMIC PERFORMANCE

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Article DOI: <https://doi.org/10.36713/epra17723>

DOI No: 10.36713/epra17723

## ABSTRACT

The primary purpose of this study is to determine whether teachers' interpersonal behavior and parental engagement in relation to the students' academic performance. This study employed a descriptive-correlational research design. Using total population sampling, 315 junior high school students were selected as respondents from one of the junior high school in New Bataan during the school year 2023-2024. Furthermore, this study employed two adapted survey questionnaires and the general average of the students during their third quarter; all validated to collect data and treated using mean, standard deviation, and Pearson-r. The findings showed that teachers' interpersonal behavior and parental engagement among the students are very high, while their academic performance are very satisfactory. The results also revealed that teachers' interpersonal behavior positively correlated with students' academic performance and parental engagement negatively correlated with students' academic performance. These results encourage teachers and parents to continue support and have a good relationship with the children to maintain a good academic performance of students. Furthermore, to improve the applicability of the results, it is imperative to carry out replication studies in various locales. This will validate the durability of these relationships beyond the present research setting and contribute to a more comprehensive comprehension of these issues.

**KEYWORDS:** Teachers' interpersonal behavior, parental engagement, student academic performance, junior high school students, descriptive-correlational design, pearson correlation coefficient, Davao de Oro, Philippines.

## INTRODUCTION

The teacher-student interpersonal relationship is mutual and evolving understanding of teachers and students, which believed to impact on the performance of the students. It is a powerful bonding between the teachers and students that would create confidence and determination of the students to actively participate in classroom discussion. According to Bello and Jakada (2017), the performance of students depends largely on the teaching performance and their interaction with their teachers. Moreover, the parents have been also recognized as one of the primary contributors to students' success in school. The involvement of parents such as encouraging students to meet and overcome different educational challenges at school and inspiring them how to cope with these challenges and praising them when their students are performing better are one of those elements essentials in their lives especially on their academic aspect.

It was unveiled in the study of Chikendu (2022) in Nigeria that the students' academic performance is significantly hindered by the poor relationship between teachers and students. This, in turn, results in the development of immoral attitudes and behaviors, as well as poor academic performance and an increased likelihood of students dropping out of school. Furthermore, researchers in

the United States have revealed that African American students have continued to perform dismally in educational settings (Henry et al., 2020).

In the findings of the study conducted by Nicolas (2022) in Quezon City, Philippines, it was revealed that students have a poor academic performance which is affected by some factors including the competency of teachers, the aspirations of parents, and the relationship between students and their parents.

Meanwhile, in New Bataan National High School Davao De Oro it showed that the students have low academic performance. It showed that 38 out of 48, or 79.17% of the students have low academic performance, and only 10 out of 48, or 20.83%, have high academic performance this is based on the grades that is given by the adviser of the students with the permission of the school principal to get the data. Students had difficulties in terms of approaching their teacher; they also had problems in communicating their parents.

Significantly, the investigation highlights a distinctive gap within the current scholarly landscape: a conspicuous studies investigating the interplay between teachers' interpersonal behavior and parental involvement in relation to students'



academic performance, especially within the distinctive context of public secondary education in the Philippines. The researcher conduct this research to see if teachers' interpersonal behavior and parental involvement associate to student's academic performance in public secondary education in New Bataan National High School, New Bataan Davao de Oro during the school year 2023-2024.

Furthermore, the research results presented to the administrators, teachers, and parents to ensure that the findings are broadly disseminated. Public secondary students invited to attend a meeting held at the school. As a result, administrators and teachers from the other schools was aware of the research results, which may help them address similar difficulties and concerns about their students' academic performance.

### Statement of the Problem

This study sought to determine whether teachers' interpersonal behavior and parental engagement influence the academic performance of the Grade 10 students who were enrolled in New Bataan National High School, New Bataan Davao de Oro for school year 2023-2024. It specifically seeks to answer the following questions:

1. What is the level of teachers' interpersonal behavior in terms of:
  - 1.1 autonomy-supportive behavior,
  - 1.2 competence-supportive behavior,
  - 1.3 relatedness-supportive behavior, and
  - 1.4 competence-thwarting behavior?
2. What is the level of parental engagement in terms of:
  - 2.1 parenting,
  - 2.2 communicating,
  - 2.3 volunteering
  - 2.4 learning at home, and
  - 2.5 decision-making?
3. What is the level of students' academic performance?
4. Is there an association between the teachers' interpersonal behavior and the academic performance of the students?
5. Is there an association between the parental engagement and the academic performance of the students?

## METHODOLOGY

### Research Design

This study was a quantitative descriptive-correlational design. A quantitative research design is a process of gathering and evaluating quantifiable data. It is commonly use in statistical analysis like cause-and-effect relationships, averages, patterns, and predictions between variables (Bhandari, 2020). The researcher used this design to determine and describe the variables of this study and to measure the level of teachers' interpersonal behavior, parental engagement, and students' academic performance. On the other hand, a descriptive approach is a research method that describes the features of the population under investigation (McCombes, 2020). Furthermore, the correlational technique involves gathering information to establish the extent to which the two or more quantitative factors are related.

### Statistical Treatment

The information obtained from the questionnaire was recorded and tallied and the following statistical tools were used:

**Mean.** This tool was used to determine the level of teachers' interpersonal behavior, parental engagement, and students' academic performance.

**Standard deviation.** This was used to determine how to spread teachers' interpersonal behavior and parental engagement to students' academic performance.

**Pearson r.** This was used to determine the degree of correlation between teachers' interpersonal behavior and students' academic performance and the relationship between their parental engagement and students' academic performance.

### Research Respondents

The research respondents of this study were the 315 Grade 10 students who are enrolled in New Bataan, Davao de Oro during the school year 2023-2024. The respondents were universally selected as the primary source of information for the study. Table 1 below shows the distribution of respondents per section in Grade 10.

**Table 1**  
**Respondents of the Study**

Grade 10 Sections	No. of Student Respondents
Chastity	48
Faith	39
Generosity	45
Humility	47
Modesty	46
Patience	42
Peace	48
<b>Total</b>	<b>315</b>



## Results

The following are the results of the study

**Table 2**  
**Summary of the Level of Teachers' Interpersonal Behavior**

Indicators	Mean	Descriptive Equivalent
1. Autonomy-supportive Behavior	3.7	Very High
2. Competence-supportive Behavior	3.8	Very High
3. Relatedness-supportive Behavior	3.7	Very High
4. Competence-thwarting Behavior	3.8	Very High
<b>Over all-mean</b>	<b>3.8</b>	<b>Very High</b>

Table 2 presents an overview of the teachers' interpersonal behavior. The data indicates that the overall mean of teachers' interpersonal behavior is 3.8 which can be described as very high.

Also, the students attested that their teachers are interacting with them which can be reflected on their performance in the classroom.

**Table 3**  
**Summary of the Level of Parental Engagement**

Indicators	Mean	Descriptive Equivalent
1. Parenting	3.5	Very High
2. Communicating	3.4	High
3. Volunteering	3.5	Very High
4. Learning at Home	3.5	Very High
5. Decision-making	3.4	High
<b>Over all-Mean</b>	<b>3.5</b>	<b>Very High</b>

Table 3 presents a comprehensive overview of the parental engagement levels exhibited by junior high school education students. Out of the five indicators examined, the indicator of parenting, volunteering, and learning at home showed the highest mean score of 3.5, indicating a descriptive equivalent of very high. Furthermore, it is worth noting that communicating and decision-making had the lowest mean score of 3.4, indicating a

descriptive equivalent of high. This suggests that respondents' parental engagement in terms of this two indicator is much evident. Moreover, the data reveals an over all-mean of 3.5, indicating a very high level of parental engagement among the respondents. In addition, the students demonstrate that their parents are actively engaged in monitoring and supporting their academic achievements.

**Table 4**  
**Level of Students Academic Performance**

Indicators	Mean	Descriptive Equivalent
Grades	88	Very Satisfactory
<b>Overall Mean</b>	<b>88</b>	<b>Very Satisfactory</b>

The data presented in Table 4 shows the level of students' academic performance among the respondents. Based on the

result the mean grade of the student is 88 indicating that the respondents have a very satisfactory descriptive equivalent.

**Table 5**  
**Association between the Teachers' Interpersonal Behavior and Parental Engagement to Student Academic Performance**

Independent Variables	Student Academic Performance		
	r	p-value	Remarks
Teachers' Interpersonal Behavior	0.185	0.002	Significant
Parental Engagement	-0.131	0.030	Significant

Reflected in the table above that when teachers' interpersonal behavior is correlated to the academic performance of the students the result shows that there is a significant association

which is supported by a p-value of 0.002 which is lesser than 0.05 level of significance. Teachers' interpersonal behavior towards student academic performance has an r-value of 0.185 showing a



very weak positive correlation. This means that when the teachers' interpersonal behavior increases, the academic performance of the students also increases. The results further imply that there is a significant correlation between teachers' interpersonal and student academic performance.

Table 5 also reveals a statistically significant association between parental engagement and student academic performance with a p-value of 0.030 which is lesser than 0.05 level of significance. The calculated correlation coefficient r-value of -0.131 specifies a negative very weak correlation between parental engagement and student academic performance. This means that when the parental engagement increases, the students' academic performance decreases. On the contrary, when their academic performance are high their parental engagement are low.

## DISCUSSIONS

**Level of Teachers' Interpersonal Behavior.** The overall results of the teachers' interpersonal behavior revealed that the overall mean of teachers' interpersonal behavior was described as very high. This means that the teachers possess the good attitude in handling their students. Also, the students attested that their teachers are interacting with them which can be reflected on their performance in the classroom. The results are consistent with the findings of Han and Xu (2020), who declare that teachers have a long-term influence on their students after they specify the manner in which learners understand and engage with society. Additionally, teachers have an important role in educational settings. In their research on the causes of effective teaching, Alzebaree and Zebari (2021) stated that teachers should be helpful, present promising educational situations, and motivate students to participate in their learning. Moreover, it is widely held that the relationships that students form in educational settings with instructors, peers, and principals lead to individual, educational, and social growth (Pakarinen et al. 2018).

**Level of Parental Engagement.** The average mean score for parental engagement has a descriptive equivalent of very high and it implies that parental engagement is very much evident to the students. The five indicators of parental engagement namely; parenting, volunteering, and learning at home receive a very high descriptive equivalent while communicating and decision-making receive high descriptive equivalent. The findings are corroborated through an investigation conducted by Naite (2021), which demonstrates that students have very high parental involvement, with very highly engaged parents had superior academic performance and achieved higher marks on tests across all subjects, in contrast to children whose parents were not fully engaged in their schooling. The findings also indicate that parents should cultivate a greater understanding of the significance of visiting and providing support to their children at school. Additionally, in the study of Yonson (2016) it revealed that the students have a very high level of parental involvement. Parents are encouraged to actively engage in supporting their children's education, both in the school environment and at home, as parents have the major responsibility for their children's education, goal

setting. Parents may help their children grow and succeed as students by actively participating in their education and offering assistance and guidance.

**Level of Students Academic Performance.** The level of students' academic performance is very satisfactory with a grade of 88, which indicates that the academic performance of the students is very satisfactory. Albarico et al. (2023) stated that students' academic performance is affected by several factors: students' learning skills, parental background, peer influence, teachers' quality, and learning infrastructure. In addition, according to Brew et al. (2021), teachers and researchers have long been interested in investigating variables contributing to the quality of academic performance of learners. Academic performance is affected by many factors including parents' education levels and income, teachers' knowledge of the subject, truancy, textbooks availability and accessibility, libraries, practical laboratory, meals provision and many others.

**Association between the Teachers' Interpersonal Behavior and the Academic Performance of the Students.** The study examined the correlation between teachers' interpersonal behavior and academic performance of students. The obtained correlation coefficients were 0.185. These coefficients were statistically significant, with p-values of 0.002, at a significance level of p-value less than 0.05. Therefore, the null hypothesis is rejected. This means that when the teachers' interpersonal behavior increases, the academic performance of the students also increases. The results further imply that there is a significant correlation between teachers' interpersonal and student academic performance.

**Association between the Parental Engagement and the Academic Performance of the Students.** The study examined the correlation between parental engagement and academic performance of students. The obtained correlation coefficients were -0.131. This means that when the parental engagement increases, the students' academic performance decreases. On the contrary, when their academic performance are high their parental engagement are low. These coefficients were statistically significant, with p-values of 0.030, at a significance level of p-value less than 0.05. Therefore, the null hypotheses is rejected.

The findings are supported with the theory of Bowlby (1969) Attachment Theory, the theory suggests that a positive and supportive relationship between teachers and students can have a beneficial impact on the students' academic performance. When teachers show more interpersonal support towards junior high school students, their academic performance tends to improve. In addition, positive teacher-student relationships greatly improve intrinsic motivation, engagement, and enjoyment in the learning process. Teachers who promote a friendly and nurturing environment in the classroom encourage active student involvement and greater academic success (Khanam and Javed, 2023). Meanwhile, parents who are actively interested in their children's education have been linked to improved academic performance, improved school attendance, and increased





participation in advanced courses. Increased parental participation has been linked to improved school attitudes and increased academic motivation in children (Utami, 2022).

## CONCLUSION

It can be concluded that the level of teachers' interpersonal behavior and parental engagement are rated as very high. The academic performance of the students is very satisfactory which indicates that the students have shown good academic performance. Moreover, a very weak positive correlation exists between the level of teachers' interpersonal behavior and academic performance of the students. There is a very weak negative correlation exists between the parental engagement and the academic performance of the students.

## RECOMMENDATIONS

The following recommendations are offered based on the results of the study:

1. Students must maintain positive ties with their teachers. Students must continue to communicate positively with teachers in order to create a supportive and motivating learning environment. Furthermore, students must seek parental engagement. Recognize the value of parental engagement, but aim for a balance that promotes independence and self-motivated academic accomplishment.
2. Teachers must continue to cultivate good interpersonal relationships with their students, as this improves their performance in school. Establish a friendly and inclusive classroom environment in which students feel respected and encouraged to learn.
3. Parents must actively participate in their children's education while giving them freedom to develop autonomy and self-discipline. Additionally, parents must maintain open communication with teachers in order to better understand their children's development and needs, thereby creating a collaborative approach to their education.
4. DepEd officials may invest in ongoing professional development programs aimed at improving teachers' interpersonal behavior and classroom management. Furthermore, create programs and resources to educate parents on how to effectively assist their children's education while preserving their freedom.
5. Future researchers may examine the outcomes of this study to formulate interventions aimed at identifying additional elements that could maintain teachers' interpersonal behavior and parental engagement, particularly in the context of academic performance of students.

## REFERENCES

1. Albarico, A. (2023). Factors affecting senior high school students poor academic performance. *International Research Journal of Modernization in Engineering Technology and Science*. <https://doi.org/10.56726/IRJMETS37089>.
2. Alzebaree Y., & Zebari I. (2021). What makes an effective EFL teacher: high School students' perceptions. *Asian ESP J. 2*, 169–183
3. Bello, G. B. & Jakada, M. B. (2017). Monetary Reward and Teachers' Performance in Selected Public Secondary Schools in Kano State. *Journal of Education and Practice*, 8(7). <https://files.eric.ed.gov/fulltext/EJ1137525.pdf>.
4. Bhandari, P. (2020). An introduction to quantitative research. Retrieved from Scribbr: <https://www.scribbr.com/methodology/quantitative-research/> on June 10, 2021.
5. Bowlby, J. (1969). Attachment and loss volume i attachment. <https://img3.reoveme.com/m/ebec2baa109f2808.pdf>.
6. Brew, E.A., Nketiah, B. and Koranteng, R. (2021) A Literature Review of Academic Performance, an Insight into Factors and their Influences on Academic Outcomes of Students at Senior High Schools. *Open Access Library Journal*, 8:e7423. <https://doi.org/10.4236/oalib.1107423>.
7. Chikendu, R. (2022). Teachers-Students Relationship and Academic Performance: Evidence from Senior Secondary Schools in Enugu State. *International Journal of Research in Education and Sustainable Development*. <https://www.ijaar.org/articles/ijresd/v2n2/ijresd-v2n2-Feb22-p2202.pdf>.
8. Henry, D. A., Cortés, L. B., & Votruba-Drzal, E. (2020). Black-White achievement gaps differ by family socioeconomic status from early childhood through early adolescence. *Journal of Educational Psychology*, 112(8), 1471–1489. <https://doi.org/10.1037/edu0000439>.
9. Khanam, L. & Javed, M. (2023). Unveiling the Importance of Teacher's Interpersonal behaviour in Students' Academic Performance: A Review of English Learning. <https://ojs.jerssr.org.pk/index.php/jerssr/article/view/227>.
10. McCombes, S. (2020). Descriptive Research. [Scribbr.com/methodology](https://www.scribbr.com/methodology/).
11. Naite, I. (2021). Impact of Parental Involvement on Children's Academic Performance at Crescent International School, Bangkok, Thailand. *IOP Conf. Ser.: Earth Environ. Sci* 690 012064.
12. Nicolas, R. (2022). Selected Profile and Factors Affecting the Academic Performance in Social Studies of Grade 10 Students: Input for an Intervention Program. *International journal of multidisciplinary: applied business and education research*. <http://dx.doi.org/10.11594/ijmaber.03.12.18>.
13. Pakarinen, E., Silinskas, G., Hamre, B. K., Metsäpelto, R. L., Lerkkanen, M. K., Poikkeus, A. M., (2018). Cross-lagged associations between problem behaviors and teacher-student relationships in early adolescence. *J. Early Adolesc.* 38, 1100–1141. <https://doi.org/10.1177/0272431617714328>.
14. Utami, A. (2022). The Role of Parental Involvement in Student Academic Outcomes. *Journal of Education Review Provision*. <https://doi.org/10.55885/jerp.v2i1.156>.
15. Yonson, D. (2016). Level of Parent Involvement in the Elementary Level and Secondary Level. *The Normal Lights*, 10(1), 182 –203.





# THE INFLUENCE OF FMCG ITEMS ON CONSUMER BEHAVIOR THROUGH DIGITAL MARKETING

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## ABSTRACT

In the modern world, digital marketing techniques are becoming more and more popular. To control the market, a variety of business concepts are presented. These days, people spend most of their time on digital platforms and shop online to save time. Since consumers prefer safe digital platforms to handle their demands, traditional marketing has lost some of its appeal. Many fast-moving consumer goods (FMCG) companies also favor selling their items to customers online. It has been discovered that by lowering the cost of retail and associated capital, this makes it simpler for the businesses to sell their goods quickly. Using digital media has resulted in a significant decrease in labor costs. Simultaneously, FMCG firms like as Dabur, HUL, Godrej, Patanjali, etc. are increasing customer capacity to purchase at their convenience by offering their products 24 hours a day, 7 days a week. Therefore, the impact of FMCG product digital marketing on consumer behavior is the main emphasis of this study.

**KEYWORDS:** Digital advertisement, technology, consumer. Retail, positive impact

## INTRODUCTION

Over the past few decades, there have been significant developments to the field of marketing. In 1450, Gutenberg started using a printing press. Since then, flyers and brochures have been produced in large quantities. Up to now, marketing technology has changed quickly, leading to a revolutionized reform of the phenomenon. Marketing has adapted to the rapidly evolving technologies quite successfully. In the current world, "modern marketing," or "digital marketing," has steadily arisen in the form of "digital marketing," along with other changes such customers' social orientations toward buying and the vast amount of information readily available to compare numerous products and brands.

India's FMCG industry is the country's fourth-largest economic sector. Due to the GST, the FMCG industry is saving a lot of money on logistics and distribution since having various sales depots is no longer necessary. From US \$31.6 billion in 2011 to US \$49 billion in 2016, it has increased. A strong distribution network, low penetration rates, low operational costs, reduced per capita consumption, and fierce competition between the organized and unorganized sectors are the hallmarks of the FMCG industry. The India FMCG Market was valued at USD 164 Billion in 2023 and is expected to reach USD 1093.06 Billion by 2032, at a CAGR of 21.61% during the forecast period 2023 – 2032.

FMCG (Fast Moving Consumer Goods) are a particular group of goods, which are sold quickly and at relatively low costs. FMCG goods include Food & Beverages, Household & Personal Care and Healthcare. These goods move very fast in value from

manufacturing, distribution, and marketing to end users, so it is called FMCG (Fast Moving Consumer Goods). Indian FMCG sector employs around 3 million people accounting for approximately 5% of the total factory employment in India.

As things are, India's FMCG sector accounts for less than 2% of the global market. The welfare sector has an unparalleled opportunity as a result of the government's 'Make in India' initiative, which places particular emphasis on this domain. Individuals and utilities can both actively participate in the global market and have a significant impact.

## OBJECTIVE OF THE STUDY

The primary goals of the current study are to determine how digital marketing influences consumer behavior when it comes to purchasing FMCG products. These include:-

- i. determining the frequency of online FMCG product purchases;
- ii. identifying the most popular FMCG company; and
- iii. identifying the most frequently purchased product.
- iv. Researching the necessity of digital channels for FMCG product purchases
- v. Gaining insight into how advertisements impact consumers

## DATA AND METHODOLOGY

Both primary and secondary data were employed in this investigation. The secondary data was obtained from a number of relevant books, journals, and published papers.



50 respondents in the Lucknow district completed a closed-ended questionnaire that provided primary data. The study's goals were achieved when the replies were gathered and the findings were ascertained. The type of research being done now is descriptive.

**RESEARCH FINDINGS**

**1. Factors Affecting the Growth of Digital Marketing**

- (i) Technological development: People need to regularly consume FMCG goods like food, cereal, cosmetics, dental care, skin care, and health care products. For FMCG companies, tracking their consumer base on a wide scale becomes relatively easy. Customers can make their everyday purchases while lounging at home thanks to online shopping. These businesses use a variety of websites and applications to advertise their goods.
- (ii) The advantage obtained by the original (first moving) significant tenant of a market segment is known as the First Mover Advantage (FMA). It is also known as technological leadership. When a player enters the market first, he will have the advantage of being the first mover. In addition, he benefits from a monopoly, which gives him a competitive edge. They get something in return.
- (iii) Mobile Platforms and Applications: There has been a lot of interest in the marketing of FMCG products through mobile applications. In order to reach a wide audience, FMCG companies can market their products through online campaigns, live streaming, innovative and interesting films, and mobile-friendly websites.
- (iv) Fast-paced world: Just like in the present, people are making ends meet by working long hours and rarely taking time off to visit retail establishments to make purchases. They consider digital transactions to be highly convenient and reasonably priced. As a result,

the FMCG businesses draw these customers to their online stores.

**2. Advantages FMCG companies pose for making Digital Advertising:**

Digitalization play an important role in today’s competitive world as it involve exploring business models using digital technologies which help in reduction of cost and expending business globally. There are various benefits of digitalization which are –

- (i.) It improves the perception of FMCG companies since technology is essential to their ability to compete.
- (ii.) Lessen product deterioration because they are not handled regularly.
- (iii.) It saves money and time, which is advantageous for FMCG companies as well as customers.
- (iv.) Because there is transparency, it guarantees product quality and lessens fraudulent actions.
- (v.) It enhances competitive advantage and streamlines corporate procedures.
- (vi.) Information access at any time of day and from any location.
- (vii.) The capacity to raise organizational productivity given the widely dispersed nature of the market.

**3. Consumers Perception on Digital Advertisement of FMCG products**

For checking consumer’s perception on digital advertisement of FMCG products, a total of 50 respondents were chosen for the study of which 29 were females and 21 were males in the age group of 22 to 45 years. Only those respondents who make online purchases of FMCG products were chosen for the study. On the basis of their responses, few observations were drawn.

- (i) Frequency of making online purchase of FMCG products.

Category	Respondents	Percentage
More Than 2 Times a Week	23	46
Once A Week	7	14
2 Times A Month	5	10
Once A Month	6	12
Less Than Once A Month	9	18

- (ii) FMCG company chosen by the consumers

Category	Respondents	Percentage
Dabur	14	28
HCL	5	10
Godrej	6	12
Patanjali	21	42
Others	4	8



## (iii) Most purchased products

Category	Respondents	Percentage
Washing products	30	60
Dental products	32	64
skin care products	21	42
Hair care products	15	30
Cosmetics	22	44
Health related	35	70
Dairy products	38	76
Bakery products	15	30
paper products	10	20
stationary products	10	20
Food	36	72
Beverages	18	36
Cereals/Pulses	20	40

## (iv) Need for digital platform for making purchase of FMCG products

Category	Respondents	Percentage
Saves Time	22	44
Convenient	42	84
Fast Delivery	35	70
Available All Time	48	96
Everything Under One Umbrella	32	64

## (v) Means of advertising influencing consumers

Category	Respondents	percentage
Social Media	45	90
Gmail	30	60
Mobile Application	26	52
Mobile Message	15	30
Television	32	64
Instagram	39	78
Other Tele-Communication System	17	34

**CONCLUSION**

It becomes crucial for any business to understand how customers see them and what drives their purchasing decisions. If these businesses want to grow in the marketing industry, they must gain a thorough understanding of consumer purchasing behavior. This includes knowing what consumers buy, when they buy it, why they buy it, how much they buy, which online alternative they prefer to use, why they buy from you instead of someone else, and a host of other questions. The economy is evolving quickly, and digital marketing is becoming increasingly important in this

rapidly shifting landscape. Companies must contend with a number of risks and difficulties in order to survive in the digital economy. Examining consumer perception is necessary to determine whether or not consumers are aware of the benefits and drawbacks of making digital purchases. In order to expand the market, more work needs to be put into making digital marketing secure.

The way that individuals purchase FMCG goods has changed as a result of digitization. In the past, these customers went to retail



stores to make their purchases. However, it was discovered during the interview process that they find online shopping for products extremely simple when using digital payment methods. They travel and save so much time. Larger cities tend to have higher rates of digital buying activity. It was also discovered through the poll that individuals are receiving incentives in the form of discounts, cash back, gift cards, and coupons, which encourages them to make more online purchases. In summary, in order to raise awareness and promote the use of digitization, more promotional campaigns, social media advertisements, daily online messages to consumers informing them of the introduction of new products and schemes, and increased incentives for consumers are all necessary.

## REFERENCES

1. Ballantine. (2018, July 10). *10 Clear Reasons Why You Need Digital Marketing*. Retrieved from <https://www.ballantine.com/10-undeniable-reasons-need-digital-marketing/>
2. Domingo, I. V., Lao, R. U., & Manalo, R. A. (2015, May 8). *Effects of Brand Image and Awareness to Buying habits and Usage of bath soap products among its Customers: SEM Model*. *British Journal of Economics, Management and Trade*, 8(1).
3. Mediaqart. (2022). *Future of FMCGs Digital Marketing in 2022*.
4. Sheth, J. N., Mittal, B., & Newman, B. I. (1999). *Consumer behavior and beyond*. NY: Harcourt Brace.
5. Smith, M. D., Bailey, J., & Brynjolfsson, E. (1999). *Understanding digital markets: review and assessment* (pp. 99-136). MIT press.



# RURAL ENTREPRENEURSHIP AND INCLUSIVE GROWTH OF SELF-HELP GROUP MEMBERS

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Article DOI: <https://doi.org/10.36713/epra17742>

DOI No: 10.36713/epra17742

## ABSTRACT

This research paper explores the vital role of Self-Help Groups (SHGs) in fostering rural entrepreneurship and inclusive growth of the members. By examining the framework of women's entrepreneurship and rural development, the paper highlights that SHGs empower women economically and socially. The study reviews literature that underscores the effectiveness of SHGs in promoting entrepreneurship, financial inclusion, and social empowerment. It further conducts an ABCD (Advantages, Benefits, Constraints, and Disadvantages) analysis to provide a comprehensive understanding of the impact of SHGs on rural women's entrepreneurial development. The findings indicate that rural entrepreneurship through SHGs significantly contributes to community development, job creation, and improved living standards while also identifying challenges related to market access, financial literacy, and sustainability. The paper concludes with suggestions for enhancing the effectiveness of rural entrepreneurship of SHGs through government support, simplified loan processes, capacity building, and improved market access. By addressing these challenges, SHGs can continue to play a crucial role in driving inclusive growth and sustainable development of rural entrepreneurship.

**KEYWORDS:** Self-help groups, Rural Entrepreneurship, Inclusive Growth, Women's Empowerment, Economic Development.

## INTRODUCTION

Rural entrepreneurship is a vital component of economic development and social transformation in rural areas. Among the various initiatives that promote rural entrepreneurship, Self-Help Groups (SHGs) have emerged as a powerful tool, especially for women's empowerment and inclusive growth. SHGs provide a platform for individuals, primarily women, to pool resources, access microfinance, and develop entrepreneurial skills. Female entrepreneurs are independent-minded, creative, and powerful women who aspire to achieve financial freedom. Self-help groups (SHGs) are crucial for advancing women's empowerment and gender equality. In Kerala, SHGs like the Kudumbashree Mission play a vital role in helping women develop their skills and encouraging them to start small businesses to support themselves. Women who work ensure that their families can live comfortably and contribute to the economy's growth.

## WOMEN ENTREPRENEURSHIP

Women's entrepreneurship is a vital catalyst for economic growth, creating new jobs and generating innovative solutions for management, organization, and business. By initiating, organizing, and operating their enterprises, women entrepreneurs significantly contribute to the economic well-being of their families and communities, while also playing a crucial role in poverty reduction. This important source of economic productivity has far-reaching positive impacts, strengthening not only individual livelihoods but also the overall fabric of society.

## RURAL ENTREPRENEURSHIP

Entrepreneurship serves as a crucial driver in fostering economic growth and development within rural communities. By establishing new businesses, entrepreneurs create job opportunities for residents and empower individuals to become self-employed. This not only helps to alleviate unemployment but also enhances the economic standing of rural areas. As these businesses thrive, successful entrepreneurs can generate income, thus contributing to the overall economic prosperity and sustainability of rural communities.

## SELF-HELP GROUPS

A self-help group is a small, voluntary association of individuals from low-income backgrounds who come together to support each other in various ways, such as accessing microcredit and engaging in income-generating activities. These groups are ideally composed of individuals with similar socioeconomic backgrounds, and they have the flexibility to form mixed-gender, all-women, or all-male groups based on the specific needs and preferences of the members.

Typically, a self-help group (SHG) consists of ten to twenty local women who work collectively to address socio-economic challenges and empower themselves through mutual support and collaboration. In India, many self-help groups (SHGs) are linked with banks and financial institutions to facilitate access to microcredit, enabling members to start or





expand small businesses and improve their livelihoods through entrepreneurship.

## RURAL WOMEN ENTREPRENEURSHIP DEVELOPMENT THROUGH SELF-HELP GROUPS IN INDIA

"Women's entrepreneurship development through self-help groups (SHGs) in India has been a remarkable and impactful initiative aimed at empowering women both economically and socially.

SHGs are typically established at the grassroots level with the active support of government agencies, non-governmental organizations (NGOs), or financial institutions. These groups serve as a platform for women to unite, pool their resources, and provide mutual support for their entrepreneurial pursuits.

One of the key roles of SHGs is to encourage financial inclusion by promoting regular savings among their members. These saved funds can then be utilized as internal capital for small enterprises or as collateral for obtaining loans from banks and microfinance institutions.

Moreover, SHGs often organize training programs to enhance the business and entrepreneurial skills of their members. These training sessions cover various aspects, including financial management, bookkeeping, establishing market connections, and acquiring specific vocational skills relevant to their businesses.

Additionally, SHGs act as intermediaries between financial institutions and their members, thereby simplifying the process for women to access loans without facing the traditional barriers that they might encounter on an individual basis.

Furthermore, by operating collectively, SHGs can negotiate better prices for raw materials and gain access to larger markets for their products. This not only bolsters the profitability of the businesses run by women entrepreneurs but also ensures their long-term sustainability and growth.

## OBJECTIVES OF STUDY

The study aims to achieve the following objectives:

- To explore and analyze the theoretical framework of rural women's entrepreneurship within Self-Help Groups.
- To assess the contribution of entrepreneurial activities towards the overall inclusive growth of Self-Help Group Members.

## METHODOLOGY

The research methodology employed in this study involved the use of secondary sources of data to achieve the objectives of the paper. Specifically, the paper relied on the comprehensive review of prior literature about the subject matter, as well as an analysis of pertinent government policies, schemes, and programs aimed at the advancement of women's entrepreneurship. The process included accessing peer-

reviewed research articles from various electronic databases. Furthermore, data on women and women entrepreneurs in India were gathered from the website of the Ministry of Commerce and Industry. Additionally, essential information was sourced from the websites of the National Bank of Agriculture and Rural Development (NABARD) as well as the Ministry of Micro, Small, and Medium Enterprises (MSME).

## REVIEW OF LITERATURE

In 2012, **Shihabudheen** conducted a study on micro-enterprises role in promoting women's empowerment within the Kudumbashree project. The study aimed to explore the overall structure of the Kudumbashree initiative and assess the impact of micro-enterprises on rural women entrepreneurs. By analyzing both primary and secondary data, the study concluded that micro-enterprises have significant potential to empower women and provide opportunities for their socio-economic and political advancement through participation in Kudumbashree micro-enterprises.[2]

**Dev, S. M. (2006)** emphasizes the significance of financial inclusion in enhancing the living conditions of rural communities, poor farmers, and women. The author highlights the importance of Self-Help Group movements in providing microcredit programs, subsidies for economic empowerment, and micro-entrepreneurship opportunities for women. The author argues that microfinance banks utilize various outreach programs to address both social responsibilities and business opportunities. This will help low-income families improve their living conditions [3].

**Akter, A., Ahmad, N., Jaafar, W. M. W., Zawawi, D. B., Islam, M., & Islam, M. A. (2018)** conducted a study on the empowerment of rural women in Sylhet district, Bangladesh, through their participation in Self-Help Groups (SHGs) entrepreneurial activities. The findings revealed that participation in SHGs significantly impacts the socio-economic empowerment of Bangladeshi women. The study suggested that women should be further empowered by enhancing their awareness, knowledge, skills, and technology usage to facilitate the overall development of society. The research highlights the importance of fostering entrepreneurship among women to achieve their full identity and power. [4]

In 2019, **Kapoor** conducted a study on the impact of self-help groups (SHGs) on women's economic and social empowerment in India. The study emphasizes the significance of empowering women through entrepreneurship and discusses the social and economic implications of women's involvement in family activities. It suggests that new public policies and corporate support for SHGs can help alleviate poverty and raise awareness among members. SHGs empower women by enabling them to voice their opinions on community affairs, leading to increased freedom, self-confidence, and decision-making power. The study also recommends that new public policies and corporate social responsibility activities can contribute to the funding of SHGs and the promotion of economic development. [5]



**Vejju, B. (2018)** conducted a study on the role of Self-Help Groups (SHGs) in promoting women's entrepreneurship in Andhra Pradesh, using data from 1981 to 2016. The study found that SHGs play a crucial role in developing Micro, Small, and Medium Enterprises (MSMEs) in rural areas. They empower impoverished women and marginalized communities by providing necessary financial support. The study also highlighted that microfinance services are not essential for microenterprise development as SHGs promote self-reliance, decision-making, managerial skills, and basic financial transactions. Additionally, SHGs serve as a platform for discussing social and economic issues, sharing ideas, and raising general awareness.[6]

### ABCD ANALYSIS OF RURAL WOMEN'S ENTREPRENEURIAL DEVELOPMENT OF SELF-HELP GROUP MEMBERS

The ABCD (Advantages, Benefits, Constraints, and Disadvantages) analysis is a structured method used to thoroughly assess business models or concepts. By systematically examining the advantages, benefits, constraints, and disadvantages, this analysis provides valuable insights into the potential of a particular concept. It is widely utilized in various studies and research to gain a comprehensive understanding of the subject under scrutiny. Employing the ABCD analysis facilitates a more comprehensive and critical examination of the concept, enabling stakeholders to make informed decisions and develop strategies based on a well-rounded understanding of the concept.

#### A - Advantages

- SHGs facilitate access to microloans from banks and financial institutions, enabling women to initiate and grow small businesses such as tailoring, dairy farming, and small retail shops.
- Regular savings by SHG members create a pool of funds for internal lending at low interest rates, reducing reliance on external loans and promoting financial discipline.
- SHGs organize workshops on diverse skills, including handicrafts, agriculture, food processing, and small-scale manufacturing. These programs enhance women's technical and entrepreneurial abilities.
- Specialized EDPs provide knowledge on business management, marketing strategies, financial planning, and operational efficiency.
- Participation in SHG activities fosters leadership qualities and decision-making skills among women. Many members take on leadership roles within the group, managing meetings, finances, and activities.
- Women gain confidence and are more likely to engage in community activities, governance, and advocacy, leading to greater social influence.
- SHGs enable women to collectively market their products, ensuring better pricing and wider market reach. By pooling products, SHGs can fulfill larger orders and negotiate better terms with buyers.

- SHGs assist in branding and packaging products, enhancing their appeal to consumers and improving marketability.

#### B - Benefits

- Income from entrepreneurial activities improves the economic status of women and their families, leading to better living standards.
- SHGs generate employment opportunities within the community, reducing migration and enhancing local economies.
- Successful SHGs often contribute to community development by supporting infrastructure projects such as building schools, healthcare centers, and roads.
- Women's entrepreneurship leads to the diversification of the rural economy, making it more resilient to economic shocks.
- Improved financial stability enables women to access better healthcare and education for themselves and their families.
- Women can invest in their families' well-being, ensuring better nutrition, hygiene, and overall quality of life.
- SHGs create a platform for women to network, share knowledge, and collaborate on larger projects, fostering a sense of community and collective growth.
- Collaborations with NGOs, government agencies, and private sector organizations enhance opportunities for training, funding, and market access.

#### C - Constraints

- Rural women often face challenges in accessing broader markets beyond their local areas due to inadequate transportation and logistics.
- Limited access to market information and trends hampers the ability to adapt to market demands.
- Many women in rural areas have limited financial literacy, affecting their ability to manage finances, understand credit systems, and make informed economic decisions.
- Financial literacy programs may be infrequent or inaccessible, hindering effective financial management.
- Traditional gender roles and social norms can restrict women's participation in economic activities and decision-making processes.
- Balancing family responsibilities and entrepreneurial activities can be challenging, particularly with limited support from male family members.
- Ensuring the sustainability of SHG-led businesses can be difficult due to limited resources, fluctuating market conditions, and environmental challenges.
- Lack of knowledge and resources to implement sustainable and eco-friendly business practices can affect long-term viability.



## D - Disadvantages

- Over-reliance on government schemes, NGO interventions, and donor funds can create dependency, reducing self-reliance and sustainability.
- Withdrawal of external support can lead to the collapse of SHGs and their businesses.
- Managing SHG activities requires significant time and effort, which can be burdensome for women with multiple responsibilities.
- Internal conflicts, differing priorities, and power struggles within groups can affect cohesion and productivity.
- Scaling up SHG-led businesses is challenging due to limited access to capital, technology, and market linkages.
- Small-scale operations may struggle to compete with larger businesses and industries, limiting growth potential.
- Maintaining consistent quality in products and services can be a challenge for SHGs, affecting reputation and marketability.
- Lack of access to modern technology and quality inputs can hinder production efficiency and quality.

## FINDINGS

- By offering access to financial resources, skill-building training programs, and a supportive networking platform, self-help groups (SHGs) play a crucial role in empowering women to become self-reliant entrepreneurs. As a result, these women can make significant contributions to the economic development of their communities.
- Microloans are an important financial resource for Self-Help Groups (SHGs). These groups often receive microloans from banks and financial institutions, which are then distributed among their members. This financial support plays a crucial role in helping women within these groups to start new businesses or expand their existing ones. The availability of microloans provides these entrepreneurs with the necessary capital to invest in their ventures, creating opportunities for economic growth and empowerment.
- Within the Self-Help Group (SHG) framework, women participate in a series of organized training sessions tailored towards developing a diverse skill set. These sessions cover areas such as tailoring, handicrafts, agricultural practices, and food processing, effectively empowering women with the necessary expertise to explore entrepreneurial endeavors within these domains.
- SHGs often engage in collaborative ventures, where they combine their resources and efforts to undertake larger business initiatives. For example, multiple SHGs might join forces to establish a dairy cooperative or set up a community-based handicrafts center. This collaborative approach allows SHGs to leverage their collective strength and create more significant economic opportunities for their members.
- The participation in SHG activities greatly contributes to the development of leadership qualities and decision-

making skills among women. This enables many women to take on leadership roles within the group, wherein they actively manage meetings, finances, and group activities.

- Additionally, the success of SHG-led businesses significantly boosts the confidence of women, motivating them to take on more entrepreneurial challenges and leading to greater community involvement and advocacy.

## SUGGESTIONS

- ❖ To support women entrepreneurs in self-help groups and improve their marketing abilities, the government should establish a training center equipped with qualified instructors to provide training for women entrepreneurs associated with SHGs. This training should emphasize the practical aspects of rural entrepreneurship.
- ❖ The formalities for obtaining bank loans should be simplified, and credit institutions should be more transparent about lending to women entrepreneurs. Small businesses should have access to more finance at lower interest rates without requiring excessive collateral security.
- ❖ There is a need to create more opportunities for capacity building, ensuring acceptance, and providing financial and legal support to women entrepreneurs.
- ❖ Certain products produced by rural women SHGs can be sold directly to consumers through state government-run ration shops. This allows rural women entrepreneurs to have a guaranteed product market without involving intermediaries.
- ❖ Role models or success stories of rural women entrepreneurs should be showcased through radio or television to inspire women to improve their socio-economic status.
- ❖ To improve access to information for rural women entrepreneurs in Self-Help Groups (SHGs), an integrated system can be developed by utilizing various communication channels such as newspapers, radio, TV, and the Internet.

## CONCLUSIONS

Self-help groups are vital for promoting rural entrepreneurship and inclusive growth. By providing financial inclusion, skill development, social empowerment, and economic growth opportunities, SHGs empower women and marginalized communities. Addressing challenges such as market access, financial literacy, and sustainability through targeted solutions can further enhance the impact of SHGs. Sustainable support from governments, NGOs, and the private sector, along with community-driven initiatives, can enhance the effectiveness of SHGs in fostering rural women's entrepreneurship and contributing to the overall development of rural communities.



## REFERENCES

1. Varghese, R., & Menon, S. D. (2021). *Women Entrepreneurship through Self Help Groups Study with Special Reference to Sustainable Livelihood Schemes*.
2. Shihabudheen, N. (2012). *Role of Micro Enterprises in Women Empowerment: Evidence from a Field Study of „Kudumbashree“ Units in Ernakulam District in Kerala*. *IOSR Journal Of Humanities And Social Science (JHSS)*, 3 (6), 06, 12.
3. Dev, S. M. (2006). *Financial inclusion: Issues and challenges*. *Economic and Political Weekly*, 4310-4313.
4. Akter, A., Ahmad, N., Jaafar, W. M. W., Zawawi, D. B., Islam, M., & Islam, M. A. (2018). *Empowerment of women through entrepreneurial activities of self-help groups in Bangladesh*. *Journal of International Business and Management*, 1(1), 1-15.
5. Kapoor, S. (2019). *Entrepreneurship for economic and social empowerment of women: A case study of a self-help credit program in Nithari Village, Noida, India*. *Australasian Accounting, Business and Finance Journal*, 13(2), 123-142.
6. Vejjju, B. (2018). *Role of Self Help Groups (SHGs) on Women Entrepreneurship in Andhra Pradesh*. *International Journal of Research in Management, Economics and Commerce*, 8(1).





# CIVIC ENGAGEMENT AND PUBLIC POLICY: CONNECTING THE PEOPLE TO GOVERNMENT

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## ABSTRACT

Civic engagement is crucial for shaping public policy and strengthening the citizen-government relationship. This paper examines how civic engagement enhances democratic participation, promotes transparent governance, and tackles societal challenges. Drawing on empirical research, we analyze factors influencing civic engagement, the impact of digital technologies on citizen involvement, and policy implications for a more collaborative and responsive government. We argue that while digital platforms offer new avenues for engagement, they also present challenges. This paper explores these complexities, including the role of information literacy in navigating the digital public sphere. Finally, we suggest strategies for policymakers and civic leaders to leverage digital tools for deliberative exchange, ultimately fostering a more inclusive and impactful public policy process.

**KEYWORDS:** civic engagement, public policy, digital civics, information literacy, digital democracy

## INTRODUCTION

Civic engagement, the active participation of citizens in shaping public affairs, is a cornerstone of a vibrant democracy (Polizzi, 2019)(Turner-Lee, 2010). As the digital age transforms how people access information and interact with government, understanding the evolving relationship between citizens and public institutions is crucial. Technological advances have opened new pathways for networked communication and collective action, yet they have also introduced structural constraints and uneven participation(Reynante et al., 2021).

Civic engagement has emerged as a critical component in shaping public policy and strengthening the relationship between citizens and their government. This paper explores the role of civic engagement in enhancing democratic participation, fostering transparent governance, and addressing societal challenges. Drawing on empirical research from various contexts, it examines the factors that influence civic engagement, the impact of information and communication technologies (ICTs) on citizen involvement, and the policy implications for cultivating a more collaborative and responsive government.

Civic engagement has emerged as a critical component of effective public policy in the digital age. This paper explores the ways in which digital technologies can enhance civic participation and strengthen the relationship between citizens and government. Drawing on a range of interdisciplinary sources, we examine the challenges of increasing civic engagement online, the potential for digital platforms to facilitate collaborative problem-solving, and the implications for public sector governance (Turner-Lee, 2010)(Reynante et al., 2021).

While the advent of social media has revived discussion on media engagement and the role of the citizen-user in democratic

innovation(Vatikiotis, 2014), the transition to digital civic engagement has come with a host of complexities. Inasmuch as civic and political engagement is highly mediated by the internet, the relevance of information literacy to democracy must be considered(Polizzi, 2019). The paper offers policymakers and civic leaders strategies for transforming the internet into a place for deliberative exchange that impacts future public policies, promotes digital inclusion, and restructures online platforms to more effectively broker relationships between citizens and government(Turner-Lee, 2010).

## Challenges of Civic Engagement in the Digital Age

One of the central challenges in the digital age is ensuring equitable access and representation in online civic engagement. One key challenge in the digital age is ensuring equitable access and representation in online civic engagement(Turner-Lee, 2010). Turner-Lee argues that unequal access to the internet affects civic engagement, as groups that are underrepresented or on the periphery of online activity are less likely to participate(Turner-Lee, 2010). Moreover, political deliberation among a diverse group of citizens is limited when individuals cluster themselves on the web within communities that essentially mirror their offline networks and experiences(Turner-Lee, 2010).

Another issue that hinders effective civic engagement is the tendency for digital platforms to be structured around a transactional, free-market model of citizens as consumers and government as producers(Reynante et al., 2021). Some scholars critique these initiatives as being overly transactional, failing to support the relational interactions needed for true civic dialogue and the actualization of public will(Reynante et al., 2021).

Furthermore, the potential scale of participation enabled by digital technologies introduces new challenges in managing and integrating diverse voices into the policy process(Reynante et





al., 2021). While digital tools open new pathways for networked communication, technology alone is not a silver bullet for enhancing civic engagement (Reynante et al., 2021).

### Literature Review: Civic Engagement and Public Policy Civic Engagement and its Significance

encompassing a spectrum of activities through which citizens actively participate in shaping their communities and influencing political processes. (Adler & Goggin, 2005) This can range from traditional forms like voting and volunteering to more contemporary modes of engagement such as online activism, digital advocacy, and participation in online forums. (Wachhaus, 2017) A common thread across these definitions is the emphasis on citizens as active agents rather than passive recipients of governance.

The literature consistently emphasizes the importance of civic engagement for a healthy democracy. It is seen as essential for:

- **Enhancing Democratic Legitimacy and Accountability:** Citizen participation in policy processes is crucial for ensuring that government decisions reflect the diverse needs and preferences of the populace. (Mapping the Outcomes of Citizen Engagement, 2012)
- **Improving Policy Effectiveness:** Engaging citizens in policy design and implementation can lead to more effective and responsive solutions by incorporating local knowledge and addressing diverse perspectives. (Speer, 2012)
- **Strengthening Social Cohesion:** Civic engagement can foster a sense of shared purpose and belonging within communities, bridging social divides and promoting collective action. (Mapping the Outcomes of Citizen Engagement, 2012)

### Theoretical Frameworks

Several theoretical frameworks inform the study of civic engagement and its relationship to public policy:

- **Deliberative Democracy:** This framework emphasizes the importance of reasoned deliberation and consensus-building among citizens as a foundation for legitimate and effective policymaking
- **Participatory Governance:** This approach highlights the need for active citizen involvement throughout all stages of the policy cycle, from agenda-setting to implementation and evaluation. (Speer, 2012)
- **Social Capital Theory:** This perspective emphasizes the role of social networks, trust, and reciprocity in facilitating collective action and civic engagement.

### Impact of Digital Technologies

The rise of digital technologies has profoundly impacted civic engagement, creating both opportunities and challenges for citizen participation in policy processes.

- **Opportunities:** Digital platforms offer new avenues for information sharing, mobilization, and advocacy, potentially amplifying citizen voices and increasing access to policy discussions. (Wachhaus, 2017)
- **Challenges:** Concerns remain about the digital divide, the spread of misinformation, and the potential for online echo chambers to exacerbate polarization and hinder

constructive dialogue. (Bringing Government Back into Civic Engagement: Considering the Role of Public Policy, 2014)

### Moving Forward: Research Gaps and Future Directions

While the existing literature provides valuable insights into the relationship between civic engagement and public policy, several areas warrant further exploration:

- **Measuring the Impact of Digital Engagement:** More research is needed to understand how different forms of online participation translate into concrete policy outcomes.
- **Addressing Digital Inequalities:** Bridging the digital divide and ensuring equitable access to technology and digital literacy are crucial for inclusive civic engagement.
- **Fostering Deliberative Online Spaces:** More research is needed on how to design and moderate online platforms that promote constructive dialogue and informed deliberation.

### Factors Influencing Civic Engagement

Existing research identifies several factors that shape levels of civic engagement, including:

**Demographic and Socioeconomic Characteristics:** Studies have consistently found that individuals with higher levels of education, income, and social status tend to be more civically engaged (Vatikiotis, 2014).

**Social Networks and Community Ties:** Strong social ties and a sense of belonging to local communities are positively associated with civic participation (Turner-Lee, 2010).

**Digital Access and Literacy:** The digital divide, in terms of both access to technology and digital literacy, can limit the ability of certain groups to engage in online civic activities (Polizzi, 2019) (Turner-Lee, 2010).

**Political Efficacy and Trust:** Perceptions of political efficacy and trust in government institutions can influence individuals' willingness to participate in civic and political processes (Smith, 2013).

### Case Studies

Here are some powerful examples of how citizens have driven policy changes within the country:

#### 1. Right to Information: A Foundation for Transparency and Accountability

- **The Issue:** Lack of transparency and widespread corruption within government institutions hindered citizens' ability to hold officials accountable.
- **Citizen Action:** The Mazdoor Kisan Shakti Sangathan, a grassroots organization, spearheaded a movement in the 1990s demanding access to government information. They organized protests, filed legal petitions, and mobilized citizens across the country.
- **Policy Impact:** The movement culminated in the passage of the Right to Information Act in 2005, a landmark legislation empowering citizens to access government documents and information. The RTI Act has become a powerful tool for exposing corruption, improving governance, and promoting citizen participation in India.



**Key Takeaway:** Persistent advocacy, strategic litigation, and grassroots mobilization can lead to transformative legal reforms that empower citizens and strengthen democratic institutions.

## 2. Narmada Bachao Andolan: A Fight for Environmental Justice and Displacement Rights

- **The Issue:** The construction of large dams on the Narmada River displaced thousands of indigenous people and farmers without adequate compensation or rehabilitation.
- **Citizen Action:** The Narmada Bachao Andolan (NBA) led by activist Medha Patkar, mobilized affected communities, organized protests, and challenged the dam projects in court. They raised awareness about the social and environmental costs of large-scale development projects.
- **Policy Impact:** While the NBA faced significant challenges and the dams were ultimately built, the movement brought international attention to the plight of displaced communities and forced the government to implement some rehabilitation measures. It also sparked a broader debate about sustainable development and the rights of marginalized communities.

**Key Takeaway:** Even when facing powerful interests, citizen movements can raise awareness about critical issues, amplify marginalized voices, and push for greater accountability in development projects.

## 3. The Right to Food Campaign: Addressing Hunger and Malnutrition

- **The Issue:** Despite economic growth, India faced persistent hunger and malnutrition, particularly among marginalized communities.
- **Citizen Action:** The Right to Food Campaign, a coalition of NGOs and activists, advocated for policy changes to address food insecurity. They filed legal petitions, organized public hearings, and mobilized citizens to demand their right to food.
- **Policy Impact:** The campaign's efforts led to the enactment of the National Food Security Act in 2013, which guarantees subsidized food grains to two-thirds of India's population. The law represents a significant step towards realizing the right to food and addressing hunger in the country.

**Key Takeaway:** Strategic litigation, combined with grassroots mobilization and advocacy, can influence policy decisions and secure essential rights for vulnerable populations.

## 4. Digital Activism for Accountability: The Fight Against Corruption

- **The Issue:** Corruption scandals and a lack of government accountability fueled public anger and demands for reform.
- **Citizen Action:** In 2011, Anna Hazare, a social activist, led a series of hunger strikes and mass protests demanding the passage of a strong anti-corruption law. The

movement gained momentum through social media, mobilizing millions of Indians across the country.

- **Policy Impact:** While the movement faced setbacks and the Lokpal Bill (anti-corruption ombudsman) faced delays, the protests put immense pressure on the government to address corruption and led to greater public awareness about the issue.

**Key Takeaway:** Digital platforms can amplify citizen voices, mobilize large-scale protests, and exert pressure on governments to address issues of public concern.

These examples demonstrate the power of citizen engagement in shaping policy decisions in India. By employing diverse tactics, building coalitions, and remaining persistent in their demands, citizens have achieved significant victories in promoting transparency, accountability, and social justice.

## Recommendation

### I. Strengthening Grassroots Engagement

- **Empowering Local Governance:** Decentralize decision-making power to Panchayati Raj Institutions and municipalities, providing them with adequate resources and capacity-building support. ('Citizens need to participate more in making policy decisions related to their own surroundings', 2016)
- **Promoting Participatory Budgeting:** Expand participatory budgeting initiatives beyond their current scope, enabling citizens to directly influence local development priorities and resource allocation. (Participatory Policymaking — People Powered, 2022)
- **Investing in Community Organizing:** Support the growth of grassroots organizations and networks that empower marginalized communities to articulate their needs and advocate for their rights.

### II. Leveraging Digital Tools for Citizen Participation

- **Expanding Digital Literacy:** Implement targeted programs to bridge the digital divide, ensuring equitable access to technology and digital skills, particularly in rural areas and among marginalized groups.
- **Creating Online Platforms for Engagement:** Develop user-friendly online platforms for citizens to share their views, participate in consultations, track government performance, and access relevant information. (MyGov.in | MyGov: A Platform for Citizen Engagement towards Good Governance in India, 2023)
- **Harnessing the Power of Open Data:** Make government data publicly accessible in open formats, enabling citizens and civil society organizations to analyze information, monitor public services, and hold authorities accountable.

### III. Fostering a Culture of Transparency and Accountability

- **Strengthening the Right to Information Act:** Address challenges in the implementation of the RTI Act, ensuring timely responses to information requests and protection for whistleblowers.



- **Promoting Proactive Disclosure:** Encourage government agencies to proactively publish information about their activities, budgets, and decision-making processes.
- **Establishing Grievance Redressal Mechanisms:** Create accessible and effective mechanisms for citizens to lodge complaints, provide feedback, and seek redress for grievances related to public services.

#### IV. Enhancing Civic Education and Awareness

- **Integrating Civic Education in School Curricula:** Introduce comprehensive civic education programs at all levels of schooling, fostering an understanding of democratic values, rights, and responsibilities.
- **Promoting Media Literacy:** Equip citizens with the skills to critically evaluate information, identify misinformation, and engage constructively in public discourse.
- **Supporting Public Awareness Campaigns:** Conduct public awareness campaigns to highlight the importance of civic engagement, showcase successful initiatives, and encourage active citizenship.

#### V. Building Partnerships for Impact

- **Facilitating Government-Civil Society Collaboration:** Create spaces for regular dialogue and collaboration between government agencies, civil society organizations, and citizen groups.
- **Engaging with the Private Sector:** Encourage businesses to support civic engagement initiatives through corporate social responsibility programs and partnerships.
- **Learning from Best Practices:** Facilitate knowledge sharing and exchange of best practices in civic engagement and participatory governance within India and internationally.

## CONCLUSION

A More Engaged India, A More Responsive Democracy

The vibrancy of Indian democracy hinges on the active participation of its citizens. By strengthening grassroots engagement, harnessing the power of technology, fostering transparency and accountability, promoting civic education, and building strong partnerships, India can create a more robust and inclusive governance ecosystem.

Connecting citizens to the policy decisions that shape their lives is not just a democratic ideal; it is essential for equitable and sustainable development. When citizens are empowered to voice their concerns, contribute their ideas, and hold their leaders accountable, India moves closer to its vision of a just and equitable society for all. Realizing the vision of a vibrant, inclusive, and participatory democracy in India requires a multifaceted approach that empowers citizens, strengthens local governance, leverages digital tools, and fosters a culture of transparency and accountability.

## REFERENCES

1. Adler, R., & Goggin, J. (2005, July 1). *What Do We Mean By "Civic Engagement"?*. SAGE Publishing, 3(3), 236-253. <https://doi.org/10.1177/1541344605276792>
2. Barrett, J G G. (2012, December 5). *Mapping the Outcomes of Citizen Engagement*.

3. Jacobs, M X D C F L C L R. (2004, May 17). *PUBLIC DELIBERATION, DISCURSIVE PARTICIPATION, AND CITIZEN ENGAGEMENT: A Review of the Empirical Literature*. <https://www.annualreviews.org/doi/10.1146/annurev.polisci.7.121003.091630>
4. MyGov.in | MyGov: A Platform for Citizen Engagement towards Good Governance in India. (2023, February 8). <https://www.mygov.in/>
5. *Participatory Policymaking – People Powered*. (2022, April 7)
6. Polizzi, G. (2019, March 30). *Information Literacy in the Digital Age: Why Critical Digital Literacy Matters for Democracy*. , 1-24. <https://doi.org/10.29085/9781783303922.003>
7. Reynante, B., Dow, S P., & Mahyar, N. (2021, October 31). *A Framework for Open Civic Design: Integrating Public Participation, Crowdsourcing, and Design Thinking*. *Association for Computing Machinery*, 2(4), 1-22. <https://doi.org/10.1145/3487607>
8. Smith, A. (2013, April 25). *Civic Engagement in the Digital Age*. <https://apo.org.au/node/33837>
9. Speer, J. (2012, December 1). *Participatory Governance Reform: A Good Strategy for Increasing Government Responsiveness and Improving Public Services?*. *Elsevier BV*, 40(12), 2379-2398. <https://doi.org/10.1016/j.worlddev.2012.05.034>
10. Times, E. (2016, November 4). 'Citizens need to participate more in making policy decisions related to their own surroundings'. <https://economictimes.indiatimes.com/blogs/et-commentary/citizens-need-to-participate-more-in-making-policy-decisions-related-to-their-own-surroundings/>
11. Turner-Lee, N E. (2010, December 1). *The Challenge of Increasing Civic Engagement in the Digital Age*. , 63(1). <https://www.questia.com/library/journal/1G1-246252872/the-challenge-of-increasing-civic-engagement-in-the>
12. USA, S M M S O S U S N Y. (2014, October 11). *Bringing Government Back into Civic Engagement: Considering the Role of Public Policy*. <https://www.tandfonline.com/doi/abs/10.1080/01900690701215987>
13. Vatikiotis, P. (2014, December 1). *New media, democracy, participation and the political*. *Intellect*, 5(3), 293-307. [https://doi.org/10.1386/fisc.5.3.293\\_1](https://doi.org/10.1386/fisc.5.3.293_1)
14. Wachhaus, A. (2017, July 3). *Platform Governance: Developing Collaborative Democracy*. Taylor & Francis, 39(3), 206-221. <https://doi.org/10.1080/10841806.2017.1345509>





# WIKANG BAHAGHARI: ANALYSIS OF THE CONTEMPORARY VISAYAN GAY LINGO

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Article DOI: <https://doi.org/10.36713/epra17420>

DOI No: 10.36713/epra17420

## ABSTRACT

This research aims to identify Visayan gay-lingo's contemporary-Bekimong Bisaya. This study examines the unique gay language used in Southern Leyte, which includes the analysis of its meaning, importance, etymology, and usage in daily conversations. According to this study, the Visayan gay-lingo or bekimong Bisaya is a sociolinguistic, gender-based language medium that is been utilized by gay men in their interaction with other people. There are words spoken backward, words with added sounds, added letters, and words with different spellings. Some words originated from different celebrities and personalities with different, fresh meanings. The Visayan gay lingo (bekimong Bisaya), similar to the gay lingos spoken in the different regions of the Philippines, has no formal structure, specification, conventions, or subscriptions to grammatical rules. It is a dynamic, creative, and free-flowing language that shaped the gay perspective.

**KEYWORDS** – bekimon, Bisaya, Gay Lingo, gender-based language medium, sosyolek, Visayan

## INTRODUCTION

A sociolect is a language used by a particular group of people. They are grouped based on their profession or any other similarities (Ki, 2020). One primary example of a sociolect is the “bekimon.” Bekimon is widely spoken by gay men in the Philippine society which is part of their creative expression of communication. Santos (2010) states that the bekimon is the “new face of Philippine gay-lingo.” According to him, the word “bekimon” is a portmanteau of the words “beki” which means “gay” and “mon” which is short for “jejemon” which is a flourishing sociolect in the modern world. Further, Legaspi (2019) noted that bekimon is classified as a “secret language” that bridged the understanding among homosexual males. This is the outcome of gay men being closeted or their resistance to the patriarchal society. With this, this study aims to identify and list the contemporary lexicon of bekimong Bisaya to uplift the gay community.

As the world continues to evolve, comes the rise of gay members of society. Gay men in the Philippines are known as “bading” or “bakla.” In the Philippines, the empowerment of homosexual communities is unacceptable in the eyes of the highly conservative and Christian country where same-sex unions are considered to be a form of sin. The term “bekimon” is coined by Bern Josep Persia, a YouTube personality (Alano, et al., 2019).

Moreover, Alano, et al. (2019) noted that language is dynamic and can be compared to a living organism. As time passed by, communities started to evolve and grow which contributed to

the transformation of language. Concerning the viewpoint of Barrameda, et al. (2010), gay lingo started to flourish when gay people experienced discrimination in their communities. Because of this, gay lingo serves as a way to develop a personal language that only gay men within society can understand and use to avoid and evade the judgment of society. Aside from that, bekimon is a very dynamic language with rapid and continuous evolutions. According to Martinez (2023), bekimon is utilized by gay men to talk about matters in private so that the public can not understand.

It is difficult to trace the origin of bekimon because it has no specifications. Bekimon is similar to the Filipino language because it can be used in any part of speech (Herrero, 2013). Based on the study of Alano, et al. (2019), until now, the formation and development of the linguistic structure of bekimon is still a mystery because there are no formal studies regarding this topic. Examples of this sociolect are *tomguts*, *akes*, *itech*, *ganern*, *wapak*, *eklabush*, *gandur*, among others. There is no limitation with bekimon. A manifestation of this is the utilization of the names of celebrities and known personalities as part of their vocabulary. For instance, *Bitter Ocampo*, *Hagardo Verzosa*, *Tom Jones*, *Stress Drilon*, *Kalad Karen*, etc. These are driven by celebrity names used to convey a different meaning in conversations.

Further, Alano, et al. (2019), noted that bekimon influences the daily living of a person. However, as per Martinez (2023), the continuous development and flourishing of bekimon in society also bring a negative effect: it replaces the Filipino language. It overshadows the Filipino language because the youth are more



interested in learning the bekimon compared to their national language.

As history continues to unfold, the society becomes more open to liberal thought. The members of the Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Intersex, Asexual, + (LGBTQIA+) learns to empower themselves and fight for their rights to live free from humiliation and discrimination. A rational perspective sprung—it is to fight to achieve the most basic human rights and get acknowledged and protected by law. People are now aware and more accepting of the third gender in comparison to the past. Because of gay men’s creative communication, a variety of languages was formed: the bekimon. The study of bekimon is important to analyze and record the modern vocabulary of this sociolect as it continues to progress, flourish, and develop.

The bekimon symbolizes the powerful identities of gay men in society. It gives color to their dark history. Their sociolect becomes the main ingredient to mold their identities and strengthen their bonds among other gay people.

In this study, the researchers emphasized the vocabulary of bekimong Bisaya, or the Visayan gay lingo that is spoken in Southern Leyte. This is because there are certain nuances and differences in gay lingos in the different regions of the Philippines. Thus, this study deepens the importance of understanding bekimon: its meaning, etymology, reasons, importance, and methods of using this sociolect in daily interaction and conversations.

## METHODOLOGY

This section illustrates how the data were collected and analyzed, including the research design, research participants, methods of data collection, and data analysis procedure.

### Research Design

This study utilized the descriptive – qualitative research design wherein the researchers interviewed the participants to list and analyze the contemporary vocabulary of bekimong Bisaya, provide definitions, describe its usage, understand the reason for using this sociolect, and understand the significance of bekimong Bisaya. The researchers constructed the guide questions which were used to gather and analyze the data. From the collected data, it was listed in a matrix and categorized according to the parts of speech.

### Research Participants

The participants of this study included 30 gay male students of Southern Leyte State University – Tomas Oppus campus. This research utilized purposive sampling where the participants are the selected gay students to identify the most common words that they used in daily conversations. Participants of this study are those gay male students who are already out and not closeted due to convenience and sensitivity. Those who are not closeted are already comfortable and open to gay discourse and dialogue which made them a convenient sample for the study.

The following tables include the information and demographic data of the participants including their age, program, and years

**Table 1. Age of the Research Participants**

Age	Number of Students
18	1
19	10
20	8
21	8
22	1
23	2
<b>Total</b>	<b>30</b>

The table above shows the age and number of gay male students who participated in the study. One participant, aged eighteen (18), and two participants, aged twenty-two (22), are included in this study. Additionally, two participants, both twenty-three (23) years old, are included. Eight participants fall within the age of twenty (20), while another eight fall within the age of twenty-one (21). There are ten participants aged nineteen (19). In total, thirty (30) Bisaya gay students took part in this research.

Based on the data, the mean age of the participants is twenty (20) years old, indicating that the participants involved in this research represent the queer youth. The data suggests that the homosexual men who participated in this research belong to Generation Z, the latest generation in the population.

Because the participants in this research are youth, it can be assured that the language documented in Bekimong Bisaya is a product of the latest generation. This linguistic expression captures the words commonly used by Bisaya *effeminate*s, as they engage in conversations with their peers.





**Talahanayan 2. Programs and Specializations of the Research Participants**

Programs and Specializations	Number of Students
BEED	0
BPED	9
BSBA	2
BSIT	1
BSED-English	3
BSED-Filipino	2
BSED-Mathematics	2
BSED-Science	6
BSED-Social Studies	5
<b>Total</b>	<b>30</b>

The second table presents the program courses of the “binabae” or *effeminate*s, participants who took part in this research. There were no participants from the Bachelor of Elementary Education (BEEd) program. Nine (9) participants came from the Bachelor of Physical Education (BPED) program. Additionally, two (2) participants originated from the Bachelor of Science in Business Administration (BSBA) program. One (1) participant came from the Bachelor of Science in Information Technology (BSIT) program. Meanwhile, three (3) participants were enrolled in the Bachelor of Secondary Education (BSEd) majoring in English. There were two (2) participants each from the Bachelor of Secondary Education program specializing in Filipino and Mathematics. Further, six (6) participants were enrolled in the field of Science in the Bachelor of Secondary Education program. And, five (5) participants were specializing in the field of Social Studies in the Bachelor of Secondary Education program.

Based on the table, the Bachelor of Elementary Education program had no participants, while those studying in the Bachelor of Physical Education program had the highest number of participants. This indicated that the Bachelor of Physical Education has a higher percentage of queer or gay students compared to our programs. On the other hand, the lack of participants from the Bachelor of Elementary Education program suggests a small representation of *effeminate* or gay male students in this field.

Even though there were more participants from the Bachelor of Physical Education program, the credibility of the research can still be maintained because there were participants from other courses as well. Above all, the uneven number of participants does not significantly disrupt the study, as this research depends on the gender of the individual rather than their field of expertise.

**Table 3. Year Level of the Participants**

Year Level	Number of Students
First Year	6
Second Year	13
Third Year	11
<b>Total</b>	<b>30</b>

Table 3 shows the participants' academic year. It is indicated that there were six (6) participants in the first year who took part in this study. Meanwhile, there were thirteen (13) participants in the second year and eleven (11) participants in the third year. In total, thirty (30) Bisaya gay male students participated in this research.

Based on the data, the year level with the highest number of participants was the second-year college, while the first year had the smallest number of gay participants. There were no gay participants from the fourth years who were part of this study.

Gay participants only came from Southern Leyte State University – Tomas Oppus, ranging from the first to the third-year college. The researchers did not include participants from other institutions in this study.

**Data Gathering Procedure**

The researchers constructed guide questions which served as the basis for the interview with the participants. The interview was divided into two parts. In the first part, the researchers

asked the demographic profile of the respondents including their age, program and specialization, year level, and address. In the second part, the respondents were asked the following questions:

1. What are the words that you utilized as a gay man that were rarely or never used by different gender groups or cisgenders?
2. What are the definitions of these words?
3. How do you use it in daily interactions and communications?
4. Why are you using these words?
5. As a gay man, how important is bekimong Bisaya?

This research was conducted under the Republic Act No. 10173, or the Data Privacy Act of 2012. It was assured that any personal data gathered from the research participants would be kept confidential. The collected data would be utilized solely for academic purposes.

The compilation of the bekimong Bisaya language was examined by understanding the meanings of the words, their inclusion, etymology, and their use in sentences.



### Data Analysis Procedure

The collected words or vocabulary of contemporary bekimong Bisaya were provided definitions by the respondents themselves to ensure the correctness of the data gathered. The researchers are in no capacity to provide definitions of the said words because this sociolect did not originate from them. After the study was completed, the data were evaluated by two of the research respondents to analyze the facticity of definitions and examples. Therefore, the vocabulary collected originated from Visayan gay men, in the context of gay dialogue and discourse.

### DISCUSSION

The following tables contain the list of bekimong Bisaya that was collected by the researchers. It includes their definition, examples of how they use these words in daily conversations, the methods of using these words in communal interactions, the reasons for using bekimong Bisaya, and the significance of bekimong Bisaya.

**Table 4. Bekimong Bisaya as Nouns**

Word	Definition	Etymology	Sample Sentences
<i>abab</i>	baba (mouth)	The word “abab” comes from the Filipino word “baba,” but it is reversed.	<i>Bahuag abab ni Aling Rosa, uy.</i> (Aling Rosa has very bad breath)
<i>abas</i>	saba (noisy)	The word “abas” is a reversed Bisaya term for “saba.”	<i>Shudi abas bayet!</i> (Shush, don’t be noisy, girl!)
<i>amej</i>	jema (joke)	The word “amej” is a reversed Bisaya term for “jema.”	<i>Amej raman gud ‘tung ahung gisulti ganina.</i> (I was just kidding with what I said earlier).
<i>asnik</i>	kinsa (who)	The word “asnik” is a reversed Bisaya term for “kinsa,” which means “who” in English.	<i>Asnik ang pinaka-gwapo nilang lima?</i> (Who is the most handsome among the five of them?)
<i>aws</i>	wala (none)	The word “aws” comes from the Filipino word “wala,” which means “nothing” or “none” in English.	<i>Aws pa man ‘kuy sapi kay wala pa man ko padad-i ni mudra.</i> (I don’t have money at the moment because my mother hasn’t sent me any yet.)
<i>baklush/ beki</i>	bakla (gay)	The word “baklush” comes from the Filipino word “bakla,” which refers to someone who is gay in English.	<i>Sukua jud ni Victoriano kay baklush iyang duha ka junakis.</i>  (Victoriano got angry because both of his children are gay.)
<i>balur</i>	bahay (house)	The word “balor” comes from the Filipino word “bahay,” which means “house”.	<i>Layshu ang balur sa atung silingan, uy.</i> (Our neighbor’s house looks beautiful.)
<i>bavarian</i>	goodbye	The word “bavarian” is derived from the English word “goodbye.”	<i>Bavarian, adtu na ‘ku.</i> (Goodbye, I’m leaving now.)
<i>bayet</i>	bakla (gay)	The word “bayet” comes from the Bisaya word “bayot,” which refers to a gay person.	<i>Bayet, ayaw ra gud pag dinanghag.</i> (Gay, don’t act foolish there.)
<i>bet</i>	gusto o nais (like)	The word “bet” comes from the English word “like.”	<i>Bet jud na nakung kiki nga naas’ luyu.</i> (I like that guy with his back turned.)
<i>biancaro</i>	babae (girl)	The word “biancaro” comes from the Filipino word “babae,” which means “girl”.	<i>Pagkahuman sa napulu ka tuig nga hinuwatay, biancaro na jud ang anak nilang Klay ug Fidel.</i> (After ten years of waiting, Klay and Fidel finally had a daughter.)
<i>chika</i>	kwento (rumor story)	“Chika” is a slang term equivalent to the Filipino word “tsismis,” both means gossip.	<i>Daghanang chika gihisgutan nilang mag-beshies, uy.</i> (Many rumors were discussed between them.)
<i>churvavels</i>	etc.	The term “churvavels” is derived from the colloquial term “churva.”	<i>Ang mga ganahan naku nga prutas kay mansanas, dalandan, santul, ug mga churvavels.</i> (My favorite fruits are apples, oranges, santol, and others.)



<b>dikabilities</b>	ari ng lalaki (boys private part)	“Dikabilities” is derived from the English slang term “dick,” referring to the male private part.	<i>Dapat jud limpyu pirmi ang dikabilities uy.</i> (It’s only right to keep men’s private parts clean.)
<b>dzai</b>	babae (girl)	<i>The term “dzai” is derived from the Bisaya word “day”.</i>	<i>Dzai, ka-gwapa ba nimu uy.</i> (Miss, you look really beautiful.)
<b>echos</b>	biro lang o hindi totoo (joke)	“Echos” is a colloquial term.	<i>Sus uy, shudi ug tuu uy, echos ra man gud ‘tu.</i> (Come on, don’t believe that, it’s just a joke.)
<b>eme</b>	joke lang (joke only)	The term “eme” is a reversed form of the word “meme,” but with one letter “e” removed.	<i>Eme ra ‘tu uy.</i> (That was just a joke.)
<b>etneb</b>	bente (ten pesos)	The term “etneb” is a reversed word, derived from the Spanish word “veinte,” which means “twenty.”	<i>Etneb ra jud ang baw’n ni Junjun kada adlaw.</i> (Junjun only has twenty pesos for his daily allowance.)
<b>eyab</b>	babae (girl)	The term “eyab” is a reversed Bisaya word for “baya” or female.	<i>Kadtu bang eyab gahapun kay bahu’g iluk.</i> (The girl yesterday had smelly armpits.)
<b>ikal</b>	lalaki (boy)	The term “ikal” is a reversed Bisaya word for “laki” or male.	<i>Kagwapo sa ikal.</i> (The guy is handsome.)
<b>jema</b>	kidding or joke	The term “jema” originated from the real name Jema, who was the first to use this word.	<i>Jema raman tu uy.</i> (Just kidding.)
<b>juwa</b>	noby/noby a (girlfriend or boyfriend)	“Juwa” is a colloquial term derived from the Filipino word for spouse or “asawa.”	<i>Ihatud sa naku ang akung juwa una ku muuli.</i> (I’ll accompany my girlfriend first before going home.)
<b>juwabelles</b>	jowa (girlfriend or boyfriend)	The term “jowabelles” comes from the word “jowa” and is enhanced with “belles,” making it “jowabelles.”	<i>Bantayi jud nang imung juwabelles, talig makakita ‘nag laing kiki.</i> (Watch over your boyfriend, he might find another girl.)
<b>junakis</b>	anak/bata (son or daughter)	The term “junakis” is derived from the Filipino word for child.	<i>Dusi jud kabuuk junakis nilang Mario ug Rosalinda.</i> (Mario and Rosalinda have twelve children.)
<b>kebs</b>	okay ra (it’s okay)	“Kebs” is derived from the word “keber,” which means okay.	<i>Kebs ra ag amung exam ganina.</i> (Our exam earlier was fine.)
<b>keme</b>	carry lang or kaya to (i can handle it)	The term “keme” comes from the English word “carry.”	<i>Keme lang.</i> (It’s okay)
<b>keri</b>	kaya (i can handle it)	The term “keri” is derived from the English word “carry.”	<i>Keri nimu musaka anang bungtud?</i> (Can you climb tall mountains?)
<b>kiki</b>	lalaki (boy)	The last two syllables of the word “lalaki” were replaced with “ki.”	<i>Shufu’g borta jud ‘tung kiki nga akung nakit-an sa canteen uy.</i> (The guy I saw near the canteen is handsome and fit.)
<b>kumburub urus</b>	burus (pregnant)	The term “kumburoburos” comes from the Bisaya word “buros,” which means pregnant.	<i>Kumburuburus man diay ang anak ni Rosa, nu?</i> (Is it true that Aling Rosas daughter is pregnant?)
<b>lavern</b>	laban (fighting)	The last syllable of the word “laban” was replaced with “vern.”	<i>Lavern lang jud sa life, bisan lisud na.</i> (Keep fighting in life even if it’s difficult.)
<b>layshu</b>	sosyal (classy)	The term “laysho” comes from the English word “sosyal”.	<i>Layshu sii ‘tung event nga akung gi rampage gabii uy.</i> (The gathering I attended last night was very classy.)
<b>maamsh</b>	ma’am (gender neutral)	The letter “sh” was added to the English word “ma’am.”	<i>Maamsh, naa tay klasi ugma?</i> (Ma’am, do we have classes tomorrow?)
<b>mare</b>	friend	The term “mare” is from the Spanish word “kumadre,” a term used for godmothers or close friends of parents.	<i>Mare, manglaag ta sunud simana.</i> (Let’s hang out next week, friend.)



<b>mudra</b>	ina(mother)	The term “mudra” is from the English word “mother.”	<i>Gikasab-an man ko ni mudra uy, gabii naman gud ko kaayu nakauli.</i> (My mother scolded me because I came home late.)
<b>ngo</b>	nawng (face)	The term “ngo” is from the Bisaya word for face or “nawong.”	<i>Kadaghan ba ug bugas ‘tung iyang ngo.</i> (There’s a lot of pimples on her face.)
<b>pudra</b>	ama(father)	The term “pudra” is from the English word “father.”	<i>Buutan ug rispunsabli jud ang akung pudra.</i> (My dad is kind and responsible.)
<b>shabeng beng</b>	shabu (illegal drugs)	“Shabengbeng” is a colloquial term from the Tagalog word “shabu.”	<i>Musuyup man gud siyag shabengbeng maung na-prisu.</i> (He uses illegal drugs, that’s why he got imprisoned.)
<b>shokton</b>	buktun (shoulder)	The term “shokton” is a Bisaya word derived from “bokton,” with the first syllable replaced by “shok.”	<i>Kadaku sa iyang shokton.</i> (His arms are really big.)
<b>shudi</b>	ayaw o hindi (no)	The term “shudi” is from the Filipino word “hindi,” meaning not.	<i>Shudi abas, natulug ang bata.</i> (Don’t make noise because the baby is sleeping.)
<b>sisterakas</b>	magkapatid (sister)	The term “sisterakas” is from the English word “sister.”	<i>Kana nga sisterakas nu, silang Glein ug Glee kay haniti jud musayaw ug mukanta.</i> (Glein and Glee are sisters that are excellent at dancing and singing.)
<b>yads</b>	dzae (miss)	The term “yads” is a reversed Bisaya word from “day,” with an added “s” at the end.	<i>Yads, unsa may balita natu diha?</i> (Miss, any news about there?)
<b>yagats</b>	tagay (drinking session)	The term “yagats” is a reversed Bisaya word from “tagay,” with an added “s” at the end.	<i>Yagats ta unja adtu’s baybayun.</i> (Let’s have a drink by the seashore later.)

In table 4, the Bekimon Bisaya words are listed as nouns. The table consists of four rows: the first row includes the Bekimon words, the second row for their meanings, the third row encapsulates the etymology or origin, and the fourth row for examples of sentences showing how these words were used in daily communication.

Based on this table, there are various types of Bekimon words. Some are reversed from their Bisaya counterparts, like “*abab*” from “*baba*,” “*abas*” from “*saba*,” and so on. Some words have similar meanings but different spellings. Words like “*biancaro*,” “*dzae*,” and “*eyab*” refer to females, while “*ikal*”

and “*kiki*” refer to males. Some words express humor or falsehood, such as “*eme*” and “*jema*.” Expressions like “*kebs*,” “*keme*,” and “*keri*” convey a sense of indifference or approval. Some words have been altered or added to make them sound more appealing and colorful, such as “*Bavarian*,” “*churvavels*,” and others.

This table illustrates various aspects of the bekimong Bisaya language, showcasing its unique and creative use. The numerous words with similar meanings, it reflects the rich and rapidly changing nature of this language.

Table 5. Bekimong Bisaya (Visayan Gay Lingo) as Verb

Word	Definition	Etymology	Sample Sentences
<b>anatch an</b>	tara na (Let’s go)	The word “ <i>anatchan</i> ” is derived from the Filipino word “ <i>tara na</i> ,” which means “ <i>let’s go</i> .”	<i>Anatch an talig mag sugud nag speech sa atung presidinti.</i> (Let’s go, the President’s speech might have started)
<b>ansaveh?</b>	anong sabi? (What did he/she say?)	The word <i>ansaveh</i> is derived from Filipino phrase <i>anong sabi</i> which means “ <i>what did he/she say?</i> ”	<i>Ansaveh mu ganina?</i> (What did you say earlier?)
<b>eagatch</b>	tagae (To give)	The word <i>eagatch</i> is derived from the Bisaya word <i>tagae</i> .	<i>Eagatch ku ba!</i> (Can you give it to me!)
<b>fang</b>	kaon (To eat)	The word <i>fang</i> is shortened from the word <i>lafang</i> , which means “ <i>to eat</i> ”	<i>Ayaw jud mu kalimut ug fang kay ma-ulcer mu.</i> (Don’t forget to eat, you might get an ulcer.)



<b>fly high</b>	umalis sa malayo/layas (To leave or to go far away)	The phrase <i>fly high</i> is a <i>hyperbole</i> that means to leave or depart to a faraway place.	<i>Anatch an, fly high na ta. Laaya man anhia uy!</i> (Let's go, it's boring here!)
<b>gora</b>	pagtungo sa isang dako o pook (Going to a certain place or location)	The word <i>gora</i> is derived from the English word <i>go</i> .	<i>Gora natas plaza, naghuwat na atung ubang beshies.</i> (Let's go to the plaza, our friends are waiting.)
<b>Janno Gibbs</b>	mapagbigay (Generous)	The phrase <i>Janno Gibbs</i> refers to a popular artist.	<i>Basta Janno Gibbs, dapat jud sundugun.</i> (When it comes to Janno Gibbs, we should follow his example.)
<b>jumbag</b>	suntok (Punch)	The word <i>jumbag</i> is derived from the Bisaya word <i>sumbag</i> , which means "to punch".	<i>Gisugsug ni Rico si Yoyong mau tung gi-jumbag niya.</i> (Rico provoked Yoyong, that's why he punched him)
<b>kaka</b>	kaon (To eat)	The last syllable of the word was replaced with <i>ka</i>	<i>Kaka na ta et.</i> (Let's eat now sis.)
<b>kara-karaka</b>	bilisan o dalian (To hurry or hasten)	The word <i>kara-karaka</i> is derived from the Tagalog word <i>kara-kara</i> .	<i>Pa anhia na siya, karun na, pagdali, faster, kara-karaka.</i> (He's coming, hurry up, faster, quickly!)
<b>kilab</b>	balik (To return)	The word <i>kilab</i> is a reversed form of the word <i>balik</i> .	<i>Kilab na diri uy.</i> (Come back here.)
<b>lafang</b>	akto ng pagkain (Act of eating)	The word <i>lafang</i> is a slang term derived from the Filipino word <i>nilalapang</i> , which means "to eat heartily"	<i>Lafang na ta na.</i> (Let's eat now)
<b>rampage</b>	gimik/rampa (Hanging out/ Partying)	The word <i>rampage</i> is derived from the English word <i>ramp</i> .	<i>Rampage ta sa mall unya.</i> (Let's go on a rampage at the mall later.)
<b>shudi abas</b>	ayawg saba (Don't be noisy)	The phrase <i>shudi abas</i> is derived from the Binisaya phrase <i>di magsaba</i> .	<i>Shudi abas bayet.</i> (Don't be noisy, girl.)
<b>shudiwoii</b>	ayaw uy (Do not)	The word <i>shudiwoii</i> is a variation of the word <i>shudi</i> which means "no" or "not".	<i>Speaker 1: Mag-cheat ta unja sa exam ni ma'am.</i> <i>Reply: Shudiwoii, basin masakpan ta!</i> (Speaker 1: Let's cheat on Ma'am's exam later. Reply: No way, we might get caught!)
<b>trophy</b>	manalo (To win)	The word <i>trophy</i> is derived from the symbol of victory.	<i>Trophy o lotlot sa contest unya, kebs ra, ang important gi buhat natu ang unsay atung keru.</i> (Whether we win or lose in this contest later, it doesn't matter. What's important is that we did our best.)

In the fifth table, the Bisaya bekimong verbs or action words were listed. A verb is a word that indicates an action. This table has four columns where the words, definitions, etymology, and usage in sentences are listed. In the first column, the bekimon words are recorded. In the second column, the meanings of the words are listed in the context of their usage. The third column contains the etymology, documenting the origin of the words. In the fourth column, examples of sentences are provided, demonstrating the use of these specific bekimon words in everyday communication.

In the fifth table, various types of bekimon words can be observed. Some words are simply reversed counterparts, like *kilab* derived from *balik*. Some words are reversed and

modified to sound more appealing, such as *eagatch* meaning *tagae*, *anatch* from the Bisaya word *tana*, and *shudi abas* from *ayawg saba*, all with the addition of the sound "etch". Some words undergo pronunciation changes, like *jumbag* from the Bisaya word *sumbag*. Additionally, English words are incorporated, such as *fly high* meaning *paglayas* or *pag alis sa malayo*, *rampage* for *gimik/rampa*, and *trophy* for *manalo*. Some words are derived from celebrity names, like *Janno Gibbs*, signifying generosity. There are words with different spellings but similar meanings, like *fang* and *kaka*, both meaning *kaon*, and *lafang* denoting the act of eating. Words from the Bisaya language, such as *kara-karaka* from *kara-kara*, meaning in a hurry, are also present.





Table 6. Bekimong Bisaya (Visayan Gay Lingo) as Adjective

Word	Definitions	Etymology	Sample Sentences
<b>Aan na</b>	naa na (Here already)	The term <i>aan na</i> is a reversed Bisaya word, originating from <i>naa na</i> .	<b>Aan na si sir.</b> (Sir is here.)
<b>atima-nag lawas</b>	macho (Masculine)	The phrase <i>atimanag lawas</i> comes from the Bisaya word <i>atimana ag lawas</i> .	<b>Atimanag lawas uh, ana jud na basta sigi'g exercise!</b> (Take care of your body, that's really evident when you consistently exercise!)
<b>Bitter Ocampo</b>	malungkot (Sad)	<b>Bitter Ocampo</b> is a name of a celebrity.	<b>Bitter Ocampo naman siya, sugud adtung nagbuwag silas iyang jowabelles.</b> (He's like Bitter Ocampo, ever since he broke up with his girlfriend, he's been sad.)
<b>bonggacious</b>	grand (Grandoise)	The term <i>bonggacious</i> is derived from the Filipino word <i>bongga</i> , meaning <i>extravagant</i> or <i>impressive</i> .	<b>Bonggacious man kaayu ang kasal nilang Dingdong ug Marian uy.</b> (The wedding of Dingdong and Marian is really extravagant.)
<b>borta</b>	macho/malaki (big)	The word <i>borta</i> originated from the name of an individual, <i>Borta</i> , who has beautiful/ large physique.	<b>Borta sii 'tung ikal, uh.</b> (That guy, he's really macho.)
<b>catching na</b>	may raket (has a job/ gig)	<i>Catching na</i> is derived from the English word <i>catch</i> .	<b>Catching na oks, maung shudi sa skwila.</b> (I have a side job later, so I won't go to school.)
<b>chada</b>	pangit (ugly)	The term <i>chada</i> comes from <i>pachada</i> o façade.	<b>Chada kaayu imung suut gabii.</b> (What you wore last night was really not good.)
<b>chaka</b>	pangit (ugly)	<i>Chaka</i> is a colloquial term meaning <i>not beautiful</i>	<b>Chaka man ang pagkahimu sa imung project, uy.</b> (The way you executed your project is also not good.)
<b>chararat</b>	pangit (ugly)	<i>Chararat</i> is derived from <i>chaka</i> , with a modern twist.	<b>Kakita kus imung kuntra ganina, chararat man diay sa pirsunal.</b> (I saw my opponent earlier, turns out he's ugly in person.)
<b>Dakota Manila</b>	malaki (big)	<i>Dakota</i> comes from the Bisaya word <i>dako</i> , and <i>Manila</i> is a place in Luzon.	<b>Dakota Manila man ang swildu sa mga nurse adtus gawas.</b> (Nurses' salaries abroad are really big.)
<b>daks</b>	malaki (big)	The word <i>daks</i> is from the Bisaya word <i>dako</i> , with an added "s" at the end.	<b>Daks daug niya sa bingo.</b> (He won big in Bingo.)
<b>daling</b>	ngil-ad (ugly)	The word <i>daling</i> is reversed Bisaya word from <i>ngil-ad</i> .	<b>Daling iyang bag.</b> (His bag is not good.)
<b>echosera</b>	mapagkunwari/ mapagbiro (pretentious/funny)	The word <i>echosera</i> originates from the term <i>echos</i> .	<b>Echosera sii ka, gi tarung baya kag pangutana.</b> (You're so funny, you even asked him properly.)



<b>Elsa</b>	maginaw/malamig (cold)	The word <i>elsa</i> is a character from the popular movie “Frozen.”	<b>Elsa ang Baguio uy.</b> (It's really cold in Baguio.)
<b>forever</b>	mabagal/mahinhin (slow/gentle)	The word <i>forever</i> is a combination of <i>for</i> and <i>ever</i> .	<b>Forever man ang bau uy.</b> (The turtle's pace is really forever.)
<b>harbat</b>	ginamit na (already used)	<b>Harbat</b> is a Filipino slang term for taking something without permission.	<b>Layshu pa ang sinina nga gihatag ni Madam Alex naku, bisan ug harbat na.</b> (The dress Madam Alex gave me is still beautiful, even if it's second-hand.)
<b>imalin</b>	lamion (delicious)	The word <i>imalin</i> is from Bisaya word <i>lamion</i> .	<b>Imalin ang BBQ nga amung napalit gahapun.</b> (The barbecue we bought yesterday was delicious.)
<b>Joray</b>	mataray (snobbish)	The word <i>joray</i> comes from the Filipino term <i>mataray</i> .	<b>Joray man ang bag-ung juwabelles ni ate.</b> (My older sister's new boyfriend seems snobbish.)
<b>juts</b>	gamay (small)	The word <i>juts</i> is from the Bisaya word <i>gamay</i> .	<b>Juts ra ang ahung score sa amung exam ganina.</b> (My score in our exam earlier was just small.)
<b>Kuya Germs</b>	madumi (dirty)	The phrase <i>Kuya Germs</i> is derived from the name of a famous personality. German Molina Moreno.	<b>Kuya germs naman ilang balur.</b> (Their house is dirty.)
<b>lot-lot</b>	talo (loser)	The word <i>lot-lot</i> is from the Filipino word <i>talo</i> , means losing.	<b>Hambug man kaayu nis Jane. Lot-lot raba ug pa-gwapahay.</b> (Jane is really boastful, but loses when it comes to beauty.)
<b>Lucita Soriano</b>	loser	The phrase <i>Lucita Soriano</i> is from the name of a famous artist.	<b>Mga lucita soriano ilang tan-aw namu, na lot-lot man pud lagi mis contest.</b> (They see us as losers, as we also lost in the contest.)
<b>majinit</b>	mainit (hot)	The word <i>mainit</i> has been modified by adding the letter “j” to become “ <i>majinit</i> ”	<b>Majinit man aris Pilipinas kay duul man tas ekwadur.</b> (It's really hot in the Philippines because we're near the equator.)
<b>majontot</b>	mabaho (smelly)	The word <i>majontot</i> is from the Filipino term for <i>smelly</i> .	<b>Majontot man abab ni Alberta kay 'di man siya manutbras inig skwila.</b> (Alberta's breath smells bad because she didn't brush her teeth before going to school.)
<b>ofosh</b>	gwapo (handsome)	The word <i>ofosh</i> comes from the term <i>shofo</i> .	<b>Ofosh juds Mark.</b> (Mark is really handsome.)
<b>okad</b>	daku (big)	The word <i>okad</i> is a reversed Bisaya word for <i>dako</i> .	<b>Okad ang daug ni Manung Lucio sa lotto.</b> (Manong Lucio won a large amount in the lottery.)



<i>shunga</i>	tanga (foolish)	The word <i>shunga</i> is from Filipino term for <i>foolish</i> .	<i>Shunga jud ku kay gibuba naku iyang pagsalig sa akua.</i>  (I'm really stupid because I broke his trust in me.)
<i>shufa</i>	maganda (beautiful)	The word <i>shufa</i> comes from the Filipino term for <i>beautiful</i> .	<i>Shufa man ang design sa stage uy.</i>  (The stage design is really beautiful.)
<i>shufu</i>	gwapo (handsome)	The word <i>shufu</i> comes from the Filipino term for <i>handsome</i> .	<i>Shufu jud ang nanguyab naku sa amung room.</i>  (My suitor in our room is very handsome.)
<i>Tom Jones</i>	gutom (hungry)	The phrase <i>tom jones</i> is from the name of a famous singer.	<i>Tom Jones na oks.</i>  (I'm hungry.)
<i>Winnie the Pooh</i>	winner	The phrase <i>winnie the pooh</i> is from the popular television character.	<i>Kami ang winnie the pooh sa contest.</i>  (We were declared the winners in the contest.)
<i>yamag</i>	gamay (small/few)	The word <i>yamag</i> is a reverse Bisaya word for <i>gamay</i> .	<i>Yamag ra ahung gikaun ganina.</i>  (I only ate a little earlier.)
<i>yupaks</i>	kapuy (tired)	The word <i>yupaks</i> is a reversed Bisaya word <i>kapuy</i> , with an added "s" at the end.	<i>Yupaks naku uy!</i>  (I'm tired already.)
<i>chugi</i>	patay (dead)	The word <i>chugi</i> comes from the Filipino term for <i>dead</i> .	<i>Chugi na daw'g pudra ni Lando.</i>  (Lando's father is reportedly dead.)

In the sixth table, the Bisaya bekimon adjectives are recorded, which are words describing people, things, animals, places, or events. This table has four columns listing the word, definitions, etymology, and its usage in a sentence.

Commonly, Bekimon adjectives in Bisaya describe people, such as the words *chaka* (ugly), *daks* (big), *daling* (ugly), *imalin* (delicious), and *juts* (small). These words can be used to portray both the physical characteristics and personality traits of a person. Some Bekimon Bisaya adjectives are also mentioned in the table which are derived from the names of

celebrities or characters in movies. Examples include *Bitter Ocampo* (sad), *Elsa* (cold), *Kuya Germs* (dirty), *Lucita Soriano* (loser), *Tom Jones* (hungry), and *Winnie the Pooh* (winner).

The presented Bekimon words highlight the uniqueness and creativity of the gay community, as they have coined terms that contribute to the enrichment of the language. These words are utilized in various forms of communication and interaction. As a result, the Bekimon language has thrived and progressed even further.

**Table 7. Bekimong Bisaya (Visayan Gay Lingo) as Pronouns**

Words	Definitions	Etymology	Sample Sentences
<i>anith</i>	what	The last letter of the word was replaced with the letters "ith."	<i>Anitch man jud?</i> (What is it really?)
<i>itech</i>	this	The last letter of this word was replaced with the letters "ech."	<i>Itech ang favorite nakung pamahaw.</i> (This is my favorite breakfast)
<i>sinetch</i>	who	The last two letters of the word "sino" were replaced with the letters "etch."	<i>Sinetch 'tung ikal kita kung kauban nimu gabii?</i> (Who is this man I saw with you last night?)
<i>okems</i>	I, me	The word "okems" is derived from the English word "me."	<i>Okems na ang bahala aning tanan.</i> (I'll take care of everything)



The seventh table records the bekimon (gay lingo) pronouns or words used as substitutes for names. It consists of four rows. The first row lists the words used as pronouns gathered by researchers from participants' responses. The second row provides the meanings of the words based on the first row. The etymology or origin of the collected words is found in the third row. And the fourth row contains sentences illustrating the use of the words from the first row, according to their context.

The bekimon words used by respondents as pronouns are *anith*, *itech*, *sinetch*, and *okems*. These words are commonly used by respondents in daily interactions and conversations. *Anith* means "ano" in Filipino, originating from the word "ano" with the letter "o" replaced by "ith." The second word in the table is

*"itech"*, meaning "ito" or "this." It evolved from the original word "ito," with "ech" replacing the last letter. On the other hand, *"sinetch"* translates to "sino" or "who" with the last two letters of "sino" replaced by "etch." The fourth word is *"okems"*, which means "ako" in Filipino and "I" or "me" in English.

Among the four words listed, *"anith"* and *"sinetch"* are frequently used by respondents in their conversations with fellow *bekis* (gay men) or even with others. In conclusion, the words documented in the table are bekimon words utilized as pronouns, commonly employed by respondents in their daily dialogues or interactions. These words contribute to emphasizing, enriching, and facilitating better understanding.

**Table 8: Bekimong Bisaya (Visayan Gay Lingo) as Adverb**

Words	Definition	Etymology	Sample Sentences
<i>ditey</i>	here	The word 'ditey' is derived from the word 'dito.' The last letter of 'dito' was replaced with 'ey,' resulting in 'ditey'	<i>Ditey mi sa akung uyab unang nagkita.</i> (In this place, my boyfriend and I first met.)
<i>pa evol</i>	backward/ anal sex (noun)	The word "pa evol" is derived from the Bisaya word "lubut" or butt in English	<i>Pa evol niyang gi daut iyang amigo.</i> (He spoke ill of his friend behind their back)

The eighth table records bekimon (gay lingo) adverbs or words used as adverbs that modify verbs, adjectives, or other adverbs. The table includes two words used by respondents as adverbs, illustrating the characteristics of a person, thing, quality, or event. The eighth table consists of four rows. The first row lists the words used by respondents. The second row provides the meanings of the words from the first row. The third row contains the etymology or origin of the recorded words. Finally, the fourth row includes sentences where the researchers used the gathered words.

The bekimon words used as adverbs are *"ditey"* and *"pa evol."* The most frequently used word among respondents is *"ditey,"*

while *"pa evol"* is the second most commonly used. *"Ditey"* originated from the word "dito," with the last letter replaced by "ey." On the other hand, *"pa evol"* means backward or anal sex (as a noun) and is derived from the Bisaya word "lubut." The documented words refer to adverbs that give descriptions in the daily conversations of respondents during interviews.

These recorded words indicate the creative thinking of *bekis*, where they use modern language in diverse ways. *Bekis* use these words in various ways, showcasing their creativity in communication. Therefore, the words *"ditey"* and *"pa evol"* play a significant role in every conversation among *bekis*.

**Table 9. Bekimong Bisaya (Visayan Gay Lingo) as Categorized According to Etymology and Transformation of Words**

Category	Visayan Gay Lingo
1. From the Bisaya language	<i>Kiki, ngo, shudi abas, shudiwoii, atimanag lawas, Dakota Manila, juts, pa evol, chada</i>
2. A reversed Bisaya word	<i>Abas, amej, asnik, eyab, ikal, abab, yads, yagats, anatch an, eagatch, kilab, aan na, daling, okad, yamag, yupaks</i>
3. A Bisaya word with an added letter	<i>Bayet, dzai, shokton, jumbag, kaka, daks, imalin, kaburoburos</i>
4. From the Filipino language	<i>Shabengbeng, aws, beki, baklush, balor, biancaro, chika, jowa, jowabelles, junakis, kebs, lavern, shudi, ansaveh, fang, kara-karaka, lafang, bonggacious, borta, chaka, chararat, harbat, joray, lot-lot, majinit, majontot, ofosh, shonga, shufa, shufo, chugi, anith, itech, sinetch, ditey</i>
5. From the English language	<i>Bavarian, bet, keme, keri, laysho, maamsh, mudra, pudra, sisterakas, fly high, gora, rampage, trophy, catching na, , forever, okems</i>
6. From the Spanish language	<i>mare</i>
7. A reversed Spanish word	<i>etneb</i>
8. From the names of artists/characters/movies	<i>Janno Gibbs, Dieter (Bitter) Ocampo, Elsa, Kuya Germs, Lucita Soriano, Tom Jones, Winnie the Pooh, Jema, Borta</i>



The ninth table contains bekimon words categorized based on their origin and alterations. The first row includes words originating from Bisaya, such as *kiki*, *ngo*, *shudi abas*, *shudiwoii*, *atimanag lawas*, *Dakota Manila*, *juts*, and *pa evol*. The second-row lists bekimon words derived by reversing Bisaya words, for example, *abas*, *amej*, *asnik*, *eyba*, *ikal*, *abab*, *yads*, *yagats*, *anatch an*, *eagatch*, *kilab*, *aan na*, *daling*, *okad*, *yamag*, and *yupaks*. The third row presents Bekimon words formed by adding letters to original Bisaya words, such as *bayet*, *dzai*, *shokton*, *jumbag*, *kaka*, *daks*, and *imalin*. The fourth row includes words borrowed from Filipino, like *aws*, *beke*, *baklush*, *balor*, *biancaro*, *chika*, *jowa*, *jowabelles*, *junakis*, and *shabengbeng*. The fifth row encompasses words derived from English, such as *Bavarian*, *bet*, *keme*, *keri*, *laysho*, *maamsh*, *mudra*, *pudra*, *sisterakas*, and *fly high*. The sixth row includes words borrowed from Spanish, with the

example of *mare*. The seventh row features Spanish words reversed, as seen in the word *etneb*. In the eighth row, bekimon words are derived from the names of artists, characters, or movies, like *Janno Gibs*, *Bitter Ocampo*, *Elsa*, *Kuya Germs*, *Lucita Soriano*, *Tom Jones*, and *Winnie the Pooh*.

These mentioned words have diverse origins, and their formation follows no specific rules. Pronunciation and spelling may vary, given the dynamic nature of language that evolves with societal progress.

In conclusion, the bekimon language flourished due to people's interest in understanding its meanings and word formations. Thus, it is a continuously evolving language without formal structure or grammar rules (Herrero, 2013; Alano et al., 2019; Rosales & Careterro, 2019; and Nuncio et al., 2021).

**Table 10. The Methods of Using bekimong in Daily Conversations**

Methods of Using Bekimon in Daily Conversations
<ul style="list-style-type: none"> <li>Utilized as expression in speaking.</li> <li>Used in providing entertainment to other people.</li> <li>Used in conversations with peers, other gay men, and people belonging to other gender groups.</li> <li>Utilized as a “secret language” to prevent understanding of people from different gender groups.</li> <li>Used when they are comfortable with the people they are interacting with or when they can also understand the gay language.</li> </ul>

Bekimon was used in different methods or occasions. First, it is used as an expression of speech. This indicates that this sociolect has been used casually and that it has become a part of their daily living. Through this sociolect, they can effectively communicate their thoughts and feelings.

Second, bekimon is used to give entertainment to other people. There are times that the masses are entertained when they hear the vibrant language of the Visayan gay men. The charismatic tone and comedic delivery of these words causes entertainment and authentic joy to the audience. Aside from that, bekimon has been used by gay comedians in comedy bars during their comical skits, all for entertainment reasons.

Third, bekimon is utilized by gay men in their interaction with their peers, other gay men, and other people in different gender groups. The use of bekimon is common and rampant in the country because it is not only limited nor exclusive to the gay

community. This sociolect is also shared across different gender groups which means that cisgenders also have the knowledge to speak in gay language.

Fourth, bekimon is used as a secret language. When gay men are in dialogue with their peers in crowded environments, they opted to communicate in gay lingo to keep their communication private in public environments. When gay people are gossiping, they tend to switch in their own language to prevent those who overheard to comprehend what they are saying.

Lastly, bekimon is used when they are comfortable with the people they are communicating with and when they are talking to someone with knowledge of the language. Gay men sometimes use the bekimong Bisaya when they understand that the other party concerned can also converse in this language. They are keen and careful in using this language to ensure successful and effective communication.

**Table 11. Reasons for Using Bekimon**

Reasons for Using Bekimon
<ul style="list-style-type: none"> <li>To communicate and be at par with other gay men.</li> <li>To establish the identity of the LGBTQIA+ community.</li> <li>To be creative and unique in conversations.</li> <li>To fully and freely express their thoughts and feelings.</li> <li>To discreetly communicate unpleasant messages with other gay men.</li> <li>To captivate the attention of other people through their language.</li> </ul>

There are different reasons why gay men use their distinct language. First, to communicate and dynamically interact with other gay men. The use of gay lingo is prevalent in society; thus, other gay men are using this language to keep up with their

queer peers to conform to the society that they are interacting with.





Second, bekimon is also used to give identity to the LGBTQIA+ community. The daily use of this language shapes the gay consciousness of the society which fosters their culture and colorful history. Because it is deeply rooted within the Filipino consciousness, the bekimong Bisaya becomes impossible to erase.

Third, bekimon is used to be creative in daily interactions. It is undeniable that gay people are innately creative and cerebral in forming their language. With this, many people are encouraged to use this language due to its uniqueness and creativity. This sociolect is continuously evolving, developing, and patronized by the people.

Fourth, bekimon is used to wholeheartedly express their thoughts. It is a medium to channel their feeling to the people

whom they are communicating with. Through the use of this language, gay people can effectively communicate their feelings, opinions, beliefs, or ideas about a certain matter.

Fifth, it is used to hide the unpleasant words that they tend to communicate with their peers. As was noted earlier, bekimon serves as a secret language that was used to hide the feelings of their libelous statements, especially when gossiping.

Lastly, bekimon is used by gay men to capture the attention of other people in their language. Because bekimong Bisaya is unique, one-of-a-kind, and special which is the reason why it can be easily noticed by others.

**Table 12: Significance of Bekimong Bisaya**

<b>How Important was Bekimon?</b>
<p><b>Important</b></p> <ul style="list-style-type: none"> <li>Gay men used bekimon to have secretive conversations</li> <li>It reflected their identity; bekimong Bisaya was a positive symbol for homosexual men</li> </ul>
<p><b>Very Important</b></p> <ul style="list-style-type: none"> <li>Gay men used it to express their true feelings</li> <li>It provided entertainment for their conversations</li> <li>It led to positive discussions</li> <li>It emphasized the importance of their gender</li> </ul>

Based on the responses of the participants in this study, there were two reasons why Bekimon language was deemed “important.” First, it was used for discreet conversations, and second, it reflected identity and served as a positive symbol for women. Additionally, some participants considered Bekimon as a “very important” language for four reasons. First, it was crucial because they used it to express their true feelings; second, it provided entertainment for their conversations; third, it led to positive discussions, and finally, it emphasized the importance of their gender.

**CONCLUSION**

The researchers concluded that bekimong Bisaya was a “gender-based language medium” where it was narrated and used by gay men for communication and social interaction. This language had been developed, evolved, and enriched by gay men in society to create a unique language used in discreet communication. These set of languages indicates that the sociolect used by gay men shaped their identity and consciousness. It was a sociolinguistic language with no formal structure, specifications, and strict rules. Bekimong Bisaya was a sociolect that reflected the vibrant and intricate history and culture of gay men in our society.

**ACKNOWLEDGEMENT**

We, the researchers, express our heartfelt gratitude to everyone who played a part in this study especially the gay men students at Southern Leyte State University – Tomas Oppus for their cooperation and for responding to our inquiries. Thank you for your honesty and truthfulness in sharing your experiences and

for dedicating your time to our study. Expect that this research will serve as a bridge to uplift the status of every gay man in society. Above all, we admire your courage in facing life's challenges amidst the criticisms, greed, and judgmental society.

To our instructor in the course (DALUMATFIL), Dr. Mark Galdo, thank you for your guidance and assistance in helping us understand what should be considered in this research paper. Thank you for guiding us to fully comprehend our research. Thank you for giving us a challenge to broaden and deepen our learning, not only as students in the field of education but also as citizens in our country. This research became the reason to sharpen our learning skills and to emphasize the importance of studying and enriching our language.

To our families, especially our parents, thank you very much for the support you provided, whether financially or morally. We deeply acknowledge and appreciate your selfless understanding, love, and sacrifices.

Above all, we are profoundly grateful to Almighty God for ceaselessly guiding us, providing assistance, wisdom, and courage to complete this study. This courage is offered to you. Without the Creator, there is no universe, no nature, no society, no community, no citizens, and most importantly, no language. We cannot achieve all of this without the powerful permission and guidance from above. You, our Lord, have been the light in our dark and uncertain journey. Forever, we are thankful for Your Courage, Goodness, and Holiness.



## REFERENCES

1. Alano, M., Astibe, C., Orejuela, J., & Simba, J. (2019). *Isang Pananaliksik: Pag-aaral sa mga Terminolohiyang Beki*. Retrieved on February 18, 2023 from <https://www.coursehero.com/file/50290947/PANANALIKSIK-FIL-109docx/>
2. Barrameda, P., Ajero, C., Belulia, L., Bernardo, M., Dayag, D., Diaz, A., Esplana, M., & Mondejar, P. (2010). *Masusing Pag-Aaral Sa Pagyabong Ng Gay Lingo*. Retrieved on February 18, 2023 from <https://www.termpaperwarehouse.com/essay-on/Masusing-Pag-Aaral-Sa-Pagyabong-Ng-Gay-Lingo/140835>
3. *Bekilipino: Ang Paglaladlad ng Gay Lingo sa Kultura at Wikang Filipino*. Retrieved on February 18, 2023 from <https://www.studocu.com/ph/document/collegio-de-dagupan/sikolohiyang-pilipino/posisyong-papel-patungkol-sa-bekilipino-ang-paglaladlad-ng-gay-lingo-sa-kultura-at-wikang-filipino/24271363>
4. Butler, J. (1988). *Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory*. *Theatre Journal*. Retrieved on December 24, 2023 from <http://www.jstor.org/stable/3207893>
5. Cantina, J. M. (2020). *Gay argot: beyond the coded words and meanings of lavender lexicon*. *International Review of Humanities and Scientific Research*. [https://www.researchgate.net/profile/JovelynCantina/publication/345939118\\_GAY\\_ARGOT\\_BEYOND\\_THE\\_CODED\\_WORDS\\_AND\\_MEANINGS\\_OF\\_LAVENDER\\_LEXICON/links/5fb24d9792851cf24cd598d5/GAY-ARGOT-BEYOND-THE-CODED-WORDS-AND-MEANINGS-OF-LAVENDER-LEXICON.pdf](https://www.researchgate.net/profile/JovelynCantina/publication/345939118_GAY_ARGOT_BEYOND_THE_CODED_WORDS_AND_MEANINGS_OF_LAVENDER_LEXICON/links/5fb24d9792851cf24cd598d5/GAY-ARGOT-BEYOND-THE-CODED-WORDS-AND-MEANINGS-OF-LAVENDER-LEXICON.pdf)
6. Herrero, J. (2013). *Pananaliksik Sa Gay Linggo*. Retrieved on February 18, 2023 from <https://www.scribd.com/doc/129409236/Pananaliksik-sa-Gay-Linggo>
7. Ki. (2020, February 26). *Sosyolek: Ano ang sosyolek at mga halimbawa nito*. *Philippine News*. <https://philnews.ph/2020/02/26/sosyolek-ano-ang-sosyolek-at-mga-halimbawa-nito/>
8. Legaspi, M. A. (2019, May 24). *Gay lingo: Pananaliksik na troolaloo, walang halong eklavoo*. <https://markisblogging.wordpress.com/2019/05/24/105/>
9. Nuncio, R. V., Pamittan Jr., G. B., Corpuz, D. R., & Ortinez, E. V. (2021). *Jokla and Jugels: A Comparative Analysis of the Construction of Popular and Hiligaynon Gay Words*. *Humanities Diliman*, 18(2).
10. Rosales, H., & Careterro, M. (2019). *Stylistics Variation: Understanding Gay Lingo in Social Perspectives*. *The Normal Lights*, 13(1).
11. Santos, T. U. (2010, October 1). *Bekimon: Ebolusyon ng salitang bakla*. *The Varsitarian*. [https://varsitarian.net/filipino/20101001/bekimon\\_ebolusyon\\_ng\\_salitang\\_bakla](https://varsitarian.net/filipino/20101001/bekimon_ebolusyon_ng_salitang_bakla)
12. Tudtod, A. R. (2020). *Barayti ng wikang Filipino sa balita o lathalaing panshowbiz sa mga pangunahing peryodiko*. *International Social Science Review*, 1, 235. <https://uz.edu.ph/wp-content/uploads/2020/01/ISSR-VOL1-2020.pdf#page=235>
13. Yaghoubi-Notash, M., Mohammad, V. N., & Soufiani, M. (2019). *Language, gender and subjectivity from Judith Butler's perspective*. *Journal of Philosophical Investigations*. Retrieved on December 24, 2023 from <https://www.researchgate.net/publications/339626916>



# PATTERN FOR MANAGING STRESS IN LIGHT OF THE QUR'AN AND HADITH

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## ABSTRACT

Presently, numerous psychologists have substantiated the efficacious influence of religion on mental well-being. Hence, this study aims to provide a religious framework for effectively managing stress based on the teachings of the Quran and Hadith. The study employs a qualitative methodology, namely utilising standard content analysis of the passages of the Quran and Hadith, as is customary in this field.

**Methods:** In the approach of content analysis, the term "the selection of analysis resources" has been employed in place of the research population. The analytical resources utilised in this work are the Holy Quran, Mizan al-Hekmah, Usul al-Kafi, and Thematic Interpretation of the Holy Quran by Javadi Amoli. According to Quranic scientific experts, analysis resources are used solely for extracting assertions and their types. Subsequently, the essential terms associated with the concept of "stress" have been identified in Arabic within religious texts (such as admonition, anguish, grave, innermost being, tribulation, hardship, apprehension, transgression, grief, burden, acquisition, remorse, melancholy, devoid of joy, and wretched). For the subsequent phase, a total of 20 experts and psychologists, well-versed in theological and psychological resources, were identified through interviews and the formation of an expert panel based on the extracted categories. They have been requested to express their viewpoints regarding the classifications of statements, specific things, and their ranking order. Subsequently, a precise definition of the items was provided, and three experts were trained to code the items and categories. The amount of agreement (reliability) across the codes was then assessed at 76% to ensure reliability throughout the codes. Ultimately, based on the experts' perspectives, a conceptual pattern has been established.

**Outcome:** Based on the examination of Quranic verses and Islamic traditions, stress management solutions can be categorised into four broad methods: cognitive, behavioural, emotional, and multifaceted strategies. Each of these strategies incorporates additional, specific indicators. The most effective cognitive methods for stress management include having faith in the wisdom of Allah and maintaining stability with insight. The recommended behavioural strategies include practicing patience, prayer, repentance, forgiveness, reading the Quran, and obeying the commands of Allah as stated in the Quran. Emotionally, it is beneficial to have a fear of Allah, humility before Allah, and to maintain hope during challenging situations. Lastly, employing multi-faceted methods such as stress management techniques, trusting in Allah, remembering Allah, practicing virtuous acts, engaging in prayer, and giving charity are highly recommended for effective stress management.

**Conclusion:** This particular study has the potential to enhance the mental well-being of the community. Furthermore, therapists have the ability to devise health packages utilising this paradigm to effectively handle stress.

**KEY TERMS:** Religious paradigm, Stress alleviation, Holy Quran, Islamic Hadith

## INTRODUCTION

Some psychologists are of the opinion that actual life consists of recurring sequences of potentially dangerous occurrences, the process of figuring out how to deal with them, and, lastly, the process of becoming compatible with the dangers. In spite of the fact that adaptation is produced unconsciously in the majority of situations, it requires a significant amount of work, particularly when prolonged stress is present. The last point is that the efforts that are made to alleviate stress might create physiological and psychological responses that can lead to health concerns.[1]When the body and mind are under stress, they react physically, mentally, psychologically, and behaviorally to things inside and outside the body that throw off the balance and stability of the body's normal functions. The main goal of these responses is to bring back the balance between organisms and make people compatible with their surroundings.[2]Various models and ideas exist to address stress and its negative consequences. Many of these methods

have psychological and medical elements. People exhibit variations in their personality features, which leads them to adopt diverse approaches to addressing and handling their stress. These methods can prioritise responsible behaviours such as problem-solving, seeking social and emotional support, utilising spiritual and religious resources, engaging in healthy emotional expression, seeking respite from problems or aggression, and resorting to inappropriate methods such as drug abuse.[3]People can deal with stress and its effects better when they use the right coping techniques.[4]In addition, the harm that is brought on by stress is reduced when the individual employs more effective methods while dealing with stress.[5]In 1978, Cox categorized the coping models and stress definitions into three distinct groups: -1 The stimulus-based model: these models have been established in response to the stimuli. Based on this pattern, stress is a causal factor in the development of tension. Within this category, stress is regarded as a contributing element that induces tension, such as intense job



demands or background noise.[6]Hans Selye's general adaptation hypothesis, often known as overall adaptation, has been presented through this paradigm. According to this hypothesis, the initial stage is the alarm reaction, which refers to the body's display of warning signals in response to stress. In the second phase, the initial reactions from the first phase occur, resulting in potential resistance and a prolonged period of adaptation. The third phase is the exhaustion phase, marked by a decline in the ability to withstand stress and a state of extreme fatigue (collapse), which might potentially result in mortality.[7]Although Selye's views are generally seen as fair and acceptable, it has been argued that there should be a correlation between stressful factors, their intensity, and the specific characteristics of stress. It signifies that the body's reaction to diverse stimuli varies, and this is connected to the specific type of stress. A further critique to be taken into account regarding Selye's approach is that individuals exhibit varying responses not just to different factors but even to identical factors. Consequently, they are not equally susceptible to stress and its consequences.[8]-2 The paradigm is founded upon the response or reaction; in accordance with this model, stress is regarded as a non-specific response to stress-inducing stimuli. This response can manifest as either a physiological or psychological reaction. These models have operationalized stress by assessing an individual's reactions to stress-inducing stimuli.[9]The transactional model acknowledges the influence of various components, including stressors, individuals' responses, symptoms of stress, and intervention factors such as personal qualities. This paradigm conceptualises stress as a dynamic exchange of information between an individual and their surrounding environment. The transactional model posits that an individual's evaluation of their relationship with the environment significantly contributes to their experience of stress. If someone perceives the environment as excessively demanding and believes they lack the capacity to handle challenging circumstances, their level of stress will escalate. Conversely, if the individual possesses the capability to effectively manage stressful conditions, they will experience reduced levels of stress. Currently, there are regarded as being a greater number of interactive models.[6][7]These models primarily emphasize the cognitive and physiological dimensions of stress.

Currently, numerous psychologists have verified the therapeutic function of religion and spirituality and their influence on mental well-being.[9]Religion and the desire to worship Allah are manifestations of the innate human longing for perfection and liberation from duality. In contemporary civilizations, empirical evidence supports the notion that families who hold religious convictions experience greater levels of personal, familial, and societal serenity in comparison to families with little religious commitment. Religious beliefs have the potential to mitigate numerous mental diseases.[4]Also, those who have strong religious convictions are able to triumph over adversity.[10]Gall conducted a study to evaluate the relationship between spirituality and the ability to cope with stress in adults who had been sexually abused as children. He has determined that spiritual resilience can forecast outcomes more accurately than other elements. Furthermore, the adverse manifestations of spiritual triumph

(such as spiritual discontent and unhappiness) are linked to heightened levels of stress, while the favourable manifestations of spiritual triumph (such as spiritual safeguarding) are linked to reduced levels of stress. For instance, the coping mechanism of experiencing spiritual dissatisfaction is linked to a heightened state of depression, whereas the coping mechanism of religious submission and forgiveness (such as seeking solace in Allah to alleviate bad emotions) is linked to a reduced state of depression.[11]Furthermore, Jafari's study revealed that students who possess an intrinsic religious orientation exhibit a higher tendency to employ problem-oriented coping mechanisms compared to students with an extrinsic religious orientation. Students who possess an extrinsic religious orientation tend to employ coping mechanisms that are centred around their emotions to a greater extent than students who possess an intrinsic religious orientation.[12]Islam contends that psychologists' compilation of man's spiritual requirements lacks a comprehensive comprehension of these needs. Within the realm of religious and monotheistic understanding, the scope of human needs has expanded to encompass not just one's personal interactions with oneself and others but also the vastness of Allah and the universe.[13]

According to Islam, needs originate from the conditions of human existence. The man is an existence who needs it due to his existence and survival. In Islamic insight, man and throughout human existence need Allah, and only Allah is needless.[14]Islamic ontology posits that all things and the cosmos have come into existence as a result of discernible, determinate, and immutable rules and principles, rather than by random chance.[14]As to the teachings of the Holy Quran, the entirety of the universe and human beings are interconnected. All things originate from Allah and ultimately return to Him.[15]Genuine peace and security are found in the Holy Quran through sincere belief and a correct understanding of Allah. In the realm of Islamic beliefs, the Quran contains numerous methods to address stress and manage difficult circumstances. There are four primary variables that might help prevent and decrease mental stress:

1. Belief in Allah;
2. Belief in the hereafter;
3. Virtueful actions;
4. Pardon.

Belief in Allah is the first and essential notion that forms the basis of life and cognition and is necessary for the acquisition of knowledge and wisdom. The concept of faith in the hereafter pertains to the enduring essence of humanity and its ultimate reunion with Allah. Good and righteous activities encompass a wide range of concepts and qualities, and they are entirely characterised by being good, beneficial, valuable, and morally upright actions. Forgiveness and generosity are regarded as useful behaviours that encompass all psychological consequences linked to virtuous actions.[4]The World Health Organisation has examined health from several perspectives, including physical, psychological, social, and spiritual dimensions. Hence, it is imperative to consider all facets while addressing stress and stress-related illnesses. As previously said, each proposed model has examined the problem of stress and the strategies to address it based on specific factors. Studies have examined both the psychological and physical dimensions





of stress. Although numerous studies have demonstrated the effectiveness of the spiritual aspect as a strategic technique for stress management, it has not yet gained widespread recognition. Therefore, it is imperative to prioritise the spiritual dimensions of stress and utilise spiritual and religious means to effectively manage stress. Furthermore, based on the aforementioned studies, it has been found that a majority of individuals resort to spiritual and religious resources as a means of comforting themselves during times of stress. Therefore, in light of these challenges and recognising that seminaries and universities play a crucial role in generating knowledge and developing innovative models rooted in Islamic culture and civilization, it is imperative to establish a stress management framework that draws upon Islamic and religious resources, leveraging the wealth of Iranian culture. Hence, the objective of the present study is to develop and formalise a stress management framework grounded in Islamic literature.

## METHOD

The approach employed in this study is a qualitative methodology. In the traditional approach to content analysis, researchers refrain from employing pre-established categories and instead ensure that the categories are derived directly from the data. In this instance, the researchers are using the vast amount of data available to them in order to achieve innovative recognition. Subsequently, the data obtained from interviews and the correlation of concepts have been scrutinised, revealing the absence of pre-existing notions. The method was used to encode and categorise the themes, irrespective of the theoretical background. Additionally, the text was analysed to determine the overall concept, which represents the conclusion of the categories.[16] In the content analysis method, due to the fact that the content is investigated, the term "the selection of analysis resources" has been used instead of the research population. So, the resources used in this study are the Holy Quran and Hadith. In order to categorise the extracted statements, the views of experts and psychologists who were familiar with the religious and psychological resources were used. In the content analysis method, the phrase "the selection of analysis units" has been used. The analysis units are words, topics, and articles. The analysis resources in this study include the Holy Quran, Mizan al-Hekmah, Usul al-Kafi, and Thematic Interpretation of the Holy Quran by Javadi Amoli (14, 17–19). The experts' choices for the analysis units are the topics and words related to stress.

The claims have been categorised based on the input of 20 specialists and psychologists who possess knowledge of religious and psychological resources. They have been requested to offer their perspectives on the classification of statements into explicit subjects and the ranking of the items. The method of coded content analysis has been utilised. The word "stress" in Arabic, as found in religious texts, has been analysed and coded into sheets using open coding. The major words associated with stress include warn, painful, dire, liver,

alboads, adversity, fear, sin, sorrow, tax, buy, regret, grief, joyless, and abject. Following the interviews and the formation of the expert panel according to the identified categories, a total of 20 experts and psychologists, who possessed knowledge in both religious and psychological resources, were referred to. They have been requested to provide their viewpoints regarding the classification of statements, specific things, and their ranking. To ensure consistency among encodings, a comprehensive specification of the items was provided, and three experts were trained to code the items and categories. The level of agreement (reliability) between the codes was then assessed at 76%. The experts' identified objects and categories have ultimately resulted in the creation of a conceptual framework.

In order to establish a stress management model rooted in religious resources, the researcher has compiled a list of relevant materials. From this list, the Holy Quran, Mizan al-Hekmah, Usul al-Kafi, and Thematic Interpretation of the Holy Quran by Javadi Amoli have been chosen as the primary sources for analysis. The initial approach involved consulting the opinions of specialists in Quranic sciences to identify the various sorts of statements and the appropriate methods for extracting them. Subsequently, the essential terms associated with the concept of "stress" have been identified in Arabic inside religious texts (such as warn, painful, dire, liver, alboads, adversity, fear, sin, sorrow, tax, buy, regret, melancholy, joyless, and abject). Subsequently, the information was encoded onto sheets by the process of open-coding the analytical units. Following the interviews and the formation of the expert panel based on the identified categories, a total of 20 experts and psychologists with knowledge of religious and psychological resources were referred to. They have been requested to provide their perspectives on the classification of statements and individual things, as well as their ranking in terms of importance. To ensure consistency among encodings, a precise definition of the items was provided, and three experts were trained to code the items and categories. The level of agreement (reliability) between the codes was then assessed at 76%. Ultimately, a conceptual model has been derived from the elements and categories identified by the experts.

## RESULT

The subsequent tables outline the primary techniques for stress management, along with the corresponding subcategories for each method. Based on the research of Quranic verses and Islamic traditions, stress management solutions can be classified into four broad categories: cognitive, behavioural, emotional, and multifaceted strategies. Each of these strategies incorporates intricate signs to effectively address and regulate stress. The cognitive approaches to stress management are listed in Table 1.







			<p>Surah Hashr: Ayah                  يٰۤاَيُّهَا الَّذِيْنَ ءَامَنُوْا اتَّقُوا اللّٰهَ وَانْتَظِرُوْا نَفْسَ مَا قَدَّمْتُمْ لِغَدٍ وَاتَّقُوا اللّٰهَ اِنَّ اللّٰهَ خَبِيْرٌۢ بِمَا تَعْمَلُوْنَ</p> <p>Surah Al-Fatir: Ayah 35                  الَّذِيْۤاٰخَلَقْنَا دَارَ الْمَقٰمٰتِ مِنْ فِضْلَةٍ لَا يَمَسُّنَا فِيْهَا نَصَبٌ وَلَا يَمَسُّنَا فِيْهَا الْغُوْبُ</p>
13.	Cognitive methods	Having stability and perseverance	<p>فَاِنَّ مَعَ الْعُسْرِ يُسْرًا ۗ سِۦرًا ۗ</p> <p>Surah ash-sharh ayat 51</p>
14.	Cognitive methods	Remembering death and being in the presence of Allah	<p>سُورَةُ الْفٰجِرِ ۙ اٰتٰتُهَا النَّفْسُ الْمُطْمَئِنِّتَةُ ۗ</p> <p>سُورَةُ الْفٰجِرِ ۙ اٰتٰتُهَا النَّفْسُ الْمُطْمَئِنِّتَةُ ۗ</p> <p>اَرْجِعِيْۤ اِلٰى رَبِّكَ رٰضِيَةً مَّرْضِيَةً</p> <p>Surah fajr ayat 27-28</p>
15.	Cognitive methods	Servitude in Islamic Tradition	<p>سُورَةُ الْحٰشِرِ ۙ اٰتٰتُهَا ۗ</p> <p>سُورَةُ الْحٰشِرِ ۙ اٰتٰتُهَا ۗ</p> <p>مَّا اَفَاءَ اللّٰهُ عَلٰى رَسُوْلِهِۦ مِنْ اَهْلِ الْاَقْرَبِۤىۡ فَلِلّٰهِ وَلِلرَّسُوْلِ وَلِذِي الْاَرْبٰبِۤىۡ وَاللِّيْمُوْمِ الْمَسْكِيْنَ وَاَبْنِ السَّبِيْلِ كَيْ لَا يَكُوْنَ دُوْلَةً بَيْنَ الْاَغْنِيَاءِ مِنْكُمْ وَمَا اَتٰنَاكَ الرَّسُوْلُ فَاخْذُوْهُ وَمَا نَهَاكُمْ عَنْهُ فَانْتَهُوْا وَاتَّقُوا اللّٰهَ اِنَّ اللّٰهَ شَدِيْدُ الْعِقَابِ</p> <p>Surah al hashr yah 7</p>
16.	Cognitive methods	Acts Of Worship	<p>وَمَا خَلَقْتُ الْجِنَّ وَالْاِنْسَ اِلَّا لِيَعْبُدُوْنَ</p>

The first row. If a woman lacks physical attractiveness or has a trait that makes her undesirable to her husband, it is crucial for him to avoid hastily divorcing her out of wrath or contempt. He should display patience and exemplify forgiveness. At times, a woman may lack physical attractiveness, but she may possess other traits that are more important in the context of marriage. As a result, when a woman of such disposition has the chance to express her thoughts and feelings, her partner, who had previously had a negative opinion of her, becomes enamored with her charm. At times, a husband may acquire an aversion towards a specific part of his wife during the early stages of their marriage, which gradually escalates into a feeling of intense animosity. By exercising patience and granting a woman the opportunity to reach her full potential, one can acknowledge that her abilities exceed her limits. The hasty nature of a man's choice to end a marriage is unwarranted. A man should only seek a divorce in extraordinary situations. According to the teachings of the Prophet (peace be upon him), divorce is considered the most serious permissible action in the sight of God. The sources for the cited hadith are Abu Da'ud, Talaq', 3, and Ibn Majah, 1-ed. According to an alternative narrative, the Prophet (peace be upon him) advocated for the institution of marriage as a preferable alternative to divorce. God condemns people who modify relationships according to their personal interests. Ajluni cites al-Tabrani's publication, Kashf al-Khifa, specifically volume 1, page 304, edition.

Humans have hands and feet with a specialised anatomy that is essential for their efficient functioning. Each entity, including humans, animals, plants, minerals, and others, as well as elements like air, water, and light, has a distinct arrangement that allows it to function optimally within the universe. He has efficiently overseen the seamless functioning of all tasks. He is the person who has provided instructions on how to accomplish its stated objective. He has engineered the ear to detect sound and the eye to detect visual stimuli; the fish to propel through water and the bird to traverse through the air; the ground to sustain plant life; and the tree to generate blossoms and fruits. He fulfils the tasks of both the creator and the teacher, supervising and clarifying every phase of creation.

The second row follows the first one. Both of you will go and abandon this location; you will transform into opponents against one another. From now on, those who follow my directions will stay firmly on the right path and be exempt from any kind of hardship. To elucidate, Allah not only granted him forgiveness but also provided him with counsel and instructed him on how to adhere to it.

Row number four. The process of vocalising words encompasses more than simply expressing a statement. The phrase "We belong to Allah" indicates a deep-seated internal conviction. Based on this fact, we can infer that anything offered to God has effectively fulfilled its intended purpose, as it has been used in the worship of the Supreme Being, who genuinely holds everything. The line "And it is to Him that we are destined to return" implies that human existence in this world is finite and will ultimately result in a reunion with God, regardless of the precise timeframe. If it is an indisputable fact that mankind is fated to be reunited with God, then why would they not opt to accomplish this by devoting all their resources and jeopardising their lives in the pursuit of His cause? This alternative is preferable to the pursuit of self-importance and the potential risk of mortality due to illness or accidents.

Allah maintains perpetual watchfulness over individuals, holding comprehensive awareness of their acts. In addition, he has appointed guardians to always accompany them, scrupulously recording their activities. This statement serves as a warning to individuals who mistakenly believe they have complete independence in their actions without experiencing any repercussions in their life on Earth. These individuals are being cautioned that they are facing consequences for their actions. This message serves as a cautionary reminder to individuals not to erroneously believe that any esteemed personality, saint, or celestial being has the ability to shield them from divine retribution. It is important to highlight that no person can shield themselves from Allah's retribution, irrespective of their degree of dedication and contributions paid to these purported guardians. These actions are performed under the mistaken idea that they will evade Allah's assessment on the day of judgement.

The cognitive methods encompass a total of 16 strategies, which include having unwavering belief in the fairness of





	<p>Live a life of righteousness, do good, ponder about Allah, and believe in him.</p>	<p>وَمَا نُرْسِلُ الْمُرْسَلِينَ إِلَّا مُبَشِّرِينَ وَمُنذِرِينَ فَمَنْ ءَامَنَ وَأَصْلَحَ فَلَا خَوْفَ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (Surah An'amAyat:48)          قُلِ اللَّهُ يَجْبِلُكُمْ مِنهَا وَمِنْ كُلِّ كَرْبٍ ثُمَّ أَنْتُمْ مُشْرِكُونَ (Surah An'amAyat:64)          الَّذِينَ ءَامَنُوا وَلَمْ يَلْبِسُوا إِيمَانَهُمْ بِظُلْمٍ أُولَئِكَ لَهُمُ الْآمَنُ وَهُمْ مُهْتَدُونَ (Surah An'amAyat:82)          Ayat:122          أَوْ مِنْ كَانَ مِنبَأً فَأَحْبَبْتُهُ وَجَعَلْنَا لَهُ نُورًا يَمْشِي بِهِ فِي النَّاسِ كَمَنْ مَثَلُهُ فِي الظُّلُمَاتِ لَيْسَ بِخَارِجٍ مِّنْهَا كَذَلِكَ زُيِّنَ لِلْكَافِرِينَ مَا كَانُوا يَعْمَلُونَ          مَا أَصَابَ مِنْ مُصِيبَةٍ إِلَّا بِإِذْنِ اللَّهِ وَمَنْ يُؤْمِنْ بِاللَّهِ يَهْدِ اللَّهُ قَلْبَهُ وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ (Surah TaghabunAyat:11)          إِنْ الَّذِينَ قَالُوا رَبُّنَا اللَّهُ ثُمَّ اسْتَفْتَمُوا أَن تَنْزِلَ عَلَيْهِمُ الْمَلَائِكَةُ أَلَّا تَخَافُوا وَلَا تَحْزَنُوا وَأَبْشِرُوا بِالْجَنَّةِ الَّتِي كُنْتُمْ تُوعَدُونَ          نَحْنُ أَوْلِيَاؤُكُمْ فِي الْحَيَاةِ الدُّنْيَا وَفِي الآخِرَةِ وَلَكُمْ فِيهَا مَا تَشْتَهَى أَنْفُسُكُمْ وَلَكُمْ فِيهَا مَا تَدْعُونَ (Surah fussilatAyat:31)          إِنْ الَّذِينَ قَالُوا رَبُّنَا اللَّهُ ثُمَّ اسْتَفْتَمُوا فَلَا خَوْفَ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (Surah AhqafAyat:13)          وَلَهُ مَا فِي السَّمٰوٰتِ وَالْأَرْضِ وَلَهُ الدِّينُ وَاصِبًا أَفَغَيْرَ اللَّهِ تَتَّقُونَ (Surah NahliAyat:52)          إِنَّهُ لَيْسَ لَهُ سُلْطٰنٌ عَلَى الَّذِينَ ءَامَنُوا وَعَلَىٰ رَبِّهِمْ يَتَوَكَّلُونَ (Surah NahliAyat:99)          إِنَّمَا سُلْطٰنُهُ عَلَى الَّذِينَ يَتَوَلَّوْنَهُ وَالَّذِينَ هُمْ بِهٖ مُشْرِكُونَ (Surah NahliAyat:100)          (Surah Hajj Ayat:31)          حُفَاءَ لِلَّهِ غَيْرَ مُشْرِكِينَ بِهِ وَمَنْ يُشْرِكْ بِاللَّهِ فَكَأَنَّمَا خَرَّ مِنَ السَّمَاءِ فَتَخٰطَفُهَا الطَّيْرُ أَوْ تَهْوِي بِهٖ الرِّيحُ فِي مَكَانٍ سَجِيٍّ وَجُهْدًا فِي اللَّهِ حَقَّ جِهَادَةٍ هُوَ اجْتَبَاكُمْ وَمَا جَعَلَ عَلَيْكُمْ فِي الدِّينِ مِنْ حَرِّجَلَةٍ إِيَّكُمْ إِذْ هَبْتُمْ هُوَ سَمَّاكُمُ الْمُسْلِمِينَ مِنْ قَبْلِ وَفِي هَذَا لِيَكُونَ الرَّسُولُ شَهِيدًا عَلَيْكُمْ وَتَكُونُوا شُهَدَاءَ عَلَى النَّاسِ فَأَقِيمُوا الصَّلٰوةَ وَءَاتُوا الزَّكٰوةَ وَءَاتُوا بِاللَّهْوِ مَوْلٰكُمُ فَبِعَمَلِكُمُ الْمَوْلٰى وَنِعْمَ النَّصِيرُ (Surah Hajj Ayat:78)          (Surah Fatir Ayat:15)          (Surah Hadid)          مَا أَصَابَ مِنْ مُصِيبَةٍ فِي الْأَرْضِ وَلَا فِي أَنْفُسِكُمْ إِلَّا فِي كِتَابٍ مِنْ قَبْلِ أَنْ نَبْرَأَهَا إِنذِك عَلَى اللَّهِ يَسِيرٌ (Surah Ayat:22)          هُوَ الَّذِي أَنْزَلَ السَّكِينَةَ فِي قُلُوبِ الْمُؤْمِنِينَ لِيَرْدَاؤًا إِيْمَانًا مَعَ إِيْمَانِهِمْ وَاللَّهُ جُوْدٌ السَّمُوتِ وَالْأَرْضِ وَكَانَ آلَ لَهُ عَلِيمًا حَكِيمًا (Surah FathAyat:22)          الَّذِينَ قَالُوا لَهُمُ النَّاسُ إِنَّ النَّاسَ قَدْ جَمَعُوا لَكُمْ فَاخْشَوْهُمْ فَزَادَهُمْ إِيمَانًا وَقَالُوا أَحْسَبِنَا اللَّهُ وَنِعْمَ الْوَكِيلُ (Ali'imranaAyat:173)          فَأَقْبَلُوا بِنِعْمَةٍ مِّنَ اللَّهِ وَفَصَّلَ لَمْ يَمَسْسَهُمْ سُوءٌ وَاتَّبَعُوا رِضْوَانُ اللَّهِ وَاللَّهُ ذُو فَضْلٍ عَظِيمٍ (Surah Ali'imranaAyat:174)          إِنَّمَا اتَّخَذُوا مِنَ الشَّيْطٰنِ لِيَحْزَنَ الَّذِينَ ءَامَنُوا وَلَيْسَ بِضَارِّهِمْ شَيْئًا إِلَّا بِإِذْنِ اللَّهِ عَلَى اللَّهِ فَايَتُوْكَرُ أَلَمْؤْمِنُونَ (MujadilahAyat:10)          (Surah YunusAyat:62)          أَلَا إِنَّ أَوْلِيَاءَ اللَّهِ لَا خَوْفَ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (Surah YunusAyat:63)          وَإِذْ يَقُولُ لِلَّذِي أَنْعَمَ اللَّهُ عَلَيْهِ وَأَنْعَمْتَ عَلَيْهِ أَمْسِكْ عَلَيْكَ زَوْجَكَ وَاتَّقِ اللَّهَ وَتُخْفِي فِي نَفْسِكَ مَا اللَّهُ مُبْدِيهِ وَتَخْشَى الْإِنْسَانَ وَاللَّهُ أَحَقُّ أَنْ تَخْشَاهُ          فَلَمَّا قَضَىٰ زَيْدٌ مِنْهَا وَطَرًا زَوَّجْنَاكَهَا لِكَيْ لَا يَكُونَ عَلَى الْمُؤْمِنِينَ حَرَجٌ فِي أَرْوَاجِ أَدْعِيَائِهِمْ إِذَا قَضَوْا مِنْهُنَّ وَطَرًا          وَكَانَ أَمْرُ اللَّهِ مَفْعُولًا (Surah AhzabAyat:37)          (Qasas)          وَأَوْحَيْنَا إِلَىٰ أُمِّ مُوسَىٰ أَنْ أَرْضِعِيْهِ فَإِذَا حَفَّتْ عَلَيْهِ فَالْقِيهِ فِي الْبَيْمِ وَلَا تَخَافِي وَلَا تَحْزَنِي إِنَّا رَادُّهُ إِلَيْكَ (Surah Ayat:7)          وَجَاعِلُوهُ مِنَ الْمُرْسَلِينَ</p>
	<p>The virtue of perseverance and the practice of a variety of religious traditions are both important.</p>	<p>إِنَّ الَّذِينَ ءَامَنُوا وَالَّذِينَ هَادُوا وَالصَّٰلِحِينَ مِنَ ءَامَنٍ بِاللَّهِ وَالْيَوْمِ الآخِرِ وَعَمِلُوا صٰلِحًا فَلَهُمْ أَجْرُهُمْ عِنْدَ رَبِّهِمْ وَلَا خَوْفٌ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (BaqaraAyat:62)          وَإِنْ عَزَمُوا الطَّلٰقَ فَإِنَّ اللَّهَ سَمِيعٌ عَلِيمٌ (BaqaraAyat:227)          إِنَّمَا يَعْمُرُ مَسٰجِدَ اللَّهِ مَنِ ءَامَنَ بِاللَّهِ وَالْيَوْمِ الآخِرِ وَأَقَامَ الصَّلٰوةَ وَءَاتَى الزَّكٰوةَ وَلَمْ يَحْضُرْ إِلَّا اللَّهُ          فَعَسَىٰ أُولَئِكَ أَنْ يَكُونُوا مِنَ الْمُهْتَدِينَ (TaubahAyat:18)</p>
	<p>Faith and consistent practice helped to alleviate strain.</p>	<p>(Surah A'arafAyat:35)          يُبَيِّنُ ءَادَمَ إِيمَانًا بِأَيْمَانِكُمْ رُسُلًا مِنْكُمْ يُفَصِّحُونَ عَلَيْكُمْ ءَايَاتِي فَمَنْ أَتَقَىٰ وَأَصْلَحَ فَلَا خَوْفَ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (Surah A'arafAyat:49)          أَهْلُوا لَآءِ الَّذِينَ أَفْسَمْتُمْ لَا يَبْتَأَلُهُمْ اللَّهُ بِرَحْمَةٍ أَنْدَخُوا الْجَنَّةَ لَا خَوْفَ عَلَيْكُمْ وَلَا أَنْتُمْ تَحْزَنُونَ (Surah A'arafAyat:49)          إِنْ الَّذِينَ ءَامَنُوا وَالَّذِينَ هَادُوا وَالصَّٰلِحِينَ مِنَ ءَامَنٍ بِاللَّهِ وَالْيَوْمِ الآخِرِ وَعَمِلُوا صٰلِحًا فَلَا خَوْفَ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ (Surah Ma'idahAyat:69)</p>





	<p>Financial and social assistance                  Participating in prayer, undertaking the Hajj pilgrimage, and engaging in acts of charity                  Adherence, settlement, and harmony</p>	<p>(Surah Baqarah Ayat:276) يَمْحُوكَ اللَّهُ الرِّبَا وَيُرِيكَ الصَّدَقَاتِ وَاللَّهُ لَا يُحِبُّ كُلَّ كَفَّارٍ أَتِيمٍ                  (Fussilat Ayat:30) إِنَّ الَّذِينَ قَالُوا رَبُّنَا اللَّهُ ثُمَّ اسْتَفْتَوْا نَنْزَلَ عَلَيْهِمُ الْمَلَائِكَةَ أَلَّا تُخَافُوا وَلَا تَحْزَنُوا وَأَبْشِرُوا بِالْجَنَّةِ الَّتِي كُنتُمْ تُوعَدُونَ                  فَهَزَمُوهُم بِإِذْنِ اللَّهِ وَقَتَلَ دَاوُدُ جَالُوتَ وَءَاتَاهُ اللَّهُ الْمُلْكَ وَالْحِكْمَةَ وَعَلَّمَهُ مِمَّا يَشَاءُ                  وَلَوْلَا دَفْعُ اللَّهِ النَّاسَ بَعْضَهُم بِبَعْضٍ لَفَسَدَتِ الْأَرْضُ وَلَكِنَّ دُو فَضَّلِعَالَى الْعَالَمِينَ                  (Surah Baqarah Ayat:251 )                  يَا أَيُّهَا الَّذِينَ ءَامَنُوا ادْخُلُوا فِي السِّلْمِ كَافَّةً وَلَا تَتَّبِعُوا خُطُوَاتِ الشَّيْطَانِ إِنَّهُ لَكُمْ عَدُوٌّ مُبِينٌ                  (Surah Baqarah aAyat:208 )                  فَإِن زَلَلْتُمْ مِّن بَعْدِ مَا جَاءَتْكُمُ النَّبِيئَاتُ فَاعْلَمُوا أَنَّ اللَّهَ عَزِيزٌ حَكِيمٌ                  (Surah Baqarah Ayat:209 )</p>
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**DISCUSSION**

The purpose of our work was to establish a stress management paradigm using Islamic materials. Based on the analysis of the verses of the Qur'an and Islamic traditions, the findings indicate that stress management strategies can be categorised into four main methods: cognitive, behavioural, emotional, and multiple-way strategies. Each of these methods comprises Comprehensive indicators are required to successfully address and manage stress. The cognitive methods consist of 16 strategies, which include having faith in Allah's justice, being guided by Allah, having insight, having faith in divine destiny, having faith in Allah's bestowal of sustenance, having faith in Allah's wisdom, having faith in divine trials, having faith in divine knowledge, having faith in Allah's mercy, having faith in Allah's omnipotence, believing in resurrection and return to Allah, having faith in the hereafter, having faith in Allah's mercy, maintaining stability and perseverance, remembering death, and being in the presence of Allah. Among these strategies, having stability and perseverance, insight, and faith in the wisdom of Allah are considered the most effective cognitive strategies for managing stress. The behavioural methods consist of 17 strategies, namely: blessing, marriage, Zakat, practicing patience or continence, sleeping, praying, Hajj, fasting, maintaining healthy family and social relations, expressing gratitude and contentment, adhering to the traditions of the Prophet (PBUH) and his household, assisting others in times of difficulty, resolving problems, demonstrating devotion and charity in the path of Allah, obeying the prophets, and seeking repentance. Practicing patience, self-control, gratitude, remorse, and engaging in Qur'an recitation and adherence to its teachings are seen as the most effective behavioural strategies for managing stress. The cognitive techniques encompass a total of 16 strategies: Remaining steadfast in one's reliance on the compassion of Allah, displaying humility towards Allah, embodying virtue, maintaining hope, seeking solace in Allah, fearing His punishment, valuing the experience of hardship over the fear of encountering it, striving to regain composure during times of adversity, nurturing self-worth, and fostering self-assurance. The most effective cognitive strategies for managing stress include cultivating a profound love for Allah, maintaining a humble attitude towards Him, fostering hope, and actively seeking solace in times of distress. The various

approaches consist of 10 techniques, encompassing belief in Allah and the Qur'an, reliance on Allah, remembrance of Allah and a commitment to piety, faith and virtuous conduct, adherence to the tenets of religion and patience, endurance in times of adversity and resistance against worldly desires, faith in Allah, striving in the path of Allah, prayer and charitable acts, and ultimately obedience, reconciliation, and unity. Placing reliance on Allah, maintaining mindfulness of Allah, and engaging in acts of devotion such as prayer and charity are seen as the most effective and comprehensive approaches to managing stress. These findings align with the results of prior research [11], [20], [21], [22], [23], [24], and [25]. Research has demonstrated the therapeutic efficacy of several spiritual interventions, including religious contemplation, invocations, and meditation. People use the Islamic mantra to achieve tranquility and modify their mental states. We can consider it a self-regulation strategy to manage stress and its consequences. This technique is a cognitive ability that has a significant impact on psychological and physiological processes within the body. It results in decreased respiration, decreased heart rates, reduced blood lactate levels, and an elevation in alpha brainwaves, all of which indicate a state of relaxation.

This type of meditation leads to enhanced cerebral blood flow, elevated serotonin levels, reduced cortisol levels, and synchronised electrical activity throughout all brain regions. Through consistent practice, individuals can gradually eliminate ingrained patterns of thoughts and emotions while simultaneously cultivating and enhancing a newfound sense of visual and subjective control. Repeating Islamic mantras can prevent the occurrence of troubling thoughts, thereby promoting long-lasting muscle relaxation [25]. Religion and spirituality can serve as effective primary and secondary means of control. Additional spiritual practices within the realm of secondary control that mitigate cognitive responses to stress include meditation, prayer, and ritual. Studying the sacred text is a beneficial activity [21]. Several researchers have found that prayer is more beneficial than progressive relaxation or no treatment in reducing anxiety and nervousness. Vafai Boor Boor conducted a study examining the relationship between religious orientation (internal and external) and coping with stress. He has determined that instructors who possess an intrinsic religious orientation experience lower levels of





professional stress compared to those with an extrinsic religious orientation. There is a significant correlation between the collective occupational pressures experienced by teachers and their use of religious coping mechanisms. Furthermore, there were distinctions between the experience of job-related stress and the use of religious coping strategies among teachers who possess internal and external religious orientations when faced with stress. Instructors with an internal religious orientation use resources such as mention, repentance, and forgiveness, as well as engage in night prayer. On the other hand, instructors with an external religious orientation primarily engage in obligatory praying, vowing, and reading of the Holy Quran. Teachers with both external and internal orientations have different stress resources. Religion significantly influences the perception of job stress [24].

The current study's findings indicate that the current stress management model is a complete one, derived from an analysis of Islamic resources. This model encompasses a wider range of domains compared to earlier models. Several earlier models possessed a psychological and clinical character. Individuals, based on their unique personality traits, choose a certain approach to cope with and manage stress. These concepts and studies seem to link to specific strategies. Various stress management techniques and methods may not offer effective coping strategies for individuals facing varied circumstances. The present study provides a thorough examination of stress, encompassing its fundamental aspects and resulting effects, while also presenting comprehensive stress management techniques. We can regard this study as exemplary for all future research and models in this field. Andler and Parker [1990] classified coping mechanisms into three distinct types. A task-oriented method necessitates acquiring information regarding stressful circumstances and their potential ramifications. Practitioners of this approach strive to prioritise their activities based on their significance and practice effective time management while carrying them out. An oriented strategy involves acquiring techniques to manage and regulate emotions and maintain a positive outlook when confronted with stressful circumstances. Individuals employing this approach typically exercise emotional regulation, as they may exhibit emotions such as rage or disappointment. The final approach is a strategy that focuses on avoiding stressful situations. This strategy requires individuals to actively reject or minimise stressful situations. Individuals employing this tactic have the ability to eliminate anxiety-inducing ideas and substitute them with alternative ones [5]. Lazarus and Folkman have categorised coping methods into two distinct types: The focus is on problem-solving and addressing specific challenges. cognitive strategies and affective strategies. We define problem-oriented strategies as responses aimed at achieving a specific goal or objective. The goal is to modify or eliminate the circumstances that induce anxiety. The emotion-oriented techniques pertain to situations that induce stress, wherein the individual possesses limited or no agency over these conditions. In such instances, individuals frequently prioritise the emotional components.

Mokhtari et al. conducted a study that revealed a significant correlation between internal religious inclination and stress levels. Internal religious orientation can play a significant role

in mitigating stress. Individuals who possess an intrinsic religious orientation experience lower levels of stress compared to those with an extrinsic religious orientation, highlighting the influence of religion in regulating stress. Religious ideas have the potential to guide individuals towards achieving perfection and maintaining good mental health. Individuals with an external religious orientation appear to experience faith deficits due to the limitations of the religious tools they rely on. As a result, those without an internal religious orientation lack well-developed characteristics and a sense of peace and harmony. Only Allah's existence causes sadness. Individuals who possess an internal religious orientation firmly believe that all events and occurrences happen solely with the consent and authorization of Allah. Put simply, genuine belief in Allah instills in the individual a feeling of fearlessness towards the unknown and future occurrences, as long as they have unwavering trust in Allah. Indeed, the individual eradicates the sources of tension and anxiety from their character. Belief in Allah and its various dimensions, including cognitive, value, attitudinal, behavioural, and emotional elements, contribute to the development of additional qualities in people. These qualities include self-esteem, internal control, and self-efficacy, which in turn make individuals more resilient to negative events and stress [23]. Gall conducted a study on the relationship between spirituality and the ability to cope with stress in adults who were victims of childhood sexual abuse. He has determined that spiritual resilience can forecast outcomes more accurately than other elements. Moreover, the negative aspects of spiritual conquering are associated with increased levels of spiritual dissatisfaction and displeasure.

While stress can play a role, studies have linked beneficial spiritual practices like spiritual protection to lower levels of stress. For example, a heightened state of depression is associated with the coping strategy of spiritual dissatisfaction, while a reduced state of depression is associated with the coping strategy of religious submission and forgiveness, such as seeking solace in Allah to alleviate unpleasant emotions [11]. We advise future researchers to formalize training programmes based on the present study's findings to address stress. The current study's disadvantage is the lack of complete consensus among the codifiers in the categorization process. The current study also recognizes the limitations of comprehensive analytical resources, time, and financial investment required for content analysis.

## CONCLUSION

The purpose of our work was to develop and formalise a stress management model using the teachings of the Qur'an and Hadith. The examination of Qur'anic verses and Islamic traditions has revealed four overarching methods for stress management solutions: cognitive, behavioural, emotional, and multi-faceted strategies. Each of these items. Methods incorporate more intricate signs to effectively address and regulate stress. The cognitive techniques include having faith in the knowledge of Allah, maintaining stability, perseverance, and insight. The behavioral strategies include being patient, practicing continence-blessing, repentance, and engaging in reading and executing the Qur'an's precepts. The mental strategies encompass fear. The most effective ways for



managing stress are devotion to Allah, submission to Allah, seeking solace and guidance from Allah during times of distress, relying on Allah's wisdom and might, constantly remembering Allah, and engaging in acts of piety like prayer and charity. Therefore, the extensive and innovative results of this study can serve as a benchmark for future research on stress, both within the field and outside. The practicality of the study's findings can offer health and mental health professionals valuable tools to assist in providing coping methods and effective treatments for stress reduction and management. These findings specifically focus on stress management using the religion model. Furthermore, what distinguishes this study from previous similar efforts is its unique use of Islamic resources to develop an original model with practical applications in stress management. Previous research has examined the association between stressful situations, diverse variables, and coping techniques for stress management.

### Acknowledgement

The Behavioural Sciences Research Centre of Bakht Arudha University of Medical Sciences, specifically the deanship and undergraduate studies department, sanctioned this study under code 452. We conducted this study in partnership with the Nigerian Muslims Foundation, with a focus on the same topic. This centre reserves all rights at its discretion. The authors would like to express their gratitude to the Behavioural Sciences Research Centre, their colleagues who assisted in carrying out this work, and their supervisor, Dr. Ali Awad Gasim.

### REFERENCES

1. Feldman RS, Garrison M. *Understanding Psychology*: Mcgraw-Hill New York, NY; 1993.
2. King M. *Ways To Identify And Coping With Job Stress*. First Ed. Tehran: Danzheh; 2009.
3. M Jahanshahi ZA, M Nasiri, NNawabi, F Shirinkam, H Karimi. *Job Stress Factors, Adjustment Models And Its Relationship With Mental Health Imam Sajjad Ramsar Hospital Nursespersian*. *FacNurs Midwifery*. 2014;12(8):741-50.
4. Parand MKA. *Stress And Coping Strategies With It*. Tehran: Tehran University Press; 2007.
5. Doroudian M. *Job Stress In Prison*. *Mon Correct*. 2013;11(134):53-6.
6. Hemmati M. *Relationship Between Job Stress And Job Satisfaction Of Nurses*. Tehran: University Of Allameh Tabataba'i; 2002.
7. MA Besharat AT, MR Rezazadeh. *Explaining Marital Satisfaction And Mental Health In Terms Of Coping Styles*. *Contemp Psychol*. 2005;1(1):48-56.
8. Sarafino EP. *Context And Perspectives In Health Psychology*. Sutton S, Baum A, Johnston M *The Sage Handbook Of Health Psychology* London. 2004:1-26.
9. A Dehghani MK. *Relationship Between Hardiness And Coping Styles In Students*. *Knowl & Health*. 2013;8(3):112-8.
10. Haris I. *Religious And Psychological Distress Among Blacks*. *J Relig Health*. 2004;3:12-5.
11. Gall TL. *Spirituality And Coping With Life Stress Among Adult Survivors Of Childhood Sexual Abuse*. *Child Abuse & Neglect*. 2006;30(7):829-44.
12. Jafari A. *Examine The Relationship Between Religious Orientation (Internally And Externally) With Coping Styles In Students*. *J Behav Sci*. 2009;1(1):91-114.
13. Shojaei M. *The Theory Spiritual Needs Of Islam Viewpoint And Of Its Correspondence With Maslow's Hierarchy Of Needs*. *J Stud Islam Psychol*. 2008;1(1):87-116.
14. *The Holy Quran*.
15. Ismaili M. *The Effect Ontology On The Mental Health Growth*. *J Counsel Res*. 2007;24:41-52.
16. Nowshadi MEM. *Qualitative Content Analysis*. *Pazhuhesh* 2011;3(2):15-44.
17. Shahri MMR. *The Mizan Alhekmeh* 14 Ed. Qom: Dar Al-Hadith; 2014.
18. Razi MC. *Hadith Al-Kafi*. Tehran: Vali Asr; 1996.
19. Amoli AJ. *Tafsier Maozoi Of The Holy Quran*. Qom: Asra.
20. Poage ED, Ketzenberger KE, Olson J. *Spirituality, Contentment, And Stress In Recovering Alcoholics*. *Addictive Behaviors*. 2004;29(9):1857-62.
21. Pargament KI, Cole B, Vandecreek L, Belavich T, Brant C, Perez L. *The Vigil: Religion And The Search For Control In The Hospital Waiting Room*. *Journal Of Health Psychology*. 1999;4(3):327-41.
22. Barabadi HA. *Develop And Evaluate The Effectiveness Of Pattern Names Consulting Logging On Improving The Image Of God And Reduce Stress, Anxiety And Depression*. Tehran: University Of Allameh Tabataba'i; 2014.
23. A Mokhtari AA, SK Tabatabaei. *Relationship Between Religious Orientation With Stress*. *J Psychol*. 2001;5(17):56-67.
24. Bour Sob. *The Role Of Religious Orientation (Internal And External) And Job Stress Coping Religious Teachers In Hamedan City* Tehran: University Of Tarbiat Modarres; 1999.
25. Ghorbani N. *Psychology Of Religion*. *Philos Theol Mysticism* 1998.



# AN ECONOMIC ANALYSIS OF VEGETABLES AND HORTICULTURAL CROPS UNDER MICRO IRRIGATION SCHEME IN HIMACHAL PRADESH

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Article DOI: <https://doi.org/10.36713/epra17698>

DOI No: 10.36713/epra17698

## ABSTRACT

The micro irrigation scheme has received considerable attention from policy makers, researchers, and economists etc. for its perceived ability to contribute significantly to groundwater resources development, agricultural productivity, economic growth, and environmental sustainability. In this paper, the impact of micro irrigation scheme has been studied on farming system in terms of production, productivity, cost and returns. At overall level Input-Output Ratio (over total variable cost) was worked out be 5.45, 5.65, 2.23, 5.40, 5.86, 2.84, 17.47, 16.38 and 38.78 for capsicum, tomatoes, brinjal, cauliflower, cabbage, potatoes, mango, kinnow and pomegranate crops respectively. Returns over variable cost were found to be positive and more than one respectively for all crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost incurred. The micro irrigation has been found to have a significant impact on resources saving, cost of cultivation, yield of crops and farm profitability. Hence, the policy should be focused on promotion of micro irrigation in those regions where scarcity of water and labour is alarming and where shift towards wider-spaced crops is taking place.

**KEY WORDS:** Micro Irrigation, Sprinkler, Drip, Input, Output, Cost, Cultivation, Return.

## 1. INTRODUCTION

Water is a resource that all living species need. Agriculture is an industry that uses a lot of water. Most of the time, this resource is not used efficiently and substantial amount of water are wasted. Irrigation advancements within the last decade have been astounding. Micro irrigation is one of the latest innovations for applying water and it represents a definite advancement in irrigation technology. It can be defined as the frequent application of small quantities of water on or below the soil surface as drops, tiny streams or miniature sprays through emitters or applicators. It differs from sprinkler irrigation by the fact that only part of the soil surface is wetted. Micro irrigation encompasses a number of methods or concepts such as bubblers, drip, trickle, mist or spray and subsurface irrigation.

Drip irrigation is one of the most efficient methods of irrigation. It is viewed as a promising technology for its ability to support farmers in raising incomes and reducing poverty. A number of benefits have been ascribed to the use of micro-irrigation. In addition to saving of water these include increased yield and productivity of certain crops (especially spaced crops), labour cost savings, electricity savings, lesser pumping hours and hence easier irrigation, better crop growth and also better soil health. Strong evidence exists claiming economic benefits from the adoption of micro-irrigation. However there exists little or sparse evidence of socio-economic benefits from the adoption of micro irrigation. There are mentions of positive nutritional impact on adopting households as well but these are few and far apart.

The water use efficiency under conventional surface method is very low due to substantial conveyance and distribution losses. Recognizing the fast decline of irrigation water potential and increasing demand for water from different sectors, a number of demand management strategies and programmes have been introduced to save water and increase the existing water use efficiency in Indian agriculture. One such method introduced relatively recently in Indian agriculture is micro-irrigation, which includes both drip and sprinkler method of irrigation. Micro-irrigation (MI) is proved to be an efficient method in saving water and increasing water use efficiency as compared to the conventional surface method of irrigation, where water use efficiency is only about 35-40 percent the benefits of micro-irrigation in terms of water saving and productivity gains are substantial in comparison to the same crops cultivated under surface method of irrigation. Micro-irrigation is also found to be reducing energy (electricity) requirement, weed problems, soil erosion and cost of cultivation. The coverage of drip (2.13 percent) and sprinkler (3.30 percent) method of irrigation is very meager to its total potential, which is estimated to be 21.01 million hectares for drip and 50.22 million hectares of sprinkler irrigation method.

Expenditure on the implementation of PMKSY is shared in the ratio of 50:30:20 between centre government, state government and the beneficiary in case of small and marginal farmers. In other words, subsidy assistant for small and marginal farmer will be @ 80% of the cost of the drip/sprinkler irrigation system and the remaining 20% will have to be borne by the farmer. In case of medium and large, subsidy assistance will be @ 50% of the cost of the system which will be shared in the ratios of 50:50 by the central government and the beneficiary.



## 2. OBJECTIVES

- (1) To study the economics of vegetables and horticultural crops under micro irrigation scheme in Himachal Pradesh.
- (2) To examine the shortcoming in micro irrigation scheme and suggest measures to remove this problem.

## 3. METHODOLOGY

The department of Horticulture, Himachal Pradesh has taken step to popularize the micro irrigation systems in all the districts except for districts of Lahaul-Spiti and Kinnaur. It was therefore that the study was conducted in two districts selected from the remaining ten districts where the micro irrigation systems have been installed. The district Kangra has been purposely selected on the basis of having highest area under Micro Irrigation System. The second district i.e. Bilaspur was selected purposely due to higher number of beneficiaries in comparison to Kullu and Sirmour districts, though the area under MIS was slightly higher in these districts than that in Bilaspur. The selected districts were divided in to two development blocks i.e. Indora and Dehra in district Kangra and Jhanduta and Sadar in Bilaspur district on the basis of having largest number of micro irrigation systems.

To fulfill the objectives of the present study, the sampling design was framed in such a way as to cover all classes of beneficiaries in the sampled schemes. In each of the selected blocks 25 vegetable farmers and orchardists using micro irrigation system have been randomly selected from the areas having sufficient concentration of micro irrigation systems, making it possible to draw the sample. Such areas were identified with the help of concerned officials of department of horticulture. Thus, the study is based on 100 farmers using micro irrigation systems (beneficiary). The selected farmers were further classified into four categories on the basis of the size of their land holdings for quantitative analysis. These are marginal (up to 0 to 1 hectares), small (1 to 2 hectares), medium (2 to 4 hectares), and large (above 4 hectares) of land holdings.

Both secondary as well as primary data has been used in this study. Detailed information was gathered regarding farm

resources, cropping system, cost and returns from crops and orchards. The secondary information related to micro irrigation scheme was obtained from different departments of Himachal Pradesh. To make the analysis simple and more understandable, tabulator analysis has been used.

## 4. RESULTS AND DISCUSSION

In this paper, an attempt has been made to calculate the various cost and returns (Gross value- production cost) incurred on cultivation of crops under unprotected conditions by different categories of sampled beneficiary and non-beneficiary farmers in Himachal Pradesh. It was found that the farmers were growing large variety of crops under unprotected conditions. Hence, the present analysis has been carried out of all crops under MIS. These crops included capsicum, tomatoes, brinjal, cauliflower, cabbage, potatoes, mango, kinnow, pomegranate etc. Cost of cultivation includes various operations inputs and cost of labour. The family labour has also been evaluated at the rate of hired labour. Transportation carriage, handling etc, if any, have been added to purchase price of inputs to work out the actual cost of input applied. Many of the inputs are home produced or some portion of these is home produced. Under such circumstances the home produced inputs have been evaluated at the current market price for working out the cost of cultivation of selected crops.

### 4.1 Cost and return of cultivation of capsicum under MIS in Himachal Pradesh

The cost of cultivation of capsicum under MIS beneficiary has been presented in Table 1. The cost of cultivation, at overall level, was found Rs. 21212 per hectare and this cost was Rs. 20627.5 for marginal and Rs. 22381 for small farmers among beneficiary household in Himachal Pradesh. It was found that value of human labour was the largest cost component accounting for 26 per cent of the total cost of cultivation followed by manure (25) and fertilizer (14). Insecticides/pesticides application was 13 per cent of the total cost. Returns over variable cost were found to be positive and more than one respectively for capsicum crop, which reveals that farmers cultivating this crop were recovering variable costs as well as getting returns over variable costs incurred.

**Table-1**  
**Cost and return of cultivation of capsicum under in MIS**

(Cost: Rs./Hact)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	2500	3125	-	-	2708.5
Manure	5000	5750	-	-	5250
Fertilizer	3000	2700	-	-	2900
I&P	2727.5	2761	-	-	2738.5
Irrigation	50	75	-	-	58.5
Machinery Labour	1200	1250	-	-	1216.5
Animal Labour	900	970	-	-	923.5
Human Labour	5250	5750	-	-	5416.5
<b>Total Variable Cost</b>	<b>20627.5</b>	<b>22381</b>	-	-	<b>21212</b>
Gross Value of Output	91325	112500	-	-	115500
Returns Over Variable Cost	70697.5	90119	-	-	94288
<b>Input-Output Ratio</b>	<b>4.43</b>	<b>5.03</b>	-	-	<b>5.45</b>

Source: Field Survey





#### 4.2 Cost and return of cultivation of tomatoes under MIS in Himachal Pradesh

The cost of tomatoes cultivation is given in Table 2. The cost of cultivation, at overall level, was found to be Rs. 54560 per hectare and this cost was Rs. 53022.5 for marginal, Rs. 54862.5 for small and Rs. 57152 for medium size of holding in Himachal Pradesh. The analysis revealed that manure was the largest cost component accounting for 31 per cent of the total cost of cultivation. This was followed by human labour (25%) and Insecticides/pesticides (15%). It was found that the net return from cultivation of Tomatoes was Rs. 253940 per hectare

at overall level. However, the net returns were Rs. 240777.5 for marginal, Rs. 279037.5 for small and Rs. 280348 for medium beneficiary farmers in Himachal Pradesh. Input-Output Ratio (over total variable cost) was 5.54, 6.09, 5.91 and 5.65 for marginal, small, medium and all holdings respectively for tomato crop. Returns over variable cost were found to be positive and more than one respectively for tomato crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost incurred.

**Table-2**  
**Cost and return of cultivation of tomatoes under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	6100	6612.5	7200	-	6560.5
Manure	16125	16712.5	18750	-	17046
Fertilizer	4575	4612.5	4631	-	4576
I&P	7940	8125	7910	-	7979
Irrigation	137.5	167.5	225	-	183.5
Machinery Labour	1987.5	2217.5	2375	-	2146.5
Animal Labour	2772.5	2357.5	2276	-	2514.5
Human Labour	13385	14057.5	13785	-	13554.5
<b>Total Variable Cost</b>	<b>53022.5</b>	<b>54862.5</b>	<b>57152</b>	<b>-</b>	<b>54560</b>
Gross Value of Output	293800	333900	337500	-	308500
Returns Over Variable Cost	240777.5	279037.5	280348	-	253940
<b>Input-Output Ratio</b>	<b>5.54</b>	<b>6.09</b>	<b>5.91</b>	<b>-</b>	<b>5.65</b>

Source: Field Survey

#### 4.3 Cost and return of cultivation of brinjal under MIS in Himachal Pradesh

The cost of cultivation for brinjal has been presented in Table 3. Wherein, it may be seen from table that the cost of cultivation, at overall level was found to be Rs. 52922.5 per hectare and this cost was Rs. 51275 for marginal, Rs. 53382.5 for small, Rs. 55125 for medium and Rs. 54705 for large farmers in Himachal Pradesh. The analysis revealed that manure was the largest cost component accounting for 30 per cent and this was followed by human labour, Insecticides/pesticides and seeds. It was found that net return

from cultivation of brinjal was Rs. 70452.5 per hectare at overall level in Himachal Pradesh. However, the net returns were Rs. 1088.8.5 for marginal, Rs. 34117.5 for small, Rs. 282375 for medium and Rs.76545 for large beneficiary farmers in H.P. Input-Output Ratio (over total variable cost) was 3.12, 1.64, 6.12, 2.40 and 2.33 for marginal, small, medium, large and all holdings respectively for tomato crop. Returns over variable cost were found to be positive and more than one respectively for brinjal crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost incurred.

**Table-3**  
**Cost and return of cultivation of brinjal under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	6200	6550	7285	6650	6657
Manure	15125	15712.5	17750	15575	16118.5
Fertilizer	4587.5	4630	4665	4750	4605.5
I&P	7940	8125	7910	8375	7990.5
Irrigation	137.5	167.5	225	200	185.5
Machinery Labour	1787.5	2067.5	2175	2100	1975
Animal Labour	2917.5	2412.5	2350	2530	2588
Human Labour	12580	13717.5	12765	14525	12802
<b>Total Variable Cost</b>	<b>51275</b>	<b>53382.5</b>	<b>55125</b>	<b>54705</b>	<b>52922.5</b>
Gross Value of Output	160083.5	87500	337500	131250	123375
Returns Over Variable Cost	108808.5	34117.5	282375	76545	70452.5
<b>Input-Output Ratio</b>	<b>3.12</b>	<b>1.64</b>	<b>6.12</b>	<b>2.40</b>	<b>2.33</b>

Source: Field Survey



#### 4.4 Cost and return of cultivation of cauliflower under MIS in Himachal Pradesh

The cost of cultivation for cauliflower has been presented in Table 4. It can be seen from the table that the cost of cultivation,

at overall level, was found to be Rs. 57959 per hectare and this cost was Rs. 57518 for marginal, Rs. 57355 for small and Rs. 59329 for large size beneficiary farmers.

**Table-4**  
**Cost and return of cultivation of cauliflower under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	7618.5	7529.5	-	8448	7689.5
Manure	16973	17005	-	18000	17344
Fertilizer	7262.5	7257.5	-	7246	7343
I&P	7126.5	7237.5	-	7224	7187
Irrigation	175	210	-	265	210.5
Machinery Labour	2365.5	2450	-	2565	2441.5
Animal Labour	2367.5	2103	-	2200	2215
Human Labour	13632.5	13563	-	13381	13528
<b>Total Variable Cost</b>	<b>57518</b>	<b>57355.5</b>	<b>-</b>	<b>59329</b>	<b>57959</b>
Gross Value of Output	325266.5	332150	-	337500	312750
Returns Over Variable Cost	267748.5	274794.5	-	278171	254791
<b>Input-Output Ratio</b>	<b>5.66</b>	<b>5.79</b>	<b>-</b>	<b>5.69</b>	<b>5.40</b>

Source: Field Survey

Further, the analysis revealed that manure was the largest cost component accounting for 30 percent followed by human labour for 23 percent, seed and fertilizer 13 percent each of the total cost of cultivation. Insecticides/pesticides application was 12 per cent of the total cost. The net return from cultivation of cauliflower was Rs. 254791 per hectare at overall level in Himachal Pradesh. However, the net returns were Rs. 267748.5 for marginal, Rs. 274794.5 for small and Rs. 278171 for large size farm in Himachal Pradesh. Input-Output Ratio (over total variable cost) was 5.66, 5.79, 5.69 and 5.40 for marginal, small, large and all holdings respectively for cauliflower crop. Returns over variable cost were found to be positive and more than one respectively for cauliflower crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost incurred.

#### 4.5 Cost and return of cultivation for cabbage under MIS in Himachal Pradesh

The cost of cultivation for cabbage has been presented in Table 5. It can be seen from the table that the cost of cultivation, at

overall level was found to be Rs. 53738.5 per hectare and this cost was Rs. 52715.5 for marginal, Rs. 53288 for small and, Rs. 54614 for large size of land holding. Further, the analysis revealed that manure was the largest cost component accounting for 30 percent followed by human labour for 25 percent and seed 13 percent of the total cost of cultivation. Insecticides/pesticides application was 12 per cent of the total cost. The net returns from cabbage cultivation for different size categories are given in Table 5. It can be seen from the table that the net returns from cabbage at overall level in Himachal Pradesh was Rs.261261.5. . Input-Output Ratio (over total variable cost) was 4.82, 4.02, 5.15 and 5.86 for marginal, small, large and all holdings respectively for cabbage crop. Returns over variable cost were found to be positive and more than one respectively for cabbage crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost.

**Table-5**  
**Cost and return of cultivation for cabbage under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	6622.5	6885	-	6970	6747.5
Manure	15940	16250	-	17000	16348.5
Fertilizer	5397.5	5060	-	5333	5426.5
I&P	6400	6400	-	6475	6473.5
Irrigation	165	268	-	280	221
Machinery Labour	2425	2475	-	2500	2446
Animal Labour	2553	2200	-	2256	2421
Human Labour	13212.5	13750	-	13800	13655
<b>Total Variable Cost</b>	<b>52715.5</b>	<b>53288</b>	<b>-</b>	<b>54614</b>	<b>53738.5</b>
Gross Value of Output	254183.5	214300	-	281250	315000
Returns Over Variable Cost	201468	161012	-	226636	261261.5
<b>Input-Output Ratio</b>	<b>4.82</b>	<b>4.02</b>	<b>-</b>	<b>5.15</b>	<b>5.86</b>

Source: Field Survey



#### 4.6 Cost and return of cultivation for potatoes under MIS in Himachal Pradesh

The cost of cultivation for potatoes has been presented in Table 6. It can be seen from the table that the cost of cultivation, at overall level, was found to be Rs. 66133 and this cost was Rs. 65207.5 for marginal and Rs. 68485 for small size beneficiary farmers in Himachal Pradesh. The analysis revealed that seed was the largest cost component accounting for 28 and this was followed by manure 26 percent and human labour 21 percent in

Himachal Pradesh. The net returns from potatoes are given in Table 6. It was found that net return from cultivation of potatoes was Rs. 121367 per hectare at overall level and this return were Rs. 108467.5 for marginal and Rs. 127948 for small beneficiary farmers in Himachal Pradesh. Returns over variable cost were found to be positive and more than one respectively for potatoes crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost incurred.

**Table-6**  
**Cost and return of cultivation of potatoes under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	18275	18950	-	-	18560
Manure	16875	18750	-	-	17250
Fertilizer	4575	4575	-	-	4597.5
I&P	7115	7385	-	-	7170.5
Irrigation	217.5	225	-	-	225
Machinery Labour	2325	2400	-	-	2355
Animal Labour	2425	2200	-	-	2335
Human Labour	13400	14000	-	-	13640
<b>Total Variable Cost</b>	<b>65207.5</b>	<b>68485</b>	-	-	<b>66133</b>
Gross Value of Output	173675	196433	-	-	187500
Returns Over Variable Cost	108467.5	127948	-	-	121367
<b>Input-Output Ratio</b>	<b>2.66</b>	<b>2.87</b>	-	-	<b>2.84</b>

Source: Field Survey

#### 4.7 Cost and return of cultivation for mangoes under MIS Himachal Pradesh

The cost of cultivation for mangoes has been presented in Table 7. It can be seen from the table that the cost of cultivation, at

overall level, was found to be Rs. 39260.5 per hectare and this cost was Rs. 36625 for marginal, Rs. 37350 for small, Rs. 39105 for medium and Rs.41315 for large size beneficiary farmers in Himachal Pradesh.

**Table-7**  
**Cost and return of cultivation for mangoes under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	-	-	-	-	-
Manure	4800	4800	4925	5200	4921.5
Fertilizer	6500	6550	6575	6700	6582
I&P	4500	4500	4575	4700	4577.5
Irrigation	200	235	250	265	255
Machinery Labour	0	0	0	0	0
Animal Labour	0	0	0	0	0
Human Labour	20625	21265	22780	24450	22924.5
<b>Total Variable Cost</b>	<b>36625</b>	<b>37350</b>	<b>39105</b>	<b>41315</b>	<b>39260.5</b>
<b>Gross Value of Output</b>	<b>765233</b>	<b>683671.5</b>	<b>685945.5</b>	<b>746988</b>	<b>686046</b>
Returns Over Variable Cost	728608	646321.5	646840.5	705673	646785.5
<b>Input-Output Ratio</b>	<b>20.89</b>	<b>18.30</b>	<b>17.54</b>	<b>18.08</b>	<b>17.47</b>

Source: Field Survey

It can also be seen from the table that human labour was the largest cost component in Himachal Pradesh. No farmer was observed to be using seed, hired animal labour and hired machinery in this crop. The analysis reveals that the net returns from mango cultivation were Rs. 646785.5 in Himachal Pradesh at overall level. The category wise net return was observed to be Rs. 728608 for marginal, Rs.646321.5 for small, Rs. 646840.5 for medium and Rs.705673 for large farmers in Himachal Pradesh. . Input-Output Ratio (over total variable cost) was 20.89, 18.30, 17.54, 18.08 and 17.47 for marginal,

small, medium, large and all holdings respectively for mango crop. Returns over variable cost were found to be positive and more than one respectively for mango crop, which reveals that farmers cultivating this crop were recovering variable costs as well as getting returns over variable cost.

#### 4.8 Cost and return of cultivation for kinnow under MIS Himachal Pradesh

The cost of kinnow cultivation has been presented in Table 8. The cost of cultivation, at overall level, was found to be Rs.



40255 per hectare and this cost was Rs. 37445 for marginal, Rs. 38325 for small, Rs. 39485 for medium and Rs. 41365 for large beneficiary farmers in Himachal Pradesh. Further, the table reveals that human labour was the largest cost component

accounting for 61 per cent of the total cost of cultivation. This was followed by manure (14%) and Insecticides/pesticides (13%).

**Table-8**  
**Cost and return of cultivation of kinnow under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	0	0	0	0	0
Manure	5495	5500	5700	5865	5754
Fertilizer	4000	4200	4500	5000	4709
I&P	4800	4900	5000	5200	5086
Irrigation	150	275	285	300	282
Machinery Labour	0	0	0	0	0
Animal Labour	0	0	0	0	0
Human Labour	23000	23450	24000	25000	24424
<b>Total Variable Cost</b>	<b>37445</b>	<b>38325</b>	<b>39485</b>	<b>41365</b>	<b>40255</b>
Gross Value of Output	808693	625000	645833	629302	659474
Returns Over Variable Cost	771248	586675	606348	587937	619219
<b>Input-Output Ratio</b>	<b>21.60</b>	<b>16.31</b>	<b>16.36</b>	<b>15.21</b>	<b>16.38</b>

Source: Field Survey

The analysis reveals that the net return from kinnow cultivation at overall level was found to be Rs. 619219 per hectare. However, the net returns from kinnow cultivation was Rs.771244 for marginal, Rs.586675 for small, Rs. 606348 for medium and Rs.587937 for large beneficiary farmers in Himachal Pradesh. . Input-Output Ratio (over total variable cost) was 21.60, 16.31, 16.36 , 15.21 and 5.40 for marginal, small, medium, large and all holdings respectively for kinnow crop. Returns over variable cost were found to be positive and more than one respectively for kinnow crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost.

#### 4.9 Cost and return of cultivation for pomegranate under MIS in Himachal Pradesh.

The cost of pomegranate cultivation has been presented in Table 9. The cost of cultivation, at overall level, was found to be Rs. 40642 per hectare and this cost was Rs. 36575 for marginal, Rs. 39025 for small, and Rs.42975 for medium

beneficiary farmers in Himachal Pradesh. Further, the table reveals that human labour was the largest cost component accounting for 55 per cent of the total cost of cultivation. This was followed by fertilizer (17%) and Insecticides/pesticides (14%). The net returns from pomegranate cultivation for different size categories in Himachal Pradesh among the beneficiary farmers are given in Table 10. It was found that net return from cultivation of pomegranate was Rs.1535445 per hectare at overall level. However, the net returns were Rs.1525925 for marginal and Rs. 1541434 for small and Rs.1519525 for medium beneficiary farmers in Himachal Pradesh. . Input-Output Ratio (over total variable cost) was 42.72, 40.50, 36.36 and 38.78 for marginal, small, medium and all holdings respectively for pomegranate crop. Returns over variable cost were found to be positive and more than one respectively for pomegranate crop, which reveals that farmers cultivating this crop were recovering variable cost as well as getting returns over variable cost.

**Table-9**  
**Cost and return of cultivation of pomegranate under MIS**

(Cost: Rs./Hact.)

Cost Components	Marginal Holding	Small Holding	Medium Holding	Large Holding	All Holding
Seed	0	0	0	-	0
Manure	5225	5350	5400	-	5354
Fertilizer	6200	6500	7000	-	6706
I&P	5000	5400	6800	-	6054
Irrigation	150	200	225	-	204
Machinery Labour	0	0	0	-	0
Animal Labour	0	0	0	-	0
Human Labour	20000	21575	23550	-	22323
<b>Total Variable Cost</b>	<b>36575</b>	<b>39025</b>	<b>42975</b>	<b>-</b>	<b>40642</b>
Gross Value of Output	1562500	1580459	1562500	-	1576087
Returns Over Variable Cost	1525925	1541434	1519525	-	1535445
<b>Input-Output Ratio</b>	<b>42.72</b>	<b>40.50</b>	<b>36.36</b>	<b>-</b>	<b>38.78</b>

Source: Field Survey





## 5. CONCLUSION AND RECOMMENDATION

The per hectare costs of cultivation of capsicum, tomato, brinjal, cauliflower, cabbage, potatoes, mangoes, kinnows and pomegranate at overall level have been worked out to be Rs. 21212, Rs. 45560, Rs. 52922.5, Rs. 57959, Rs. 53738.5, Rs. 66133, Rs. 39260.5, Rs. 40255, and Rs. 40642 in Himachal Pradesh respectively. The manure and human labour was the largest cost component among the MIS beneficiary farmers in Himachal Pradesh. For the horticultural crops, fertilizer and human labour was the largest cost component among the beneficiary farmers in both the districts. On an average, the per hectare net returns from the cultivation of capsicum, tomato, brinjal, cauliflower, cabbage, potatoes, mangoes, kinnow and pomegranate at overall level, have been worked out to be Rs. 94288, Rs. 253940, Rs. 70452.5, Rs. 254791, Rs. 261261.5, Rs. 121367, 646785.5, Rs. 619219 and Rs. 1535445 in Himachal Pradesh respectively.

The major problems related to installation of Micro Irrigation System, which were reported by farmers, are information delay, misleading information, information regarding Micro Irrigation System not broad cast in newspaper, television and radio etc. The design of micro irrigation system not was provided by the concern authorities, available design was high technological and it was difficult to implement those. The various problems faced by the farmers in the study area related to transportation facilities were; non availability of vehicles in time, long wait to get vehicles or payment of more charges during the peak season of vegetables and horticultural crops. Besides transportation, problems like shortage of packing material, high prices of these and lack of storage facilities were also of major concerned to the grower in the study areas. The prices of produce depend mainly on the market conditions, and if the growers do not have proper information regarding market, then they cannot take the advantage of high prices. The farmers were facing the problems of getting late information, information available for few markets only, inadequate information and misleading information. Sometimes vegetable growers get very little out of their sale because of low prices in the market, high marketing cost, malpractices by commission agents and other market functionaries etc. In most of the cases, commission agents quote lower prices than the actual one.

It is clear from the above discussion that the Micro Irrigation Scheme in Himachal Pradesh has increased the production, productivities and income of the farmers. But in spite of these, there are many problems faced by farmers. The following suggestions are given to improve the conditions of these farmers.

- Establishment of vegetable and fruits processing units in producing areas can improve the profitability by reducing the losses in picking, grading and packing etc. This will also solve the problem of packing material and transportation up to some extent.
- Arrangement should be made to provide low interest loan, sanction of loan and subsidies in time, good quality of seed and fertilizer.
- Government should organize awareness camps about Micro Irrigation System at Village levels.

- Keeping in view the perishable nature of vegetables and fruits and variations in market prices, adequate storage facilities should be developed.
- Arrangement should be made to provide latest information regarding prices and arrivals of the vegetables and fruits in the markets.
- The emphasis should be given to expand the market facilities and on developing infrastructure by improving packing and transportation facilities.
- In present marketing system of vegetables and fruits, most of the benefits are reaped by the middleman. An attempt should be made to strengthen the marketing system by organizing cooperative societies, particularly for small farmers. This will help in minimizing the margin of the intermediaries and will ultimately ensure better producers share in consumer rupee.

## 6. REFERENCES

1. Puranik, R. P., Khonde, S. R., and Ganorkar, P. L. (1992), *Constraints and problems as perceived by non adopters and adopters of drip irrigation systems, Agricultural Situation in India*, 47(1):33-34.
2. Sivannappan, R.K. (1994), *Prospects of micro-irrigation in India, Irrigation and Drainage Systems*, 8 (1):49-58.
3. Reddy, K. S. and Reddy, G. P. (1995), *Micro irrigation for water scarce areas, Yojana*, 39(8): 39-42.
4. Narayanamoorthy, A. (1997), *Economic Viability of drip irrigation: An empirical analysis from Maharashtra, Indian Journal of Agricultural Economics*, 52(4): Oct.-Dec.
5. Narayanamoorthy, A. (2005), *Economics of drip irrigation in sugarcane cultivation: Case study of a farmer from Tamil Nadu, Indian Journal of Agricultural Economics*, 60 (2):235-248.
6. Dhawan, B.D. (2000). *Drip irrigation: Evaluating returns, Economic and Political Weekly*, 35(42): 3775-3780.
7. Narayanamoorthy, A. (1997), *Drip irrigation: A viable option for future irrigation development, Productivity*, 38 (3): 504-511.
8. Narayanamoorthy, A. (2003), *Averting water crisis by drip method of irrigation: A study of two water intensive crops, Indian Journal of Agricultural Economics*, 58(3): 427-437.
9. Kannan, S. and Gurumurthy, S. (1999), *Drip irrigation and water management, Yojana*, 13(1): 15-16.
10. Narayanamoorthy, A. and Deshpande, R. S. (1998), *Economics of drip irrigation: A comparative study of Maharashtra and Tamil Nadu, Mimeograph Series No. 47, Agro-Economic Research Centre, Gokhale Institute of Politics and Economics, Pune, Maharashtra.*



# STUDENTS UNREST AND STRIKES IN INSTITUTIONS OF LEARNING

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Article DOI: <https://doi.org/10.36713/epra17688>

DOI No: 10.36713/epra17688

## ABSTRACT

*In an era where student unrest and strikes are becoming increasingly prevalent in institutions of learning worldwide, understanding the underlying causes and finding effective solutions has never been more critical. This study delves into the multifaceted nature of student protests, exploring the roles of poor governance, inadequate facilities, socio-political influences, economic pressures, and psychological stress in fueling dissatisfaction and agitation among students. Through a comprehensive review of existing literature, this research identifies key strategies for mitigating unrest, including transparent governance, enhanced communication, infrastructural investments, and robust mental health support. The findings underscore the importance of a holistic approach to creating a stable and conducive educational environment, emphasizing that the involvement of students in decision-making processes and proactive engagement with socio-political issues are vital in curbing the tide of student strikes. By implementing these strategies, educational institutions can foster a more supportive and peaceful atmosphere, thereby ensuring the continuity and quality of academic progress.*

**KEYWORDS:** Student unrest, Strikes, Poor governance, Socio-political influences, mental health support

## INTRODUCTION

Students' unrest and strikes in institutions of learning have become a prevalent issue globally, disrupting academic progress and highlighting systemic challenges within educational environments. This phenomenon often stems from a combination of factors, including poor governance, inadequate facilities, and a lack of engagement between administration and the student body (Nwankwo, 2020). Additionally, societal and political influences frequently exacerbate tensions, leading to more pronounced and widespread protests (Ojo & Olufemi, 2018). Addressing these disturbances necessitates a holistic approach that prioritizes open communication, responsive leadership, and the active participation of students in decision-making processes to foster a more stable and conducive educational atmosphere. Hence, this study explores students' unrest and strikes in schools to understand their underlying causes and potential solutions.

## RESEARCH QUESTIONS

1. What are the causes in students' strikes and unrest in schools?
2. How can strikes and unrest be curbed in schools?

## REVIEW OF LITERATURE

### The concept of the word students' unrest and strikes

The term "students' unrest" refers to a state of dissatisfaction and agitation among students within educational institutions, which can manifest in various forms such as protests, sit-ins, boycotts, and other forms of collective action. This unrest often arises from

grievances related to academic policies, administrative decisions, or broader socio-political issues affecting the student body (Nwankwo, 2020). On the other hand, "strikes" in schools involve the organized refusal by students to attend classes or participate in school activities as a form of protest against perceived injustices or to press for specific demands (Ojo & Olufemi, 2018). These strikes can be a powerful means for students to draw attention to their concerns and effect change within their institutions.

### Causes of students unrest and strikes in schools.

Students' unrest and strikes in educational institutions have become pervasive issues worldwide, disrupting academic processes and highlighting deeper systemic problems. Understanding the causes of these disturbances is crucial for developing effective interventions. This literature review synthesizes existing research on the primary causes of students' unrest and strikes in schools, focusing on governance issues, inadequate facilities, socio-political influences, economic factors, the impact of social media, and psychological factors. Poor governance is a recurrent theme in the literature, with ineffective leadership, lack of transparency, and arbitrary administrative decisions contributing significantly to student dissatisfaction. For instance, Nwankwo (2020) emphasizes that students frequently protest against policies perceived as unfair or detrimental to their academic progress and well-being. Governance issues can also manifest in the form of corruption, where mismanagement of funds leads to inadequate educational resources, further exacerbating student grievances (Adebayo, 2019). The quality of



educational facilities is directly linked to student satisfaction and performance. Numerous studies have highlighted the impact of poor infrastructure on student morale and academic outcomes. Williams (2020) found a strong correlation between inadequate facilities and the frequency of student protests. Socio-political factors significantly influence the dynamics of student unrest. Broader societal issues such as economic instability, political unrest, and social inequalities often spill over into educational institutions. Ojo and Olufemi (2018) argue that students are not isolated from their socio-political environment; hence, national issues can trigger or amplify local grievances within schools. Effective communication between students and school administrations is critical in preventing and resolving unrest. Johnson and Adams (2017) highlight that schools with robust mechanisms for student engagement and feedback experience fewer instances of unrest. Economic factors also play a crucial role in student unrest. High tuition fees, inadequate financial aid, and the rising cost of living contribute to the financial strain on students and their families. According to Brown (2018), economic hardships can lead to increased stress and frustration among students, who may then organize strikes to demand more affordable education and better financial support. The advent of social media has transformed the landscape of student activism. Smith (2021) notes that social media platforms provide students with powerful tools to organize, mobilize, and spread their messages rapidly. This increased connectivity allows for the swift dissemination of information and can lead to larger and more coordinated protests. Psychological factors, such as stress and mental health issues, are increasingly recognized as contributors to student unrest. A study by Williams and Harris (2022) found that students who reported higher levels of stress were more likely to participate in protests. Schools that neglect mental health support and fail to address the psychological well-being of their students may inadvertently contribute to an environment where unrest is more likely to occur.

### Remedies to Students Strikes and Unrest in Schools.

Addressing students' unrest and strikes in schools requires a multifaceted approach that targets the root causes and promotes a stable educational environment. Effective governance is crucial, as studies suggest that transparent, accountable, and responsive leadership can significantly reduce student dissatisfaction (Nwankwo, 2020). Schools should establish clear policies that involve students in decision-making processes, as participatory governance fosters a sense of ownership and reduces feelings of alienation (Brown, 2018). Improving educational facilities is another essential remedy. Investments in infrastructure, adequate learning materials, and proper sanitation can enhance student satisfaction and academic outcomes, thereby decreasing the likelihood of unrest (Williams, 2020). Socio-political influences must also be managed carefully. Engaging with the broader community and addressing societal issues that impact students can help mitigate the spillover of external conflicts into educational settings (Ojo & Olufemi, 2018). Effective communication and engagement strategies are vital in this context. Establishing open channels for dialogue between

students and administrators helps address grievances promptly and reduces misunderstandings that can lead to escalations (Johnson & Adams, 2017). Additionally, providing economic support to students, such as scholarships, financial aid, and affordable tuition fees, can alleviate financial pressures that often trigger protests (Brown, 2018). The role of social media in student activism cannot be overlooked. Schools should leverage social media for positive engagement, using it to communicate effectively with students and address their concerns before they escalate (Smith, 2021). Finally, addressing psychological factors is critical. Providing mental health support and creating an environment that prioritizes students' psychological well-being can reduce stress and anxiety, which are significant contributors to unrest (Williams & Harris, 2022). Implementing these strategies collectively can help create a more conducive learning environment, reducing the incidence of students' unrest and strikes in schools.

### METHODOLOGY

The study employed a secondary data analysis approach, utilizing existing literature such as journal articles, published theses, and reports to investigate the causes and remedies of students' unrest and strikes in educational institutions. This approach involves a comprehensive review of scholarly databases, academic journals, institutional repositories, and relevant publications to collect and analyze data. Key search terms and inclusion criteria were defined to identify relevant studies, ensuring a wide-ranging and thorough examination of the topic. The selected literature was systematically reviewed and synthesized, focusing on identifying patterns, themes, and findings that contribute to understanding the multifaceted nature of students' unrest and effective intervention strategies.

### RESULTS AND DISCUSSION

The results and discussion highlight several critical factors influencing students' unrest and strikes in educational institutions. Transparent governance structures and inclusive decision-making processes were found to significantly reduce unrest, with 85% of students feeling more engaged when involved in policy discussions (Nwankwo, 2020). Improved educational facilities, including modern classrooms and adequate materials, correlated strongly with a 60% decrease in protest activities, fostering a conducive learning environment (Williams, 2020). Addressing socio-political influences through community engagement was also effective, as schools actively involved in local issues saw a reduction in unrest, supported by 70% of students feeling more connected (Ojo & Olufemi, 2018). Effective communication channels between students and administrators played a vital role, with 78% of students believing it helped prevent strikes (Johnson & Adams, 2017). Economic support, such as scholarships and financial aid, reduced protest incidents by 55%, alleviating financial stress among students (Brown, 2018). While social media facilitated protest mobilization, it also enabled proactive school communication, mitigating disruptions (Smith, 2021). Addressing psychological factors was crucial, with schools providing mental health support reporting lower stress levels and



fewer protests, supported by 65% of students valuing these services (Williams & Harris, 2022). These findings underscore the multifaceted strategies needed to foster a stable educational environment and reduce instances of student unrest and strikes.

## CONCLUSION

The study concludes that a multifaceted approach is essential for mitigating students' unrest and strikes in schools. Effective governance, improved facilities, socio-political engagement, open communication, economic support, strategic use of social media, and psychological services are all critical components of a comprehensive strategy to create a stable and conducive learning environment.

## RECOMMENDATIONS

- **Implement Participatory Governance:** Schools should adopt inclusive decision-making processes to involve students in policy discussions, thereby fostering a sense of ownership and reducing feelings of alienation.
- **Invest in Infrastructure:** Governments and school administrations should prioritize funding for educational facilities to provide a conducive learning environment.
- **Engage with Communities:** Schools should actively address broader socio-political issues affecting students, ensuring a supportive and responsive institutional environment.
- **Enhance Communication:** Establish clear and open channels for dialogue between students and administrators to resolve grievances promptly and prevent escalation.
- **Provide Economic Support:** Increase financial aid, scholarships, and reduce tuition fees to alleviate the financial burden on students and their families.
- **Leverage Social Media:** Use social media platforms for positive engagement and proactive communication with students to address their concerns in real-time.
- **Offer Psychological Services:** Implement robust mental health support systems to help students manage stress and anxiety, contributing to overall well-being and stability within the school environment.

By implementing these recommendations, educational institutions can significantly reduce the incidence of students' unrest and strikes, creating a more stable and productive learning environment.

## REFERENCE

1. Adebayo, T. (2019). *Socio-political factors and student unrest in tertiary institutions*. *Journal of Social Studies*, 54(2), 112-127.
2. Brown, K. (2018). *Economic hardships and student protests: An analysis*. *Educational Economics Review*, 31(4), 489-507.
3. Johnson, M. &. (2017). *Building trust and communication in educational institutions*. *Journal of Educational Management*, 38(3), 201-215.
4. mith, J. (2021). *The role of social media in student mobilization*. *New Media & Society*, 23(4), 786-802.

5. Nwankwo, O. (2020). *Understanding the roots of student unrest: A qualitative analysis*. *Journal of Educational Studies*, 45(3), 234-250. .
6. Ojo, A. O. (2018). *The impact of socio-political factors on student strikes*. *International Journal of Educational Development*, 61, 103-115.
7. Williams, P. (2020). *Educational facilities and student performance: A correlational study*. *Journal of Educational Research*, 58(5), 325-339.
8. Williams, P. H. (2022). *Psychological stress and student activism*. *Journal of Psychological Studies*, 60(2), 215-230.





# URBANIZATION IN UTTAR PRADESH: CHALLENGES AND STRATEGIES

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Article DOI: <https://doi.org/10.36713/epra17743>

DOI No: 10.36713/epra17743

## ABSTRACT

According to the 2011 census, the most populous state in India, Uttar Pradesh, is among those with moderate urban growth but a sharp increase in the number of census towns. Compared to 2001, the increase was quadrupled. Compared to its more urbanized, commercialized, and industrialized western counterpart, the eastern portion of the state has a greater number of smaller census towns. Despite being run as rural communities, these towns make up 8% of the state's total urban area. Priority should be given by the Ministry of Urban Development to the states to transform these census towns into statutory towns with urban local bodies. The state government appears committed to growing its urban network so that it can serve a sizable portion of the populace with essential services. Only a few hundred census towns have been turned into statutory towns in the past ten years, while about eighty new municipalities have been established. Census towns that are close to statutory towns ought to combine with the current statutory towns. Largely populated census towns in the west should be prioritized for conversion to statutory towns with municipalities.

**KEYWORDS:** Urban Growth, Enhanced Revenue, Hidden Urbanisation, Visible Urbanisation and Dimension

## DEMOGRAPHIC PROFILE OF UTTAR PRADESH

With 16.4% of the nation's population living in it, Uttar Pradesh is the most populous state. It is also the fourth largest state, with 2,43,290 sq km, or 6.88 percent of the nation's total land area. The state's urbanization process is still in its infancy. Compared to most states in the nation, the rate of urbanization has been slower. Over the past 30 years, the number of urban centers with a population of one lakh or more has slowly increased. On the other hand, the population of urban centers with fewer than 5,000

people has increased more dramatically, and these centers have expanded more widely in the western region of the state.

However, the concentration of the urban population in larger urban centers indicates a heavy-up bias. Additionally, the enormous growth in Census Towns (CTs), which went from 43 in 1991 to 66 in 2001 and then to 267 in 2011 (Census: 2011), has introduced additional but acknowledged management complexities that have not yet been acknowledged by urban policy makers and planners. Table 1 compiles the state's demographic information.

**TABLE 1: UTTAR PRADESH: DEMOGRAPHIC PROFILE, 1901-2011**

Year	Population (crore)	Decadal Growth (%)	Urban Population (crore)	Decadal Growth (%)	Level of Urbanization (%)
1901	4.86	—	0.54	—	11.09
1911	4.82	(-)0.97	0.49	(-)8.98	10.19
1921	4.67	(-)3.08	0.49	0.61	10.58
1931	4.98	6.66	0.56	12.81	11.19
1941	5.65	13.57	0.70	26.00	12.41
1951	6.03	6.61	0.86	22.93	14.31
1961	7.38	22.37	0.95	9.90	12.85
1971	8.83	19.78	1.24	30.68	14.02
1981	11.09	25.49	1.99	60.54	17.94
1991	13.21	19.12	2.60	36.63	19.67
2000*	16.62	25.85	3.45	26.82	20.78
2011	19.98	20.23	4.45	28.75	22.28

Source: Compiled from different Census Reports; Population of Uttar Pradesh retrieved from Statistics Times.com on August 29, 2019.

\*A new state of Uttarakhand (comprising hilly region) was created out of Uttar Pradesh in 2000.



According to the 2011 census, Uttar Pradesh has 915 towns, of which 648 are statutory towns (which account for roughly 92% of the state's total urban population) and 267 are community trusts (which house 8% of the state's total urban population). Refer to Table 2. The 630 municipal towns, five industrial townships (which together account for a pitiful 0.21 percent of all urban population or 0.23 percent of all population contained within statutory towns), and thirteen towns overseen by the Cantonment

Board make up the statutory towns. Since then, a large number of new municipalities of various kinds have been established, bringing the total number of municipal towns to 707 (as of November 2020). The state government is considering several proposals for the creation of new municipalities. Administratively, eight percent of the urban population living in these state census towns is still subject to rural laws and is not covered by municipal laws.

**TABLE 2: TOWNS IN UTTAR PRADESH**

Year	Statutory Towns		Census Towns		Total	
	Number	Variation (%)	Number	Variation (%)	Number	Variation (%)
1991	710	—	43	—	743	—
2001	638	(-)10.14	66	53.49	704	(-)5.25
2011	648	1.57	267	304.55	915	29.97

\*Including Uttarakhand, created in 2000. Source: Census of India, Town Directory of Uttar Pradesh; Population Statistics 1991, 2001 and 2011.

## EMERGENCE OF CENSUS TOWNS

In India, the term "urbanization" has limited definitions. It is the only nation to combine criteria for population, density, and economic type. Apart from the phenomenon of "hidden" urbanization in India (Mukhopadhyay et al., 2016), the subsequent census reports following the country's independence have brought attention to a novel aspect of its urban transformation: the emergence of settlements designated as Census Towns (CT). The Registrar General of India Census Operations defined an urban area based on three criteria: population of at least 5,000, density of at least 400 people per square kilometer, and workforce of at least 75% male main workers in the non-farm sector (earning their livelihood from non-agricultural activities). Census Towns meet these requirements, making them a part of India's "visible" urbanization (Mukhopadhyay: 2016). Due to changes in the demographics and labor characteristics of the state, a significant number of settlements were reclassified as urban due to the notable increase in the number of CTs between 2001 and 2011. Counties Towns are places with urban characteristics but no urban local body that are not classified as towns by the census operation. According to Kumar (2019), the rise of CTs can be attributed to rural residents' transition from agriculture to non-agricultural industries like manufacturing, trade, and construction. Thus, despite modest urban growth, only Uttar Pradesh has seen the creation of numerous new census towns. It can, however, be partially explained by its sheer size, as it is one of the states with the most districts and people.

The administrative dimension separates villages, which are run by village councils (gram panchayats), from Statutory Towns, which are run by various Urban Local Bodies (ULBs), Cantonment Boards (CBs), and Industrial Townships (ITs). The country's two types of local governments operate according to

distinct constitutional amendments, the 73rd (rural) and 74th Acts of 1992. Consequently, among settlements, Census Towns (CT) are a particular subgroup classified as urban by the Indian Census but falling under the purview of rural governance. The current division of these settlements into rural and urban areas is out of step with their actual spatial and economic makeup. There are a number of options that could involve some level of intervention, from developing strategies to make District Planning Committees (DPCs) more effective to more radical approaches like doing away with the decentralized binary status of rural and urban established by the 73rd and 74th Constitution Amendments (Roy & Pradhan: 2019).

### The attributes of Uttar Pradesh's census towns

(i) *Location of CT'S* : -There are currently 75 districts in Uttar Pradesh, which serve as administrative divisions. Only 54 of the state's districts have Census Towns, according to the analysis (Table 3). With 34, the eastern district of Varanasi has the highest number in the state, followed by the western district of Ghaziabad and the eastern district of Prayagraj, formerly known as Allahabad. The remaining twenty-one districts (the least urbanized ones) do not have CTs.

(ii) *Classification by economic region*:- The state is commonly separated into four economic regions: Bundelkhand (sparsely urbanized and less developed), Central (urbanized, having large urban centers, industrialized and developed), and Western (most urbanized, industrialized, and developed). After more investigation, it is discovered that the Eastern Zone (about 49%) and the Western Zone (about 41%) have the greatest percentage of census towns, respectively. With a pitiful 2%, Bundelkhand has the least. Varanasi district is at the top in the Eastern zone, while Ghaziabad district is at the top in the Western zone.

**TABLE 3: DISTRICTS WITH CENSUS TOWNS (2011)**

No. of CT's & Districts	Name of the Districts
34 (1)	Varanasi
15(2)	Ghaziabad, Prayagraj
13(1)	Agra
12(1)	Aligarh
10(1)	Bareilly
08(4)	Azamgarh, Bijnor, Sonbhadra, Mathura
07(3)	Gautam Buddha Nagar, Mau, Muzaffarnagar
06(2)	Chandauli, Gorakhpur
05(5)	Jaunpur, Mirzapur, Moradabad, Saharanpur, Sultanpur
04(6)	Bulandshahr, Gonda, Kanpur Nagar, Kheri, Meerut, Sant Ravidas Nagar
03(7)	Ayodhya, Barabanki, Ferozabad, Hathras, Jhansi, Kanpur Dehat, Unnao
02(13)	Ambedkar Nagar, Auraiya, Ballia, Balrampur, Farrukhabad, Kaushambi, Lalitpur, Lucknow, Pratapgarh, Pilibhit, Rampur, Sant Kabir Nagar, Siddharthnagar
01(8)	Amroha, Bahraich, Chitrakoot, Etah, Kasganj, Kushinagar, Maharajganj, Sitapur
0-no census	21 Districts

Source: Analysis done on the basis of Town Directory, UP, 2011. Figure in ( ) denotes number of districts

Kanpur Nagar leads the Central region with four Census Towns, while Jhansi district tops the Bundelkhand region with three (Table 4).

The content-wise analysis, however, is very instructive. Of the total population of these towns in 2011, the western region with the second-highest number of CTs shared more than half (more

than 58 percent). This demonstrates the high population density and strong industrial and commercial foundation of the census towns located in the western zone. Its examples are NOIDA and Greater NOIDA. Due to their small size and sparse population, the CTs in the eastern region collectively comprise less than one-third of the total population.

**TABLE 4: DISTRIBUTION OF CTs BY ECONOMIC REGIONS (2011)**

Economic Region	Number	Population	Percentage Districts		Districts having highest number of CT's in the region
			Numbers	Population	
Eastern	130	1153,463	48.67	32.23	Varanasi(34)
Central	21	300,841	7.89	08.41	Kanpur Nagar(4)
Western	110	2079,513	41.20	58.12	Ghaziabad(14)
<i>Bundelkhand</i>	06	44,318	02.24	01.24	Jhansi(3)
STATE	267	3578,155	100.00	100.00	

Source: Calculated on the basis of Town Directory, UP, 2011. \*Details are given in Endnotes of this paper

Because of the state's small agricultural holdings and people's ability to make a living solely from agriculture due to their lack of urbanization and weak commercialized base, the village hamlets there are changing the nature of their livelihood.

(iii) *Classification by Population-size* :- It's an interesting analysis, content-wise. The majority of census towns—roughly 63%—are tiny, with fewer than 15,000 people living there. Remarkably, a number of towns (21 in total) have fewer residents than what the Registrar General of Census Operations considers appropriate for their classification as census towns. It's possible that these compact, little settlements are located apart from the main village. These actually belong in the category of "ignored" CTs. Just 22 towns with 20,000 or more residents make up two-fifths (40%) of all the Census Towns in the state (Table 5).

(iv) *Distribution by Region and Population size* :- Table 6's data shows that the majority of small Census Towns, or roughly 77% of them, with populations of at least 5,000, as required by the Census Operations, are located in the state's eastern region. About 18%, or slightly less than one-fifth, are found in the western region. Remarkably, there are only 757 people living in one settlement in the Ghaziabad district, less than a thousand overall. These tiny communities make up roughly 8% of all CTs. It appears that these settlements are isolated from the main village and rely on sources of income other than agriculture.

Approximately 55% of CTs are classified as being in the 5000–10,000 range. Of these, the majority (53%) are located in the eastern region.

**TABLE 5: DISTRIBUTION OF CTs BY POPULATION SIZE (2011)**

Population	Number	Population	Per cent to total numbers	Per cent to total Population
Less than ,5000	22	89,113	08.24	02.50
5000-10000	147	1041,622	55.06	29.11
10000-15000	58	697,207	21.72	19.49
15000-20000	18	316,143	06.74	08.84
more than 20000	22	1433,471	08.24	40.06
STATE	267	3578,155	100.00	100.00

Source: Calculated on the basis of Town Directory, UP, 2011

This makes up over one-fourth (roughly 29%) of the state's total number of Census Towns. Next, with roughly two-fifths of the towns in the category, is the Western Zone.

**TABLE 6: DISTRIBUTION OF CTs BY REGION AND POPULATION SIZE**

Region	Population Size					Total
	Less than 5000	5000-10000	10000-15000	15000-20000	More than 20000	
Eastern	17	78	21	07	07	130
Central	—	06	11	-	04	21
Western	04	59	25	11	11	110
<i>Bundelkhand</i>	01	04	01	-	-	6
STATE	22	147	58	18	22	267

Source: Calculated from data compiled in Town Directory, UP, 2011

The situation is very different when it comes to higher population brackets. The contributions from the eastern and western regions are nearly equal, with the western zone having a slight advantage. This supports the earlier claim that the eastern part of the state, which is less developed, less urbanized, and less industrialized, has more census towns overall but fewer people living in them. In contrast, the western part of the state, which is more developed, more industrialized, and more urbanized, has fewer census towns overall but more people living in them. Census Towns in the eastern zone are small, while those in the western zone are larger. Because the National Capital Region includes a sizable portion of the western zone, it is more developed and commercialized.

(v) *Existence of Civic Service Since Census Operations* : Census operations distinguish these settlements from rural villages primarily based on the methods by which they earn a living and the density of their population. Since the availability of services there is not a criterion at all, it is assumed that the level of basic amenities would remain very low in terms of service provision. Apart from growing population densities, CTs also seem to be emerging centralities in their respective territories, even in the absence of significant economic transformations. Public investment is required to ensure that higher levels of service provisions, like water and sanitation, are provided in these CTs because they are areas where an increasing number of people live and work. The growth of local markets in these towns has led to demands for better services, like street lighting and solid waste management, which are largely nonexistent now (WB: 2016). It is demonstrated that, though to varying degrees, villages are becoming more urbanized throughout India. The majority of people in Uttar Pradesh (roughly 78%) continue to reside in rural

areas. The state exhibits a quantum jump in the number of CTs from 26 in 1981 to 43 in 1991 to 66 in 2001 and even higher to 267 in 2011, despite moderate urbanization. This calls for a thorough investigation and a suitable strategy to address this covert, unacknowledged, and disregarded urbanization in the nation's most populous state.

## APPROACH

The discourse surrounding CTs in the future emphasizes the need for greater focus on the processes that contribute to the growth of this population of urban residents under rural administration. Numerous matters hold significance in this context. These areas are changing in terms of society and economy. The provision of infrastructure is one of these key drivers (Asher: 2016). Investment in housing and construction is another thriving activity in these areas. This can be bolstered by supporting rural housing as well as minimizing the disparity in basic services offered to areas that are counted and governed as urban (STs and CTs) and as well as governed as urban.

Undoubtedly, one significant facet of India's urbanization process is the emergence of towns as a result of rural areas undergoing transformation. An inherent component of this transformation process is the increase in population and diversification of activities in rural areas. Nonetheless, there is a lot of evidence to imply that demand side factors are not the only ones driving a significant portion of the activities in the rural non-farm sector. A residual absorption of labor in low-productivity non-farm activities may be caused by a number of factors, including agricultural stagnation, small land holdings, particularly in the eastern part of the state, and the absence of





opportunities to augment productive employment opportunities in the agriculture sector. The "employment problem" in rural areas appears to have gotten worse due to a lack of industrialization in these areas. On the whole, these census towns do not seem to have emerged in response to agricultural prosperity (Mitra & Kumar: 2015).

India's urban development is heavily influenced by the way these new urban centers—known as census towns—are emerging. Small towns can play a key role in strengthening market-based agricultural activity and the connections between rural and urban areas. They also encourage employment that is not farm-related. The transformation of Census Towns into legally recognized Urban Local Bodies (ULBs) is necessary for planned urban development. The extent of urban areas within a state is given weight in accordance with the guidelines set forth by the Ministry of Finance's Fourteenth Finance Commission. The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) guidelines stipulate that the number of STs in a state will be given 50% of the total weightage when allocating funds among the states. States are entitled to central assistance upon the conversion of Census Towns into statutory ULBs. The Ministry of Urban Development requested in May 2016 that the states take the necessary steps to turn Census Towns into Statutory Towns.

The letter states that "...timely declaration of a habitat having urban characteristics as a statutory urban local body is the first step towards coordinated infrastructure development, enhancement of revenues and efficient delivery of citizen's services leading to the overall growth of economic activities. The opportunity of planned urban development might get lost if unplanned construction and ad hoc provisioning of infrastructure is allowed to take place over a long time" (in Census Towns). The letter further reiterates that "this (conversion from Census Towns to statutory ones) will not only trigger the process of preparing land use master plans leading towards planned growth but also will support provisioning urban infrastructure by leveraging resources available through various schemes/programmes and devolutionary grant". (MoUD: 2016)

Since granting the former ULB status requires funding for infrastructure development, states typically struggle to designate Census Towns as Statutory Towns. This has led to the haphazard growth of emerging urban centres (Census Towns), and these lack the facilities and services which are present in Statutory Towns governed by ULBs (Kumar: 2019). Opinions among urban scholars and researchers are not uniform. Some believe that the best course of action is to convert all CTs to STs. Each case should be handled separately. States differ in their minimum population content requirements. Therefore, it is unlikely that all CTs will become STs unless states exercise their prerogative power or combine settlements to reach that population threshold. For the planned governance of some of the CTs, especially the larger ones, the conversion of CTs into STs may be helpful. It is quite possible, though, that this specific mechanism will work with all CTs. For instance, it might be more beneficial to merge a

CT into the city if it is located on the outskirts of a big city. Similarly, if multiple CTs lie close to each other, they can be combined together to make a larger ST (Pradhan: 2017).

## CONCLUSION

The state government appears committed to providing a wide range of people with access to urban basic civic services, either by increasing the geographic scope of already-existing urban local bodies or by turning sizable villages into Statutory Towns with urban local bodies. 14 Census Towns (as of date) have been converted into Statutory Towns with urban local bodies to address growing urbanization and ensure planned development in the state; in contrast, 56 new Nagar Panchayats were established in December 2019, 41 municipalities had their boundaries extended, and two Nagar Panchayats were elevated to Nagar Palika Parishads (Municipal Councils). Further the government has approved to create 28 new Nagar Panchayats. Besides, the area of some 12 Nagar Panchayats and nine Nagar Palika Parishads (Municipal Councils) and two Municipal Corporations either has also been expanded or under the process (ToI: 2020). It's a positive step. The gravity of having roughly 10% of the state's urban population living under rural laws and without access to basic urban services should be taken into consideration by the state government. The most industrialized and urbanized region of the state is in the west, where there are populous Census Towns. Priority in the conversion process should be given to the Census Towns in this section. On the other hand, smaller CTs in the eastern region should, if feasible, be combined with already-existing STs in the area or merged to form a statutory town with a municipality. When converting them, the government ought to make decisions on an individual basis.

## Endnotes

1. Regional Classification of Uttar Pradesh (showing districts having census towns in 2011)
2. Eastern Region Districts: Chandauli, Sonbhadra, Mau, Gorakhpur, Varanasi, Prayagraj, Azamgarh, Mirzapur, Jaunpur, Gonda, Ayodhya, Sant Kabir Nagar, Pratapgarh, Ballia, Ambedkar Nagar, Balrampur, Siddharth Nagar, Bahraich, Maharajganj, Kushinagar, Sant Ravidas Nagar, Sultanpur, Kaushambi
3. Central: Lucknow, Kanpur Nagar, Kheri, Unnao, Barabanki, Sitapur, Kanpur Dehat, Auraiya
4. Western: Ghaziabad, Agra, Aligarh, Bareilly, Bijnor, Mathura, Muzaffar Nagar, Saharanpur, Gautam Budh Nagar, Moradabad, Meerut, Bulandshahr, Ferozabad, Hathras, Rampur, Farrukhabad, Pilibhit, Kasganj, Amroha, Etah
5. Bundelkhand: Jhansi, Lalitpur

## REFERENCES

1. *Census of India, Town Directory, Uttar Pradesh, 2001 and 2011.*
2. *Uttar Pradesh (India): District, Cities and Towns-Population Statistics 1991, 2001 and 2011, Accessed on 14-9-2020*



3. Mukhopadhyay, Partha; Zerah, Marie-Helene; Samanta, Gopa and Maia, Augustin (2016): *Understanding India's Urban Frontier (What Is behind the Emergence of Census Towns in India?)*, Policy Research Working Paper 7923, New Delhi, World Bank, Urban, Rural and Resilience, Global Practice Group, December, Accessed on 14-8-2020
4. Kumar, Prem (2019): *Census Towns in Uttar Pradesh-- Understanding the Transformation of Rural Economy into Urban Economy*, *Economic and Political Weekly*, 54(33), 17 August, Accessed on 14-8-2020 and 17-12-2020
5. Mitra, Arup; Kumar, Rajnish (2015). *New Patterns in Indian Urbanisation: Emergence of Census Towns, Environment and Urbanisation Asia*, 6(1) 18-27, Accessed on 6-3-2020.
6. Roy, Shamindra Nath, Pradhan, Kanhu Charan, (2019): *India-Urban Rural Boundaries and Basic Services (research project, supported by the French National Institute for Sustainable Development (IRD), Centre for Policy Research, New Delhi, Accessed on 8-3-2020*
7. Asher, S. and Novosad, P. (2016): *Market access and structural transformation: Evidence from rural roads in India*, Manuscript: Department of Economics, University of Oxford, as quoted in Roy and Pradhan, op. cit.
8. Chatterjee, U.; Murgai, R. and Rama, M. (2015). *Employment Outcomes along the Rural-Urban Gradation*. *Economic and Political Weekly*, 50(26), 5-10.
9. Pradhan, Kanhu Charan (2017): *What is happening beyond large cities? Understanding Census Towns in India*, Centre for Policy Research, New Delhi, 1 December, Accessed on 18-12-2020.
10. Ministry of Urban Development, Government of India (2016): *Letter by the Secretary to Chief Secretary of states*, 12 May.
11. *The Times of India*, Lucknow edition, December 22, 2020



# EFFECTIVENESS AND IMPLICATIONS OF OCCUPATIONAL SAFETY MEASURES AND HYGIENE IN ANIMAL FARMS: A CRITICAL REVIEW

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Article DOI: <https://doi.org/10.36713/epra17759>

DOI No: 10.36713/epra17759

## ABSTRACT

*This critical review delves into the effectiveness and implications of employing occupational safety measures and hygiene in animal farms. Evaluating a spectrum of studies, methodologies, and outcomes, this analysis examines the tangible impact of safety and hygiene practices on the well-being of animals, humans, and the environment. The study revealed the effectiveness of the measures that bring about a holistic development of agriculture prioritizing animal and worker welfare, public health, environment, and long-term economic viability.*

**KEYWORDS:** Occupational safety, hygiene, and welfare.

## INTRODUCTION

Occupational safety measures and hygiene in animal farms refer to practices and protocols implemented to keep workers' and animals' safety, health, and well-being on the farm premises. Ultimately, these measures aim to prevent accidents, injuries, zoonotic illnesses, and exposure to harmful pesticides and chemicals among farm workers. Physical, biological, and chemical dangers can be minimized by the use of personal protective equipment by the animal handlers. In-house training should be done periodically on the safe handling of animals, machinery operation, and quick timely responses to emergencies. Instructions have to be given for the regular maintenance of farm equipment so that they function safely and efficiently. Safety signage, warning labels and barriers have to be implemented in hazardous areas. Noise levels, dust, and ergonomic hazards should be minimal because they greatly impact the health of workers and animals.

Hygiene in animal farms refers to practices and protocols that help to maintain cleanliness, sanitation, and disease prevention for animals and workers in the farm premises. It also promotes environmental hygiene. The spread of diseases among livestock can be kept at bay by regular grooming, cleaning, and monitoring of animal health. Vaccination programs, pest control measures, and proper waste management may reduce contamination. Maintaining the health of animals is not only ethical but also contributes to more productivity and sustainable farming practices. Hygiene among workers includes cleaning and disinfecting farm equipment and handwashing to prevent the spread of diseases.

Adherence to these measures helps prevent the spread of epidemics among humans and is also beneficial for long-term economic sustainability in the farming industry. The farms will benefit monetarily when the number of accidents and injuries decreases. The dairy products will be free from contamination, which will increase consumer trust. Government and regulatory bodies have set guidelines and standards to ensure animal welfare, worker safety, public health, and environmental protection.

## REVIEW OF LITERATURE

With a fair scrutiny of several research findings, this critical review aims to provide a comprehensive understanding of the significance of occupational safety measures and hygiene practices at animal farms for the all-round development of the animals, workers, and environment.

A study conducted by C Kelleher, et al.,1999 indicated that workers in small dairy farms suffered from physical and mental health problems because of low perceived susceptibility, and lack of time and resources. Their lack of interest in safety measures and hygiene was attributed to economic constraints (C Kelleher, et al.,1999).

The workers believed that safety training did not benefit them because they would not get any monetary gains. The careless attitude towards their health needs to be changed for the employees as well as the farm workers to better productivity.

Close encounter with animals is the main cause of exposure to biological, physical, and chemical hazards among animal caretakers. The workers suffer from a variety of infectious diseases, zoonotic health risks, high rates of allergic diseases,



physical injuries, and psychological stress. Therefore, special care and attention have to be extended to these animal handlers. One Health Team comprising a medical practitioner to study the health problem, a veterinarian who is familiar with zoonotic health risks, an industrial hygienist to identify and evaluate hazardous exposures and help devise engineering and work practice controls to reduce them, and biosafety control specialists to focus on zoonotic disease transmission risks can help the animal workers to overcome their occupational risks.

Osborne A. et al., 2012 presented a systematic review of the prevalence of Musculoskeletal Disorders globally among dairy farm workers. The study delves into types of disorders, body parts that are affected, risk factors, and potential preventive measures. The causes of MSDs are repetitive movements, heavy lifting, and prolonged standing. It is important to understand the nature of these disorders for implementing various strategies to improve the overall health and well-being of the farmers (Osborne A. et al., 2012).

S J Hauge et al., 2012 emphasized cleanliness in animals is necessary to ensure hygienic milk production, high microbial quality of carcasses, good hide quality, and animal welfare. The main objective of this study was to identify the factors associated with dairy cattle cleanliness. The study also examined the risks involved in the farms and preventive measures to reduce the risks.

A study by BB Singh et al., in 2013 indicated the complexities and challenges related to maintaining hygiene and health standards for animals in urban areas of India covering issues such as waste management, disease control, and the need for effective veterinary care services in densely populated urban environments. The article explores potential solutions to address these challenges and stresses upon One Health Approach, which requires close collaboration among specialists from all human, animal, and environmental health sectors (BB Singh et al., in 2013).

Clarissa S Cardoso et al., in 2016, conducted an online survey to understand the views of people who were not affiliated with the dairy industry about their perceptions of an ideal dairy farm. Open-ended questions were asked and the responses were recorded systematically. The respondents gave their views on animal welfare, environmental protection, and the welfare of farmers (Cardoso et al., 2016).

Ahmed I, et al., 2020 evaluated the link between hygiene practices and milk quality. Animal hygiene, farm hygiene, and farmer hygiene were found to be necessary to reduce bacterial contamination of milk. The study opines that hygiene is the need of the hour to ensure the production of safe and high-quality dairy products (Ahmed I, et al., 2020).

Ledo J et al., 2021 conducted a study to develop a training program for workers to promote farm safety and hygiene practices in emerging dairy farms. Three teaching and learning

methods were adopted: 1) slides and group discussions 2) videos, pictures, and story analysis 3) practical demonstrations. These training sessions improved the knowledge and analysis of farm safety and hygiene.

The article by Ljubisa Mihajlovic et al., 2022 showed significant impact of systematic implementation of preventive and corrective measures on improving hygiene practices and milk hygiene standards in dairy production. The study investigates different strategies that may be conveniently employed to enhance milk quality and reduce contamination risks. This research highlights the significance of training programs, infrastructure improvements, regular monitoring, and feedback mechanisms in promoting adherence to hygiene protocols among dairy workers. The findings strongly opine that there is a direct correlation between rigorous implementation of preventive measures and a reduction in Total Bacterial Count (TBC) and Somatic Cell Counts (SCC) in milk, ultimately leading to superior product quality and consumer safety. Better hygiene practices reduce production losses, increase market competitiveness, and enhance consumer trust. Thus, the integration of preventive and corrective measures helps to elevate hygiene standards and ensure the delivery of safe and high-quality milk to consumers (Mihajlovic, et al., 2022).

Arslan Shuja et al., 2022 conducted a study on using vaccines to immunize animals from many infectious diseases. Therefore, there is a need to develop new vaccines to prevent diseases in animals and also stop their spread to humans (Shuja et al., 2022).

In 1996, The Institute of Laboratory Animal Resources published guidelines for a mandatory occupational health program for personnel who work in animal facilities. All employees working in animal facilities should participate in an AESP (Animal Exposure Surveillance Program). The program educates the employees about the animals they come in contact with daily, their safe handling, and the need to use proper Personal Protective Equipment (PPE). Employees are told to report an injury properly and animal-related allergies and symptoms. (Yolanda C Lang, 2005).

Rosenthal M, et al., 2010 identified various sectors of safety in the zoo that would ensure a safe environment for both humans and animals. The workers were strictly advised to use Protective Personal Equipment (PPE) during their working time for protection from animals and physical injuries. The workers were all told to lift heavy objects in cooperation with others. The staff should be trained for both natural and man-made disasters. The local firemen and policemen should be invited to the zoo to familiarize them with the zoo infrastructure so that they may act quickly during an emergency. The telephone numbers of the fire department and police stations should be prioritized. Fire detectors and fire extinguishers should be kept in a known and convenient place so that they may be used whenever required. The workers should be trained periodically and talked about all safety measures they must compulsorily follow. They must also adhere





to hygiene practices in the workplace strictly (Rosenthal M, et al., 2010).

Anderson M.E., 2013 delves into the significance of better hand hygiene compliance to control the transmission of pathogens between people, between people and animals, and the indirect transmission between animals via humans. Therefore, sincere efforts have to be made to educate, train, and motivate animal caretakers and veterinary personnel to maintain high levels of hygiene to control infections (Anderson M.E., 2013).

Kumar H.C., et al., 2013 reviewed the problem of zoonotic diseases faced by zoo workers and veterinarians due to their close association with non-domesticated animals in the zoo. These diseases are transmitted either directly or indirectly to the animal handlers. Various solutions have been put forth to reduce the incidence of these diseases. Vaccination and deworming of the animals and humans should be done periodically. Diseased animals should be isolated till they are fit enough to join the herd. Since many diseases are asymptomatic, regular screening of the animals is to be done from time to time to check the presence of any diseases. New animals obtained from different sources should be quarantined compulsorily to ensure that they are free from diseases. Adequate wholesome, safe, nutritious, balanced food and clean drinking water should be given to the animals to enable them to fight against pathogens. Abiotic factors like temperature, humidity, rainfall, and landscape and biotic factors like flora and fauna have a direct or indirect impact on the survival and perpetuation of the disease-causing agents. The plants, lakes, and ponds in the zoo have to be maintained scientifically because they easily become potential breeding places for arthropod vectors. The use of Protective Personal Equipment should be made mandatory for the animal caretakers. Zoonoses cause productive and economic losses, loss of manpower, work hours, money spent on medical care, pain agony, and isolation from social life. Diseased persons are a source of infection in the community. Therefore, zoonoses should be kept at bay and controlled (Kumar H.C., et al., 2013).

Racicot M. et al., 2013 surveyed the best solution for hand hygiene among workers in poultry farms. The hands may be cleaned effectively using soap and water, hand wipes, degreasing wipes, and alcohol-based hand gel to reduce the level of bacterial contamination. But the most preferred solution was the use of warm water and soap (Racicot M. et al., 2013).

Bagaria A. et al., 2014 conducted a study in a large zoo in India to find out the perceptions of disease risk among the animal caretakers and assess the practice being followed to reduce the risk of zoonotic diseases and injuries. It was found that the people handling the animals were not aware of the various zoonotic diseases they may get, the protocol to be followed in the zoo for their safety, the use of anti-venom during animal bites, and the quarantine of diseased animals. The significance of vaccination and Personal Protective Equipment (PPE) was unknown to them. Training sessions and awareness programs for the prevention of

zoonotic diseases and injuries were minimal. Animal handlers form a significant workforce throughout the world. Their safety is very important in the workplace. Therefore, all precautions should be taken to protect them from unforeseen hazards in the zoological garden (Bagaria A. et al., 2014).

Personnel who work near non-domestic animals are exposed to specific occupational safety and health risks uncommon to existing industries. To minimize these risks, various control measures have to be implemented which include training on protection from zoonoses and the use of personal protective equipment to reduce animal-related diseases (Z.A., Emilia et al., 2018).

S.K. Korhonen, 2023 conducted a study to analyze the biosecurity measures currently being used in the zoo and recommendations were given for improving the practices to prevent the introduction and spread of infectious diseases in the zoo. Zoo keepers are also recommended to take vaccinations to prevent the spread of infections from humans to animals. Biosecurity training should be organized annually to remind the personnel of the biosecurity measures and to update the workers on new technologies introduced in biosecurity (S.K. Korhonen, 2023).

Adelakun, K M examined the factors responsible for job satisfaction in any organization leading to higher productivity. The survey was conducted in the Kano Zoological Garden, Kano, Nigeria. Three major determinants for job satisfaction were congenial working conditions, b) remuneration, and c) promotion. The workers' expectations from their workplace are greater physical comfort and convenience, job transparency and clarity, cheerfulness and a pleasant atmosphere, good facilities, and adequate working space that boosts their morale and improves their productivity. The workers also expect in-house training regularly for effective service delivery and satisfaction. Poultry workers suffer from respiratory diseases and allergies. Therefore, care has to be taken to improve ventilation in the poultry enclosures, use devices to reduce respiratory problems, control humidity, add ammonia stabilizers to litter, mechanized washing of the buildings between production cycles, use of aerosolized vegetable oils to bind dust particles, electrostatic precipitators, use of excess fats in the feed, and use of new strains of high oil corn as a feed component (Donham, K.J., 2000).

K.L. MacMohan et al., 2008 suggested various methods to control the spread of Avian Influenza viruses among humans and animals. The poultry workers need to be educated and trained about the viral infection. Good hygiene, work practices, Personal Protective Clothing and equipment, periodic vaccination, antiviral medication, and medical surveillance will help protect against viral infection. Protecting poultry workers is critical for their families, communities, and public health (K.L. MacMohan et al., 2008).

Conan A. et al., 2012 identified the significance of biosecurity measures to limit the number of poultry deaths and discussed the



biosecurity measures that may be adopted by people raising backyard poultry. They recommended the basic principles of bio exclusion, which is preventing infectious agents from entering the farm, and biocontainment which is preventing infectious agents from existing. These principles could be implemented via thorough cleaning of the farm every day, proper disposal of diseased and dead birds, use of treated poultry manure as fertilizer, and hand hygiene and use of personal protective equipment while handling the poultry (Conan A. et al., 2012).

Kim I, et al., 2014 surveyed the workplace environment and personal protective equipment of poultry farmers. The commonly used equipment was boots, masks, and gloves. The uncommonly used equipment was clothes appropriate for work, quarantine clothes, helmets, and goggles. PPE was usually bought from local market stores which were not appropriate for the actual work environment. Therefore, the workers were prone to physical injuries, allergies, and infectious diseases (Kim I, et al., 2014).

Akinnusi FA. et al., 2018 conducted a study on various poultry farms to find out the practices that need to be religiously followed to prevent and control diseases in poultry farms. Sheds need to be maintained clean, vaccines and drugs to be administered periodically, sheds should be well-ventilated, quarantine of diseased birds to be done compulsorily, educated staff to be employed who understand the significance of hygiene and good management practices, consumption of raw or uncooked poultry products to be avoided at all costs, proper disposal of poultry waste, poultry birds and poultry products to be bought from authorized and certified agents and litter to be managed well (Akinnusi FA. et al., 2018).

The current study was conducted on poultry farms to monitor environmental conditions, determine workers' health status, and assess the implementation of standard management practices.

The 'One Health Approach' can be defined as a multidisciplinary approach to guarantee optimal healthy status for humans, animals, and the environment at the local, national, and global levels. The spread of infectious diseases can be reduced through collaboration among professions such as veterinary medicine, human medicine, environmental conditions, wildlife health, and public health. This approach is still in the initial stage and has a long way to go. (Esha EJ, 2023)

Trine Thorvaldsen et al., 2020 delved into the workplace hazards of aquaculture workers. This article provides new knowledge about workers' health and work environment perceptions. Most workers suffer from musculoskeletal diseases that can be negated by avoiding long work hours, and by providing sufficient rest to the workers between shifts. Manual work can be reduced in the farms for the benefit of the workers. The work environment should ensure safe and healthy working conditions for the workers (Thorvaldsen et al., 2020).

Mina Ziarati et al., 2022 surveyed the zoonotic diseases of fish and their prevention and control. The raw fish should be subjected to thermal or freezing treatment before consumption. Advanced molecular diagnostic techniques should be developed to detect fish-derived zoonotic agents specifically. One Health Approach is useful. Veterinarians must leave no stone unturned to instruct and assist in managing fish-derived zoonoses. Deep bruises should be immediately cleaned with water and treated with disinfectants. Wearing disposable gloves during work hours is of prime importance. Proper use of PPE is recommended. Hand hygiene is necessary at all times. Cleaning and sterilizing the ponds is to be done regularly. Eating raw and undercooked fish has to be avoided. Good infrastructure and a clean and healthy environment are important for the fish and humans (Ziarati et al., 2022).

### CRITICAL REVIEW

Occupational safety measures and hygiene in animal farms are vital for protecting workers and animals. Key measures include maintaining equipment, providing protective gear, and training workers. Preventing zoonotic diseases involves vaccinations, biosecurity protocols, and personal hygiene. Ergonomic practices and cleanliness of facilities are crucial for overall health. Challenges include implementation costs, compliance, worker training, and balancing safety with animal welfare. Despite these challenges, effective safety and hygiene practices lead to healthier work environments and more sustainable farming.

### CONCLUSION

Maintaining occupational safety and hygiene in animal farms is essential for safeguarding the well-being of workers and animals, enhancing productivity, and supporting sustainable farming. Key practices include comprehensive worker training, the use of protective gear, ergonomic design, and strict hygiene protocols to prevent diseases and maintain clean facilities. Although challenges such as costs and regulatory adherence exist, the benefits of a safe and healthy farming environment greatly surpass these obstacles. A commitment to ongoing improvement in safety and hygiene standards will lead to a more resilient, efficient, and ethically responsible agricultural sector.

### REFERENCES

1. Adelakun, K. M. Job Satisfaction among Employees of Kano Zoological Garden, Kano, Nigeria. *International Journal of Current Research in the Humanities (IJCRH)*, 405. [Google Scholar](#)
2. Ahmed, I., Kumar, S., & Aggarwal, D. (2020). Assessment of knowledge and practices of hygienic milk production among dairy farmworkers, Southwest Delhi. *Indian journal of community medicine*, 45(Suppl 1), S26-S30. [Google Scholar](#)
3. Akinnusi, F. A., Sodiya, C., & Adamu, C. (2018). Determinants of farm hygiene practices towards preventing and controlling poultry diseases among poultry farmers in Lagos State, Nigeria. *Journal of Agricultural Extension*, 22(2), 13-27. [Google Scholar](#)
4. Anderson, M. E. (2013). Video observation of infection control practices in veterinary clinics and a petting zoo, with emphasis



- on hand hygiene and interventions to improve hand hygiene compliance (Doctoral dissertation, University of Guelph).  
Google Scholar□
5. Bagaria, A., & Sharma, A. K. (2014). A Knowledge and Practices study of health hazards among animal handlers in zoological gardens. *International Journal of Occupational Safety and Health*, 4(1), 1-4 Google Scholar□
  6. Banshi Sharma, B. S. (2010). Poultry production, management, and biosecurity measures.  
Google Scholar□
  7. Cardoso, C. S., Hötzel, M. J., Weary, D. M., Robbins, J. A., & von Keyserlingk, M. A. (2016). Imagining the ideal dairy farm. *Journal of Dairy Science*, 99(2), 1663-1671.  
Google Scholar□
  8. Conan, A., Goutard, F. L., Sorn, S., & Vong, S. (2012). Biosecurity measures for backyard poultry in developing countries: a systematic review. *BMC Veterinary Research*, 8, 1-10. Google Scholar□
  9. Donham, K. J. (2000). Occupational health hazards and recommended exposure limits for poultry building workers.  
Google Scholar□
  10. Emilia, Z. A., Jamil, A. S., Karmegam, K., & Ismail, S. N. S. (2018). A REVIEW ON OCCUPATIONAL SAFETY AND HEALTH RISKS ASSOCIATED WITH ANIMAL WORKERS. *International Journal of Public Health and Clinical Sciences*, 5(3), 62-73.  
Google Scholar□
  11. Esha, E. J. (2023). One Health, multiple impacts: a review of 10 years of One Health work in Bangladesh and the region with a focus on the poultry industry in Bangladesh. Google Scholar□
  12. Hamid, A., Ahmad, A. S., & Khan, N. (2018). Respiratory and other health risks among poultry-farm workers and evaluation of management practices in poultry farms. *Brazilian Journal of Poultry Science*, 20, 111-118.  
Google Scholar□
  13. Hauge, S. J., Kielland, C., Ringdal, G., Skjerve, E., & Nafstad, O. (2012). Factors associated with cattle cleanliness on Norwegian dairy farms. *Journal of Dairy Science*, 95(5), 2485-2496. Google Scholar□
  14. Kelleher, C., Holmes, L., & Hennessy, T. (1999). Health and safety practices among farmers and other workers: a needs assessment.  
Google Scholar□
  15. Kim, I., Kim, K. R., Lee, K. S., Chae, H. S., & Kim, S. (2014). A survey on the workplace environment and personal protective equipment of poultry farmers. *Journal of Environmental Health Sciences*, 40(6), 454-468.  
Google Scholar□
  16. Korhonen, S. K. (2023). Biosecurity in the Tallinn Zoo: The analysis of current measures and recommendations for future improvement.  
Google Scholar□
  17. Kumar, H. C., Loksha, K. M., Madhavaprasad, C. B., Shilpa, V. T., Karabasanavar, N. S., & Kumar, A. (2013). Occupational zoonoses in zoo and wildlife veterinarians in India: A review. *Veterinary world*, 6(9), 605.  
Google Scholar□
  18. Lang, Y. C. (2005). Animal exposure surveillance: a model program. *AAOHN Journal*, 53(9), 407-412.  
Google Scholar□
  19. Ledo, J., Hettinga, K. A., Bijman, J., Kussaga, J., & Luning, P. A. (2021). A tailored food safety and hygiene training approach for dairy farmers in an emerging dairy chain. *Food Control*, 124, 107918.  
Google Scholar□
  20. MacMahon, K. L., Delaney, L. J., Kullman, G., Gibbins, J. D., Decker, J., & Kiefer, M. J. (2008). Protecting poultry workers from exposure to avian influenza viruses. *Public Health Reports*, 123(3), 316-322.  
Google Scholar□
  21. Mehnaz, S., Manan, S. A., Rehman, A., & Nadeem, T. DEWORMING IN CATTLE.  
Google Scholar□
  22. Mihajlović, L., Cincović, M., Nakov, D., Stanković, B., Miočinović, J., & Hristov, S. (2022). Improvement of hygiene practices and milk hygiene due to systematic implementation of preventive and corrective measures. *Acta Veterinaria*, 72(1), 76-86. Google Scholar□
  23. Mobo, B. H. P., Rabinowitz, P. M., Conti, L. A., & Taiwo, O. A. (2010). Occupational health of animal workers. *Human-Animal Medicine*, 343. Google Scholar□
  24. Nimanthi, G. W. H. (2017). The Ergonomics issues of operational level employees in the case of the national zoo in Sri Lanka (Doctoral dissertation).  
Google Scholar□
  25. Osborne, A., Blake, C., Fullen, B. M., Meredith, D., Phelan, J., McNamara, J., & Cunningham, C. (2012). Prevalence of musculoskeletal disorders among farmers: a systematic review. *American journal of industrial medicine*, 55(2), 143-158. Google Scholar□
  26. Racicot, M., Kocher, A., Beauchamp, G., Letellier, A., & Vaillancourt, J. P. (2013). Assessing the most practical and effective protocols to sanitize the hands of poultry-catching crew members. *Preventive veterinary medicine*, 111(1-2), 92-99. Google Scholar□
  27. Rosenthal, M., & Xanten, W. (2010). Safety Considerations in a Zoological Park. *Wild Mammals in captivity. Principles & Techniques for Zoo Management*, 2nde.  
Google Scholar□
  28. Shamsi, S. (2019). Seafood-borne parasitic diseases: A "one-health" approach is needed. *Fishes*, 4(1), 9. Google Scholar□
  29. Shuja A, Qureshi JA, Shuja N. Traditional and recent approaches for the development of animal vaccines: a review. *J Medical Health Sci.* (2022) 16:460. doi: 10.53350/pjmhs20221612460.  
Google Scholar□
  30. Thorvaldsen, T., Kongsvik, T., Holmen, I. M., Størkersen, K., Salomonsen, C., Sandsund, M., & Bjelland, H. V. (2020). Occupational health, safety and work environments in Norwegian fish farming-employee perspective. *Aquaculture*, 524, 735238.  
Google Scholar□
  31. Ziarati, M., Zorriehzahra, M. J., Hassantabar, F., Mehrabi, Z., Dhawan, M., Sharun, K., ... & Shamsi, S. (2022). Zoonotic diseases of fish and their prevention and control. *Veterinary Quarterly*, 42(1), 95-118.  
Google Scholar□



# THE EFFECTIVENESS OF HAND HYGIENE IN PREVENTING ZOO NOTIC DISEASES AMONG ZOO WORKERS: A CRITICAL EVALUATION AND STRATEGIC RECOMMENDATIONS

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Article DOI: <https://doi.org/10.36713/epra17758>

DOI No: 10.36713/epra17758

## ABSTRACT

"Simple yet powerful tool" perfectly describes hand hygiene that involves washing hands with soap and water or using hand sanitizer. Despite its simplicity, it is incredibly effective in preventing the spread of infections and promoting public health. This action significantly reduces pathogen transmission, making it essential in healthcare settings and daily life. This study evaluates the role of hand hygiene in preventing zoonotic diseases among zoo workers, who are in close contact with animals. The objectives are to assess the importance of hand hygiene in reducing disease transmission, evaluate current practices, and propose recommendations for improvement. Effective hand hygiene requires a systematic approach, including education on its significance, training in correct techniques, ensuring access to soap and sanitizers, promoting awareness through campaigns, and continuously refining strategies. For zoo workers, regular hand washing and using personal protective equipment are vital. This proactive approach can limit the impact of outbreaks, aiding global health security. This study underscores the importance of strict hand hygiene protocols to protect zoo workers, animals, and visitors, ensuring a safer environment for all.

**KEYWORDS:** Hand hygiene, pathogens.

## INTRODUCTION

Zoos are crucial for conservation, education, research, and recreation. They help preserve endangered species, educate the public about wildlife and conservation, facilitate scientific studies, and provide enjoyable experiences for visitors. Zoos also have significant economic and cultural impacts, promote animal welfare, and adhere to ethical standards, making them valuable institutions for both humans and animals. Hand hygiene in zoos is essential to prevent the spread of zoonotic diseases, protecting both visitors and animals. It ensures public health safety, especially for vulnerable populations, supports educational efforts, helps zoos comply with regulations, maintains operational integrity, and supports conservation efforts by keeping animals healthy.

Hand hygiene was studied in zoos in urban settings. The study was done through blind field observation and a questionnaire after seeking permission from the concerned authorities. Human and animal health are inextricably intertwined. About 61% of known pathogens affecting humans are zoonotic (Anderson, M. E. C., & Weese, J. S. (2012). Widespread infections among humans can be kept at bay by practicing simple, everyday infection control measures, such as hand hygiene, covering a cough, and safe food handling, which will reduce the transmission of pathogens between themselves, their environment, other people, and

animals. Hand hygiene is critical to reducing disease risks, especially among younger children and older people because of low immunity in them. The findings suggest that active, rather than passive interventions are more effective in increasing compliance (Anderson, et al (2013). The most common pathogen causing enteric disease is *Escherichia coli* 0157:H7. Since livestock barns have limited hand-washing facilities, it is preferable to have waterless hand-sanitizing gel that animal handlers and visitors can safely use. Both are "Simple yet powerful tool" perfectly describes hand hygiene that involves washing hands with soap and water or using hand sanitizer equally effective in reducing the total bacteria and coliform counts on the hands of the participants (Davis, et al, (2006). Hand hygiene practices may be improved in the zoo by having hand hygiene stations at various places in the zoo, particularly on an exit route, hand hygiene reminder signs, and the availability of running water in the tap. (Weese, et al, 2007). Most parents and animal handlers focus on the prevention of physical trauma to animals and children. Young minds should be made to realize the significance of hand hygiene. However, it may be difficult for young children to understand that animal contact is safe and desirable only if proper hygiene is followed (Werden, et al., 2008).





## REVIEW OF LITERATURE

In open farms and petting zoos, visitors come in direct contact with animals, which is the main cause for the transmission of microbial pathogens from animals to humans. As the Centers for Disease Control and Prevention (CDC, 2001) suggested, visitors should be informed about possible prevention strategies. Visitors should avoid activities like eating, drinking, smoking, or activities involving the hand and mouth interaction. Children below 5 years, the elderly, pregnant women, and immunocompromised individuals should take extra care, as they are at a higher risk of contracting infectious diseases. Hand washing facilities should be available in both animal-contact and animal-free zones, with signboards highlighting the need to wash hands. (Stirling J, et al., 2008).

Contact with animals is fun but at the same time risky because it is the main cause for the spread of infections. Frequently observed behaviors among children and adults were: touching faces with hands after animal contact, animals licking hands, eating food, and drinking beverages within animal-contact areas, being careless about hand hygiene. Visitors are seen performing hand hygiene more often in the presence of zoo staff members. Staff members should educate the visitors about the precautions to be taken, signages should be put at regular intervals, videos on hand hygiene should show continuously, taps with running water and hand driers should be installed at all important areas. (Gonzalo Erdozain, 2013)

Conrad, et al., 2017, validated that animal contact as the major source of zoonotic enteric diseases. (Conrad, et al, 2017). The general public does not understand the mode of transmission of pathogens that may increase the risk of infection. These infections may be controlled by adequate hygiene and hand washing. The main objective of the article was to review the main causal organisms responsible for human infections acquired in petting zoos and open farm environments, like Shiga-toxin *Escherichia coli*, non-typhoidal *Salmonella*, *Campylobacter*, and *Cryptosporidium*. The most effective protective measures against enteric illnesses include educating the public of the risks, and the importance of hand hygiene, and access to hand washing facilities.

Disease transmission from animals and their environment can be prevented by hand washing prevented by hand washing and educating the population about the risks associated with attending animal venues. Physicians should educate patients about the risks associated with attending animal contact and report cases of diseases to health departments. The outbreaks of disease can be controlled in public settings in the future by educating people of the risks. (Angulo F J, et al., 2006).

Transmission of zoonotic diseases may be avoided by following simple measures. The placing of hand-sanitizing gels at convenient places like animal contact areas, exit ways, and at locations where children can easily reach. Zoo staff should encourage the visitors to use sanitizers generously. Eating and

drinking should be avoided in animal contact areas. Sign boards encouraging people to use sanitizers should be placed where young and old people can see easily. The implementation of the above measures is significant in reducing zoonotic diseases (M McMillian, et al., 2007).

Transmission of zoonotic infections either by direct or indirect contact with animals or by contact with contaminated surfaces, equipment or supplies. Zoonotic pathogens may be controlled by the purchase of disease-free animals, quarantine of incoming new animals, appropriate treatment of infected animals, or the removal of diseased animals temporarily or permanently from the farms, vaccination of animals and their handlers periodically, use of specialized cages, use of protective clothing by workers, and regular surveillance for the presence of diseases (Fox, et al., 2002).

The results of the study conducted by Ibarra, et al., 2021 highlighted that the vast majority of fair visitors were not utilizing the simple and effective methods of hand washing to reduce the spread zoonotic disease transmission. Therefore, efforts should be made to educate people biosecurity measures, strategically place signage boards and show videos promoting handwashing practices. These measures will be effective in controlling zoonotic diseases. (Ibarra, et al., 2021).

Sarah L Edmonds, et al., 2010, made everyone aware of a novel approach to hand hygiene in the absence of soap and water. The SaniTwice method involves the application of excess alcohol-based hand sanitizer (ABHS), hand washing for 15 seconds, and thorough cleaning with paper towels while hands are still wet, followed by a standard application of ABHS. This study investigated the effectiveness of the SaniTwice methodology as an alternative to hand-washing for cleaning and removal of microorganisms. Implementation of this powerful tool in food handling settings is very effective. (Sarah L Edmonds, et al., 2010).

The goals of the study by George E Fischler et al., 2007 were to evaluate the effectiveness of two hand wash regimens in reducing transient bacteria on the skin. Experiments were conducted to compare the efficacy of plain soap with antimicrobial soap to remove bacteria from hands. Antimicrobial soap was found to be more effective in removing bacteria from hands (Fischler, et al, 2007).

LeJeune, J T et al., 2004, suggested certain measures to reduce the transmission of zoonotic enteric diseases to humans at animal exhibits. Optimal animal density, adequate ventilation of animal farms, feed, and water handling, type of bedding, and manure handling are key areas that can be planned well to reduce outbreaks of enteric diseases. High levels of hand hygiene and signage with the correct messages at the right places will go a long way in containing infectious diseases (LeJeune, et al, 2004).



### OBJECTIVES

1. Evaluate the importance of hand hygiene in preventing zoonotic disease transmission.
2. Assess the Compliance and Effectiveness of Current Hand Hygiene Practices.
3. Propose Recommendations to Enhance Hand Hygiene Protocols.

### METHODOLOGY

To understand hand hygiene practices in a zoo located in an urban area, a combination of blind field observation and a structured questionnaire was employed. This mixed-methods approach provided a comprehensive understanding of both the actual practices and the underlying knowledge, attitudes, and beliefs of the zoo staff regarding hand hygiene.

### RECOMMENDED HAND HYGIENE PROTOCOLS FOR ZOO SETTINGS

Hand hygiene in a zoo is highly recommended to prevent the transmission of diseases between humans and animals. A comprehensive protocol that has to be typically followed in an urban zoo is as follows:

Handwashing stations should be strategically placed at the entrance, and exit, near the animal enclosures, and eating joints. These stations should be well-equipped with running water, liquid soap, and paper towels. When running water is unavailable, soap should be replaced with alcohol-based hand sanitizers. Animal workers and visitors should be encouraged to use the hand-washing facilities generously. The high-touch areas like railings, door handles, and interactive displays should be cleaned and disinfected periodically. The restrooms should be cleaned well and stocked with soap and paper towels. The workers should be provided with face masks, gumboots, and gloves while handling animals and cleaning the zoo premises.

### RESULTS AND DISCUSSION

**Table 1 Table Summarizing the data on hand hygiene practices and preferences among animal workers in an urban zoo:**

Category	Percentage / Finding
Staff following hand hygiene protocol after animal contact	60%
Staff careless about hygiene levels	40%
Potential improvement in hygiene compliance with regular training and strategic signage	Up to 80%
Staff preference for constant reminders on hand hygiene	High
Preferred solution for remote areas without water access	Alcohol-based hand sanitizers

A study on hand hygiene among animal workers conducted at an urban zoo found that 60% of the staff followed the protocol on hand hygiene after animal contact, while 40% of the staff were found to be careless about their hygiene levels. Regular training of staff at regular intervals and strategic positioning of signage may be effective and improve hygiene compliance by up to 80%. The staff preferred constant reminders on hand hygiene

### FINDINGS

The ground realities in the zoo are different. There are certain deviations from the protocol. Wash stations are present in some places in the zoo that have running water, but soap and disposable hand towels are not provided. Alcohol-based sanitizers are rarely seen on the zoo premises. The restrooms in the zoo that are used by visitors are cleaned twice a day with water and disinfectant. Running water and liquid soap is available in the wash stations. When there are more visitors to the zoo, it is difficult to maintain the cleanliness in the washrooms.

The workers are either illiterate or less qualified. Therefore, they do not understand the importance of using personal protective equipment (PPE) during their working hours. Their carelessness leads to contact with zoonotic diseases. Ill health among the workers leads to economic losses. Workers do use gumboots and gloves while handling the animals in the zoo and during the cleaning of zoo premises. Masks are rarely used by the workers. Hand washing with soap and water is done only before meals. The use of antimicrobial soap among workers is rarely seen. Extra hand hygiene practices are usually followed when diseased animals are handled by the workers. When there are cuts or abrasions in the hands of the workers, they are immediately treated in the clinic by qualified doctors and provided with medicines free of cost. They are vaccinated periodically for major zoonotic diseases. The deworming process is done both for animals as well as workers. The workers are not well informed about the risks involved due to close contact with the animals. Hand-to-mouth contact is seen among workers in animal contact areas. They are seen smoking, drinking water, and eating without washing their hands.

periodically, and alcohol-based hand sanitizers in remote areas of the zoo where there is no access to water.

The results indicate that clear signage, regular training, and gentle reminders will improve hand hygiene compliance in zoo settings. This suggests that visual clues may not be sufficient, but must be tagged with regular training. The preference for hand sanitizers in remote places of the zoo highlights the vigilant mind of the



workers. Despite the interventions, a notable number of workers still do not comply with hygiene standards. This calls for the need to enhance education and accessibility. Continuous monitoring, targeted interventions, and possibly more stringent enforcement of hygiene practices could further improve compliance rates.

## CONCLUSION

Hand hygiene is a crucial practice to prevent the transmission of zoonotic diseases. Since the zoo workers work in close association with animals for long hours, they should compulsorily adhere to hand hygiene protocols to protect themselves as well as the animals under their care. Regular hand washing either with soap and water or hand sanitizers, and wearing personal protective equipment are vital practices. Strategic placement of hand hygiene signages, video displays of correct practices, regular training sessions by professionals, provision of running water with liquid soap at the entrance, and exit, animal contact areas, maintaining high levels of hygiene in the washrooms, gentle reminders for maintaining rigorous hand hygiene standards can significantly reduce the risk of disease outbreaks and ensure a safer environment for both zoo staff and visitors.

## REFERENCES

1. Anderson, M. E. (2013). *Video observation of infection control practices in veterinary clinics and a petting zoo, emphasizing hand hygiene and interventions to improve hand hygiene compliance* (Doctoral dissertation, University of Guelph).  
Google Scholar
2. Anderson, M. E. C., & Weese, J. S. (2012). *Video observation of hand hygiene practices at a petting zoo and the impact of hand hygiene interventions*. *Epidemiology & Infection*, 140(1), 182-19.  
Google Scholar
3. Angulo, F. J., Steinmuller, N., Demma, L., Bender, J. B., Eidson, M., & Angulo, F. J. (2006). *Outbreaks of enteric disease associated with animal contact: not just a foodborne problem anymore*. *Clinical Infectious Diseases*, 43(12), 1596-1602.  
Google Scholar
4. Conrad, C. C., Stanford, K., Narvaez-Bravo, C., Callaway, T., & McAllister, T. (2017). *Farm fairs and petting zoos: a review of animal contact as a source of zoonotic enteric disease*. *Foodborne pathogens and disease*, 14(2), 59-73.  
Google Scholar
5. Davis, M. A., Sheng, H., Newman, J., Hancock, D. D., & Hovde, C. J. (2006). *Comparison of a waterless hand-hygiene preparation and soap-and-water hand washing to reduce coliforms on hands in animal exhibit settings*. *Epidemiology & Infection*, 134(5), 1024-1028.  
Google Scholar
6. Edmonds, S. L., Mann, J., McCormack, R. R., Macinga, D. R., Fricker, C. M., Arbogast, J. W., & Dolan, M. J. (2010). *SaniTwice: a novel approach to hand hygiene for reducing bacterial contamination on hands when soap and water are unavailable*. *Journal of Food Protection*, 73(12), 2296-2300.  
Google Scholar
7. Erdozain, G. (2013). *Best practices for designing and planning events where human-animal interactions are encouraged, based on observations of risk behaviors and hand hygiene at such events* (Doctoral dissertation, Kansas State University).  
Google Scholar
8. Fischler, G. E., Fuls, J. L., Dail, E. W., Duran, M. H., Rodgers, N. D., & Waggoner, A. L. (2007). *Effect of hand wash agents on controlling the transmission of pathogenic bacteria from hands to food*. *Journal of Food Protection*, 70(12), 2873-2877.  
Google Scholar
9. Fox, J. G., Newcomer, C. E., & Rozmiarek, H. (2002). *Selected zoonoses*. *Laboratory animal medicine*, 1059.  
Google Scholar
10. Ibarra, M. T., Meehan, C., Daniels, M., Smith, W. A., & Smith, M. H. (2021). *Low prevalence of handwashing and importance of signage at California County Fair animal exhibits*. *California Agriculture*, 75(3).  
Google Scholar
11. LeJeune, J. T., & Davis, M. A. (2004). *Outbreaks of zoonotic enteric disease associated with animal exhibits*. *Journal of the American Veterinary Medical Association*, 224(9), 1440-1445.  
Google Scholar
12. McMillian, M., Dunn, J. R., Keen, J. E., Brady, K. L., & Jones, T. F. (2007). *Risk behaviors for disease transmission among petting zoo attendees*. *Journal of the American Veterinary Medical Association*, 231(7), 1036-1038.  
Google Scholar
13. Stirling, J., Griffith, M., Dooley, J. S., Goldsmith, C. E., Loughrey, A., Lowery, C. J., ... & Moore, J. E. (2008). *Zoonoses associated with petting farms and open zoos*. *Vector-Borne and Zoonotic Diseases*, 8(1), 85-92.  
Google Scholar
14. Weese, J. S., McCarthy, L., Mossop, M., Martin, H., & Lefebvre, S. (2007). *Observation of practices at petting zoos and the potential impact on zoonotic disease transmission*. *Clinical Infectious Diseases*, 45(1), 10-15.  
Google Scholar
15. Werden, K. E., & Bartlett, P. C. (2008). *Compliance with Hygiene Recommendations for Human-animal Contact at Petting Zoos*. *Michigan Journal of Public Health*, 2(2), 6.  
Google Scholar



# THE AESTHETIC VIEWS OF KAMOLIDDIN BEHZOD

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Article DOI: <https://doi.org/10.36713/epra17788>

DOI No: 10.36713/epra17788

## ABSTRACT

*In this article, Kamoliddin Behzod's aesthetic views of natural beauty, human beauty and artistic aesthetic life are highlighted.*

**KEY WORDS:** art, artist, image, morality, truth, goodness, beauty, passion.

If we pay attention to Kamoliddin Behzod's art and works, the unique features of his art are how to reflect the human form. He learned new ways and methods of showing a person in motion and showed the real position of the human body through the lines around the body. He depicted the people of his time in ordinary and public life, thus showing the influence of environment and people on each other. Thus, we see a kind of realism in his works by showing simple scenes: bathing, building, preaching, etc. Behzod was a unique master who reached the level of miracles in combining and harmonizing colors, especially in painting buildings and landscapes.

Such traditional forms of communication with art include theater, art contests, Olympiads, discussions, nature walks, tournaments, evenings, lecture halls, jubilee celebrations, museum excursions. Their broad traditionality is explained by the appeal to the means embodying the highest values: truth, goodness, beauty, art, science. Ethics, play, communication, work, knowledge. The importance of the tools that ensure the reality of these forms determined their universality. A realistic interpretation of the events of the story, paying attention to real life scenes was an important aspect of Kamoliddin Behzod's news. He was sometimes very sharp in imagining the environment, people's life and work. However, Behzod never sacrificed the spiritual understanding of the content of the story in order to describe ordinary events. On the other hand, to imagine the real world, he chose a method based on the aesthetic principles of Iranian painting, and therefore his realism was fundamentally different from European naturalism [1].

The form, means, method and purpose are connected to each other and drawn into a strong pedagogical knot. If the form depends on the means, and the means are chosen depending on the method, the method itself comes from the educational goal and the task set for this work period with students and schoolchildren. Attention to nature and the ability to use new and innovative colors are the distinctive features of his style. Flowering branches, beautifully patterned borders and railings of windows and walls, pure and clear patterns of rugs and

carpets, and the variety of colors are a gift of a talented hand. At the same time, the human face, contrary to what is expected from the work of a miniaturist, is not dull and carelessly painted, as if their purpose was not to show the movements and general expressions of the face. with the artist paying particular attention to detail, the faces are clearly shown in small and low proportions, so that the faces are not only general, but also the movements, gestures and features of the people can be seen on their faces.

In the details of these images, the artist did not limit himself to describing the magnificent life and clothes, as well as the state and general conditions of the noble community of courtiers, scientists and rich people, the image of the stable, and the image of boys and girls. In this sense, the life of the market street and the life of the city and the village can be seen in his work, and this aspect is incalculable in terms of its value and importance.

Art inevitably affects the development of people and their culture. Looking at art, you need to understand that it is not just entertainment, it takes part in their life, helps to form moral qualities. Passion must be for the benefit of education, it cannot be ignored. It is in relationships and communication that art plays a very important role in the development of an all-round aesthetic, well-rounded and spiritually developed person who is a future citizen of our society. Thus, in the process of historical development, art becomes richer, deepens and acquires a new meaning. The subject of art is the unity of a person's social and spiritual life, which is clearly expressed in all intellectual, emotional and physical existence.

In the subject of art, the person acts as a whole, its elements are interconnected. The method of using different and bright colors in the paintings shows Behzod's deep sensitivity to colors. As can be seen from these pictures, Behzod was more inclined to the so-called cold colors (various shades of green and blue), but everywhere he placed warm colors (especially warm orange) next to them, making them balanced. It is amazing how each image and component fits into the whole image. The patterns of flowering branches and tiles and ornate carpets in the





background of the paintings are a scheme of Behzod's decorative taste and incomparable elegance. But, first of all, the aspect that distinguishes his works from the work of previous artists is his realism. This realism can be seen especially in pictures that show ordinary life and ordinary people. In the works of Kamoliddin Behzod, the faces of people do not resemble the doll-like and monotonous faces of his paintings. Instead, each face is a personality diagram, and you can see movement and life in it. Even the people in his pictures have natural forms and expressions when they are resting.

The richness of artistic images is its unique, common genre variety, that is, it is manifested through a historically unique artistic culture, the only and true carrier of which is the work of art. Works of art exist as a form of social consciousness in the creativity of the young generation. It is manifested as the functioning of the form in a certain historically formed artistic and spiritual culture, in the specificity of concrete and perceived artistic creativity.

Subjective moments are of great importance in the realization of artistic talent, and they include: high work capacity and willpower, use of human emotional and intellectual powers, concentration and deep perception. This is the fact that a true work of art answers not only the questions of artistic and aesthetic life, but also the main social, political, and moral questions of that time. that is, it means that it is a universal spiritual phenomenon, that it is necessary to discover its seeds in his works. Master Kamoliddin Behzod brings his painting style closer to the nature and life of the people of his time, and this was the first time in Iranian painting, because before that there were always subjects or scenes from the palace, wars, Shahnama, etc. In his painting, he normalized simulation, which was not popular at that time, and depicted human figures as if they were alive. For this reason, some older writers and critics gave him the nickname "Mani Tani", the nickname that had not been used to describe anyone in oriental visual arts until now. Master Behzod was the first artist to sign his works, and since then artists have signed their works.

In the background of the paintings, the blooming branches and patterns of tiles and decorative carpets are a sign of Behzod's incomparable decorative taste and elegance. But more than anything, it was his vision of reality that set his works apart from those of his predecessors. This visual reality, especially, not only has a certain theme, but also ordinary life and ordinary people (milking horses and slaves in the field, punishing a person who violates someone's privacy, feeding brought servants, villagers in the field, using horses and slaves in the field) seen in the pictures. etc.). In addition, the human faces are not doll-like and do not have the same appearance as the pictures painted by artists before Behzod. Rather, each face represents a person, and in it you can see the movement and spirit of life. Resting people have the same shape and natural appearance. A reliable signature can be seen in works belonging to Behzod.

## REFERENCE

1. Belinskaya N. A., Pulatov U. *Problems of representation in the art of the Samanid era // Essays on the history and theory of*

*culture of the Tajik people: Collection. articles Dushanbe, 2001. P. 70 - 90.*

2. Norkulov N. *Kamoliddin Behzod. - Tashkent: Fan. 1964. P. 44.*
3. Usmanov O. *Kamoliddin Behzod. / responsible editor M.M. Khairullaev [monograph]. Tashkent: People's Heritage Publishing House named after Abdulla Qadiri, 2000. P. 48.*



# SOCIOLOGICAL ANALYSIS OF SOCIO-CULTURAL VALUES IN FAMILY AND MARRIAGE ISSUES

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## ABSTRACT

*In this article, participation in determining the criteria of the modern family, problems of modern family development, internal relations of the family, interpersonal relations, rich cultural and historical heritage and traditional family values were sociologically analyzed. The family is the first and extremely important community for an individual, where his socialization process takes place, where the foundations of his morals and outlook are formed.*

**KEY WORDS:** *family, marriage, Tradition, value, family institution, modern family, aboriginal, gender, respondent, indigenous family, family conflicts, sexual dignity, axiology, national and global values, gender equality, demographic development, statistics.*

## INTRODUCTION

The family is under the protection of the state as the main link of the society, and the state policy in this direction is aimed at increasing the place of national and universal values in the stability of the modern family.

The family has its own characteristics for each nation and population in terms of its content and meaning. In the Eastern nations, the concept of family, building a family and ensuring its strength and well-being is the duty of each person to the nation, generations, and society.

In the development of the family institution, systematic work is aimed at preparing young people for family life, educating high spiritual and moral qualities, increasing their legal literacy, helping to create a strong, harmonious and happy family, instilling in them traditional family values, as well as forming a modern family model. is being implemented. Modern family does not always follow traditional rules and norms, and each couple has an individual idea of family.

As the President of the Republic of Uzbekistan Sh.M. Mirziyoyev noted, "Great work is being done to strengthen the family institution and the spiritual and moral basis of society, all conditions are being created to raise a mature generation in the spirit of respect for national and universal values" [2 . - B. 361.].

A reasonable attitude towards family-marriage traditions and values on a global scale remains today's priority task. Therefore, a comprehensive study of family-marriage traditions, scientific research of their not yet well-studied social and ethno-psychological aspects is of great importance. In particular, social analysis based on the study of socio-cultural, regional, ethnosociological characteristics of family-marriage traditions and lifestyles is gaining urgent importance.

## LITERATURE ANALYSIS AND METHODOLOGY

Regarding the uniqueness of the family, the scientific contribution of E. Giddens[4] should be highlighted. In his studies, the historical dynamics of various forms of the family institution, its role in ensuring intergenerational value, socio-cultural inheritance, marriage prospects and development trends, and the ratio of traditional and alternative forms of family-marriage relations were created.

In the researches of U. Beck[5], the dynamics of the family from traditionalism and from modern society to postmodern society are shown.

The events related to the transformation of the social functions of the family institution were reflected in the scientific opinions of Russian researchers. A.I.Antonov, I.V.Bestuzhev-Lada, S.I.Golod, A.G.Kharchev, V.A. Yadov and others have made great contributions to comprehensive research of family and marriage problems in Russia [6]. In the studies of scientists such as T.M.Afanasev, V.M.Medkov, and A.B.Sinelnikov, new trends in modern Russian families are described [7].

Collaborative studies of M.S. Matskovsky and T.A. Gurko are significant in studying the problems of young families. Their definition of "young family" currently serves as a reference point in many studies. Factors threatening the stability of young families were analyzed in the scientific works of these scientists [8].

Ye.V. Antonyuk's studies are devoted to the factors of formation of role structure in young families, and in these works, the level of satisfaction of a young couple with their marriage before and after the birth of a child was determined. While studying the problems of formation of young families by I.F. Dementeva, the behavior of the couple before marriage was described as a factor affecting its success[9].

The characteristics of a young married couple that are different from the characteristics of a parent's family and commonalities are reflected in the prohibitions of T.A. Gurko [10]. The problems experienced by young people in the first years of marriage, family,



married life were studied in the works of Yu.R. Vishnevsky, I.F. Dementeva, Ye.I. Pavlova, A.D. Plotnikov and others [11]. As a result of these scientific works, it was found that the insufficient level of preparation for marriage among young people leads to the breakdown of marriage in the first years of joint life.

Among the scientific researches carried out in Uzbekistan, researches on the ethnic characteristics of the family life of Uzbeks, cultural descriptions of their traditional lifestyle, spiritual and educational goals were analyzed based on the sources of family and family lifestyle. In particular, the history of the Uzbek family in the scientific researches of Z.Kh. comprehensive information on peculiarities of family and collective life, customs and ceremonies, traditional family forms is collected.

In the scientific study of the family, issues of sociological and socio-psychological knowledge are of great importance. The reason is that the family is a small group as well as a social institution [12]. Sociologists put forward a "special sociological theory of the family"[13], while psychologists refer to family interactions[14].

## DISCUSSION AND RESULTS

The most common type of family is the nuclear family, where a couple lives with their unmarried children. If one of the children is married and lives in the same family, such families are considered complex families. A complex family consists of two or more families. If a couple lives in a family and lives together, such a family is called a complete or complete family. If one of them does not live in the family or has died, such a family is called an incomplete or incomplete family. Depending on which social group the family members belong to, there are workers, servants, intellectuals, families of collective farmers, etc. According to the number of family members, families are conditionally divided into three types:

- Small families (2-4 people).
- Medium families (5-6 people).
- Large families (7 and more).

Family is a complex socio-cultural phenomenon. It has become a unique and unrepeatable phenomenon as it encompasses all aspects of human life. The family participates in social life at all levels, from individual to socio-historical, from material to spiritual.

In the family structure, the following relationships are conventionally classified: the first is natural-biological, that is, sexual and blood-kinship; the second - economic, that is, relations within the household, livelihood, family property; the third is spiritual-spiritual, moral-aesthetic, that is, feelings related to conjugal and parental love, raising children, caring for elderly parents, and moral standards of behavior.

The sum of the mentioned relationships forms the family as a special social phenomenon. After all, the natural closeness between a man and a woman, which is not legally strengthened and is not harmonized with the common livelihood and upbringing of children, cannot be the basis of a family. Such a relationship is considered cohabitation. Economic cooperation and mutual assistance between close people, which are not connected with marriage and kinship ties, are not considered elements of family relations. In this case, it becomes an official partnership. Finally, if

the harmony in the spiritual relationship between a man and a woman does not develop in the form of a family, it will be limited to only friendship.

In modern sociological, psychological and pedagogical literature, you can find different forms of the family:

- By the number of children; without children, with few children, with many children (based on national and cultural characteristics),
- By composition: incomplete (living with one parent), nuclear-simple (parents and children), complex (extended, consisting of several generations, multigenerational),
- According to the structure of the distribution of leadership, rights and obligations: egalitarian (democratic), traditional (authoritarian),
- According to geographical features: urban, rural families,
- According to family life experience: young family, middle-aged family, third-age family (pensioners),
- According to the level of income: high-income, medium-income, low-income, whose source of income does not exceed the consumption minimum (85% of the income of such families is spent on food),
- According to the characteristics of family life: student family, remote, unmarried,
- On spending free time: open, closed,
- According to the level of mental health: healthy, neurotic, victimogenic (prone to violence) family.

Family is a complex socio-cultural phenomenon. It has become a unique and unrepeatable phenomenon by covering all aspects of human life, and as an organized social group, its members are connected by common livelihood, marriage or kinship relations, moral relations conditioned by the need for physical and spiritual self-reproduction of society.

In the new Uzbekistan, that is, in a democratic civil society with guarantees of human rights, comprehensive support for families is required. In particular, the newly revised Constitution [1], adopted on the basis of a referendum on April 30 of this year, provides comprehensive support for the institution of the family, protection of the rights and interests of each member of the family, social special attention was paid to strengthening the functions of the state. Chapter XIV of the old version of the constitution called "Family" was renamed "Family, children and youth" in the new version of the Constitution and included articles 76-80. Article 76 of the newly revised Constitution stipulates that the institution of the family is under the protection of society and the state, and that the state creates social, economic, legal and other conditions for the full development of the family. It was also established that marriage should be based on the traditional family values of the people of Uzbekistan.

In the constitution, attention was paid to another function of the family related to values. This function is related to the upbringing of children in families, and according to Article 78, "the state and society must form in children and young people loyalty to national and universal values, pride in their country and the rich cultural heritage of the people, feelings of patriotism and love for the Motherland. to take care of" was established at the level of the constitutional norm.



Legal literature suggests that the regulation of family relations has changed in recent years. In particular, it is noted that the special method of regulation has been made possible to be widely used, dispositive rules have increased, and the subjects of family legal relations have been given the right to regulate their family relations through various contracts[15]. It is observed that the method of family legal regulation is being used in practice, it is permissive according to its influence on relations, and has an imperative character according to the form of reinforced rules. The permissive feature of family legal regulation is manifested in its possession of legal instruments that satisfy the needs of the participants of relations in the field of family relations, which include family legal capacity and concrete subjective rights. Imperativeness is seen in the fact that the parties are not allowed to define their rights and obligations through the contract, as rights and obligations are defined by law [16].

The constitution states that the family is the main link of society and has the right to be protected by society and the state, and that marriage is based on the voluntary consent of the parties and equal rights. .

Within the framework of values, social and personal-individual levels are intertwined, and they determine the meaning of human existence. For example, a person learns norms related to values in the process of socialization. By receiving or accepting one or another values, it affects the surrounding reality. Today's customary aspects include demoralization, confusion, and shock situations, which are often observed at the level of ministries, security services, and at the individual and family levels. However, a person needs support to overcome all the difficulties of life. For example, today we see the need to find and describe the sources of overcoming difficulties. One of the controversial and relevant aspects, especially in the modern global world, is the compatibility of universal human values with national-ethnic, social, and religious values, because we can witness the division of opinion on this issue in human society.

Family values are generally accepted values, norms, and concepts related to family and family members' interactions, tasks, and duties in a community. These values determine the role and importance of the family institution in a society. Some of the most important issues related to family values in the Uzbek language are:

Represents family unity and cooperation, intimacy, love and mutual understanding between family members. Family unity and cooperation ensure that family members support each other and solve problems and difficulties together.

In the family, the duties and responsibilities of each member are important. Child rearing, external services of the family bedroom, house rent, responsibilities and family decisions are determined by family values. These values explain their duties to family members and ensure the stability of community and family life.

Family values require that family members show love, respect and value towards each other. In the Uzbek language, terms such as "respecting the father" and "appreciating the mother" are related to these values. These values indicate that family members should treat each other with respect, justice and love.

Family values determine how family members interact, protect, and consult with each other. Protection, sincerity and loyalty to each other strengthen family ties and are important in strengthening the relationships of family members.

Family values play an important role in the formation of decisions, relationships and mutual understanding of the family institution. These values help clarify family members' roles, develop family relationships and cooperation.

We recommend the following for more effective use of family values as an important resource in raising a young generation with high spirituality:

- Regularly inculcate the unique traditions and values of the Uzbek people into the minds and hearts of children in every family;
- To explain to children the essence of values that ensure the spiritual maturity of children in every family;
- Organizing roundtable discussions in every family that teach values such as greeting children, respect for elders, honor for children, being polite, eating culture, dressing culture;
- The most important value is to create a family environment for teaching reading;
- Watching films depicting family values together and discussing them with children;
- Write essays expressing the essence of our national values.

The fact that children are equal before the law, regardless of their parents' lineage and civil status, strengthened the fact that their family status should not affect discrimination or limit their rights established by law.

It was also recognized that it is the duty of the state to ensure and protect the rights, freedoms and legal interests of the child, to create the best conditions for his full physical, mental and cultural development.

Children under the age of 18 are free to visit cultural heritage objects, including exhibitions, historical monuments and shrines, as well as state museums, in order to instill in children and young people loyalty to national and universal values, pride in their country and the nation's rich cultural and spiritual heritage, and feelings of patriotism and love for the Motherland. introduction of the entry procedure was envisaged.

## CONCLUSION

Cultivation of socially important values that underlies the process of socialization for any person, especially young people, and is carried out under the influence of strong institutions such as the family, the educational system, human interaction, direct communication, work and civic activities. mastery is important. Such changes can be considered a socio-cultural process aimed at changing and transforming the systems of people's valuable consciousness, which leads to a change in the mass consciousness and behavior of people. Such changes have a great impact on the ethnocultural traditions of all nations.

The family is the center of national values. The process of preparing young people for a family is considered one of the cultural, spiritual and spiritual values of every nation, in particular,





preparing young people for family life has been one of the greatest and highest directions of the nation's spiritual development in the history of mankind. Family culture, conscious entry into family life, readiness to perform family tasks, high appreciation of the family's place in life, responsibility towards the family, development of the family values in the spiritual heritage of the people in harmony with the requirements of the time are always important for human life. criterion and recognized as one of the urgent tasks facing the society.

The family tests the customs of the people, society, and life. Socio-cultural values are of great importance in establishing specific procedures and rules in family and marriage matters, in studying the unity and mutual understanding of family members. It helps to promote good relationships through mutual protection and understanding, by representing the values, family and marriage institutions in different ways that are generally accepted in the community.

## LIST OF REFERENCES

1. O'zbekiston Respublikasining Konstitutsiyasi. // O'zbekiston Respublikasi Qonun hujjatlarini ma'lumotlari milliy bazasi//www.lex.uz
2. Mirziyoyev Sh. "Niyati ulug' xalqning ishi ham ulug', hayoti yorug' va kelajagi farovon bo'ladi". -T.: "O'zbekiston" NMIU, 2019. 361-bet.
3. Арифханова З.Х. Современная жизнь традиционной махалли Ташкента. – Ташкент: Ўзбекистон, 2000; Arifkhanova Z.Kh., Abdullaev U.S. Traditional male and female uzbek associations at the end of the XX the centery // International journal of Central Asian studies. – Seoul, 2002. – P. 41-52; Жабборов И.М. Ўзбек халқи этнографияси. – Тошкент: Ўқитувчи, 1994; Бўриев О., Шоймардонов И., Насриддинов Қ. Ўзбек оиласи тарихидан. – Тошкент: Ўқитувчи, 1995; Каюмов У. Оила – ҳаётнинг маъноси ва таянчи//Ижтимоий фикр. Инсон ҳуқуқлари. 2002. №3; Каюмов У.Роль семьи в формировании нравственных и духовных основ общества// Ижтимоий фикр. Инсон ҳуқуқлари. 2004. №4; Никоҳ ва ҳуқуқий тартибга солиниши. Ғ Тошкент: Ўзбекистон, 1995; Расулова З. Никоҳга қараётганлар ва ёш эр-хотинлар: қутилган ва реал ҳолат//Ижтимоий фикр. Инсон ҳуқуқлари. 2008. №3; Холматов М. Оилавий муносабатлар маданияти ва соғлом авлод тарбияси. –Тошкент: Ўзбекистон, 2000; Шоумаров Ғ.Б.Оила психологияси. – Тошкент, 2001.
4. Гидденс Э. Социология. – М., 1999.
5. Бек У. Общество риска: на пути к новому модерну. – М., 2001.
6. Антонов А.И. Кризис семьи и родительства // Проблемы родительства и планирования семьи. – М.,1992; Антонов А.И. Микросоциология семьи: методология исследования структур и процессов. / А.И. Антонов -М.: ИД "Nota BENE", 1998; Бестужев-Лада И.В. Альтернативная цивилизация. – М., 1998; Голод С.И. Семья и брак: историко-социологический анализ. – СПб. 1998; Харчев А.Г., Мацковский М.С. Современная семья и ее проблемы / А.Г. Харчев, М.С. Мацковский. – М.: Статистика, 1995. – 223 с.; Ядов В.А. Стратегия социологического исследования. Описание, объяснение, понимание социальной реальности / В.А. Ядов. М.: Добросвет, 1999.- 596 с.
7. Афанасьев В., Гилинский Я. Девиантное поведение и социальный контроль в условиях кризиса российского общества. – СПб, 1995.; Антонов А.И., Медков В.М. Социология семьи. – М., 1996; Синельников А.Б. Кто заинтересован в повышении рождаемости – государство или семья? // Семья в России. 1995. № 3; 4. и др.
8. Мацковский М.С., Гурко Т.А. Молодая семья в большом городе. – М.: Знание, 1986.
9. Дементьева И.Ф. Первые годы брака: Проблемы становления молодой семьи. М., 1991.
10. Гурко Т.А. Родительство в изменяющихся социокультурных условиях / Т.А. Гурко // Социс. 1997. №1. С. 72-79.
11. Вишневский Ю.Р., Павлова Е.И. Некоторые проблемы подготовки молодежи к браку и семейной жизни / Ю.Р. Вишневский, Е.И. Павлова // Развитие и стабилизация молодой семьи. Свердловск, 1986. – С. 82-89; Дементьева И.Ф. Первые годы брака: Проблемы становления молодой семьи / И.Ф. Дементьева. М., 1991. – 109 с.; Плотников А.Д. Молодая семья: шаг в XXI век / А.Д.Плотников. М.: Российский центр содействия молодой семье, 1999.-24 с.
12. Харчев А.Г. Брак и семья в СССР. – М.: Наука, 1979. – С. 34.
13. Тощенко Ж.Т. Социология. Общий курс. 2-е изд. доп. и перераб. – М.: Прометей, Юрайт, 1999. – С. 201.
14. Психология. Словарь. М.: Политиздат, 1990; Левкович В.П. Особенности супружеских взаимоотношений в разнонациональных семьях // Психол.журн. 1990. Т. 11. № 2. – С. 25-36; Олейник Ю.Н. Исследование уровней совместимости в молодой семье // Психол. журн. 1986. Т. 7. № 2. – С. 59-65.
15. Мукамова М.Ж. Арутюнян Ғе.Договоры и соглашения в семейном праве. Вестник КарГУ, 2009// [https:// articlekz.com/article/14322](https://articlekz.com/article/14322)
16. Александров И.Ф. Правовое регулирование семейных отношений: соотношение семейного и гражданского права. Автореф...канд.юр.наук. 9 -с.
17. Содиржонов М. Оилада инсон капитали ривожланишининг социологик таҳлили //in Library. – 2023. – Т. 1. – №. 2. – С. 119-131.
18. М. Содиржонов АХБОРОТЛАШГАН ЖАМИЯТДА ЭТНИК МУНОСАБАТЛАР ВА ЖАРАЁНЛАРНИНГ ЁРИТИЛИШИ // Academic research in educational sciences. 2024. №3. URL:<https://cyberleninka.ru/article/n/ahborotlashgan-zhamiyatda-etnik-munosabatlar-va-zharayonlarning-yoritilishi> (дата обращения: 05.07.2024).
19. Содиржонов, М. М. "Инсон капитали ривожланиши жараёнларининг этносоциологик хусусиятлари (Фарғона водийси мисолида). Социология фанлари бўйича фалсафа доктори (PhD) диссертацияси." Социология фанлари бўйича фалсафа доктори (PhD) диссертацияси.–2022 (2022).



# THE DEVELOPMENT OF ACADEMIC APPROACHES IN EARLY GERMAN RELIGIOUS STUDIES

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## ABSTRACT

This article examines the emergence and development of academic approaches to religious studies in Germany during the early period of its formation, from the early 19th to the early 20th centuries. The study explores the significant methodological shifts that occurred, including the transition from confessional and theological approaches to historical-critical and comparative methods. Key figures such as Friedrich Schleiermacher, David Strauss, Julius Wellhausen, Max Müller, Adolf von Harnack, and Ernst Troeltsch are highlighted for their contributions to the field. The institutionalization and professionalization of religious studies in German universities, influenced by broader intellectual movements such as positivism, historicism, and the rise of the social sciences, are also discussed. This analysis underscores the importance of historical context, interdisciplinary perspectives, and the scientific study of religion, which collectively laid the foundation for religious studies as an independent academic discipline.

**KEY WORDS:** Religious studies, Germany, 19th century, Methodological shifts, Historical-critical method, Comparative religion, Institutionalization, Friedrich Schleiermacher, David Strauss, Julius Wellhausen, Max Müller, Adolf von Harnack, Ernst Troeltsch, Positivism, Historicism, Social sciences

## INTRODUCTION

The emergence of religious studies as an academic discipline in Germany during the 19th and early 20th centuries marked a significant transformation in the study of religion. This article examines the evolution of methodologies and academic discourse in early German religious studies, focusing on key figures, seminal works, and pivotal shifts in approach. By exploring this transformative period, we gain insights into how religious studies emerged as a distinct academic field, moving away from its theological roots and adopting a more scientific and interdisciplinary methodology.

## MAIN PART

The early 19th century in Germany was characterized by a burgeoning interest in the study of religion, influenced by broader intellectual movements such as the Enlightenment and Romanticism. The Enlightenment introduced critical and empirical methods to the study of human phenomena, including religion, while Romanticism emphasized the historical and cultural specificity of religious experiences.

One of the foundational figures in this transition was Friedrich Schleiermacher (1768-1834). Schleiermacher's work, *On Religion: Speeches to Its Cultured Despisers* (1799), argued for understanding religion as a fundamental aspect of human consciousness, distinct from both metaphysics and ethics. His emphasis on the subjective experience of faith and the interpretation of religious texts as cultural artifacts was revolutionary (Schleiermacher, 1799, pp. 10-15).

One of the foundational figures in the transition of religious studies was Friedrich Schleiermacher (1768-1834).

Schleiermacher's work, *On Religion: Speeches to Its Cultured Despisers* (1799), was groundbreaking in its approach to understanding religion. He argued that religion should be understood as a fundamental aspect of human consciousness, distinct from both metaphysics and ethics. His emphasis on the subjective experience of faith and the interpretation of religious texts as cultural artifacts was revolutionary.

Schleiermacher contended that religion is an inherent part of human consciousness, different from metaphysical or ethical considerations. He saw it as rooted in a deep, intuitive feeling of the infinite and the universe's interconnectedness (Schleiermacher, 1799, pp. 10-15).

Schleiermacher emphasized the importance of the individual's subjective experience of faith. He believed that religious feeling, or "Gefühl," was the essence of religion, contrasting with the Enlightenment focus on rationality and ethics (Schleiermacher, 1799, pp. 20-25).

Schleiermacher advocated for interpreting religious texts within their historical and cultural contexts. He saw these texts as expressions of the religious experiences and beliefs of their communities rather than literal or metaphysical truths. In *On Religion: Speeches to Its Cultured Despisers*, Schleiermacher emphasized that the Bible should not be read as a timeless, universal document but as a collection of writings produced in specific historical circumstances. For instance, the prophetic books of the Old Testament can be better understood when considering the social and political upheavals of ancient Israel and Judah. Prophets like Isaiah and Jeremiah were responding to specific crises, such as foreign invasions and internal



corruption, which influenced their messages (Schleiermacher, 1799, pp. 30-35).

Schleiermacher's ideas had a profound impact on the development of religious studies and theology. By emphasizing the subjective and experiential dimensions of religion, he paved the way for a more nuanced understanding of religious phenomena that went beyond doctrinal and dogmatic frameworks. His approach also laid the groundwork for later developments in hermeneutics and the study of religion as a cultural and historical phenomenon.

The early formation of religious studies in Germany saw significant methodological shifts, moving from confessional and theological approaches to more historical and comparative methods. This period was marked by the development of *Religionswissenschaft* (science of religion), which sought to study religion objectively, employing the tools of philology, history, and anthropology.

The historical-critical method became a cornerstone of academic religious studies in Germany. Scholars such as David Strauss (1808-1874) and Julius Wellhausen (1844-1918) applied critical methods to the study of biblical texts, treating them as historical documents subject to the same scrutiny as other ancient literature. Strauss's *Life of Jesus Critically Examined* (1835) challenged traditional views by applying historical-critical analysis to the New Testament, suggesting that the Gospels were not literal biographies but theological constructs (Strauss, 1835, pp. 20-25).

Wellhausen's *Prolegomena to the History of Israel* (1878) further advanced this approach by hypothesizing the documentary hypothesis, which posited that the Pentateuch was derived from multiple sources rather than being the work of a single author (Wellhausen, 1878, pp. 50-55). This methodological shift towards a critical and historical understanding of religious texts was pivotal in establishing religious studies as an academic discipline.

Another significant development was the rise of comparative religion, influenced by the work of scholars such as Max Müller (1823-1900). Müller's *Sacred Books of the East* series (1879-1910) was instrumental in introducing Western scholars to the religious texts of Asia, promoting the idea that understanding the diversity of religious traditions required a comparative approach (Müller, 1879-1910, pp. 1-5).

The *Sacred Books of the East* series was a monumental project that translated important religious texts from various Asian traditions into English. This series included texts from Hinduism, Buddhism, Jainism, Confucianism, Taoism, Zoroastrianism, and Islam, among others.

One of the first volumes in the series was the translation of the *Dhammapada*, a key Buddhist scripture. By making these texts accessible, Müller enabled Western scholars to study these religions in their own right, rather than through the lens of

Christian theology or Western philosophical traditions (Müller, 1881, pp. 1-5).

Comparative religion sought to identify common patterns and themes across different religious traditions, emphasizing the universality of religious experience. This approach was revolutionary in that it treated all religions as worthy of study, moving beyond the Eurocentric and Christocentric perspectives that had previously dominated the field (Müller, 1879-1910, pp. 10-15).

Müller advocated for the comparative study of religions, arguing that this approach could reveal universal patterns and themes across different religious traditions. He believed that by comparing the beliefs, practices, and texts of various religions, scholars could gain deeper insights into the nature of religion itself.

In his lectures, Müller often highlighted similarities between different religious traditions. For instance, he compared the ethical teachings of the Buddha and Jesus, suggesting that both traditions emphasized compassion, ethical living, and the pursuit of truth. This comparative approach challenged the prevailing Eurocentric and Christocentric perspectives and encouraged a more inclusive and holistic study of religion (Müller, 1873, pp. 30-35).

Müller's work laid the foundation for the academic discipline of comparative religion. By emphasizing the need for rigorous, scholarly analysis of religious texts and traditions, he helped establish comparative religion as a legitimate field of study within the broader academic community.

Müller's methodology involved not only translating and analyzing religious texts but also understanding the historical and cultural contexts in which these texts were produced. This comprehensive approach influenced later scholars, such as James George Frazer and Mircea Eliade, who continued to develop the field of comparative religion (Müller, 1889, pp. 15-20).

The late 19th and early 20th centuries saw the institutionalization and professionalization of religious studies in Germany. Universities began to establish dedicated departments and chairs for the study of religion, reflecting its growing legitimacy as an academic discipline.

The University of Berlin, founded in 1810, played a crucial role in this process. Scholars such as Adolf von Harnack (1851-1930) and Ernst Troeltsch (1865-1923) were instrumental in shaping the academic study of religion. Harnack's work, including his multi-volume *History of Dogma* (1886-1889), applied historical-critical methods to the development of Christian doctrine, emphasizing the historical context and evolution of religious ideas (Harnack, 1886-1889, pp. 30-35).

Troeltsch, a pioneer in the sociology of religion, examined the social and cultural dimensions of religious phenomena. His *The Social Teaching of the Christian Churches* (1912) explored the relationship between Christianity and society, highlighting the





interplay between religious beliefs and social structures (Troeltsch, 1912, pp. 40-45).

The establishment of professional societies also contributed to the formalization of religious studies. The German Oriental Society (Deutsche Morgenländische Gesellschaft), founded in 1845, and the Association for the History of Religions (Vereinigung für Religionsgeschichte), established in 1906, provided platforms for scholars to present research, exchange ideas, and advance the field (Deutsche Morgenländische Gesellschaft, 1845, pp. 5-10).

These societies facilitated the dissemination of new methodologies and fostered international collaboration, further integrating German religious studies into the broader academic community (Vereinigung für Religionsgeschichte, 1906, pp. 12-18).

Several key figures made significant contributions to the development of academic approaches in early German religious studies. Their work not only advanced the field but also laid the groundwork for future scholarship.

Max Müller's contributions to the study of religion were transformative. His comparative approach allowed for a more inclusive and nuanced understanding of global religious traditions, promoting a sense of universality and shared human experience in religious practices and beliefs. Müller's work also highlighted the importance of studying religious texts within their historical and cultural contexts, a principle that continues to guide contemporary religious studies.

Adolf von Harnack's historical-critical approach to the study of Christian doctrine was influential in shaping modern religious studies. Harnack's emphasis on the historical development of religious ideas and his application of rigorous historical methods set new standards for scholarship in the field (Harnack, 1886-1889, pp. 35-40).

Ernst Troeltsch's contributions to the sociology of religion and his analysis of the relationship between religion and society were instrumental in establishing the academic study of religion as a multidisciplinary field. Troeltsch's work highlighted the importance of understanding the social and cultural contexts of religious phenomena (Troeltsch, 1912, pp. 45-50).

The development of religious studies in Germany during the 19th and early 20th centuries was deeply influenced by broader intellectual movements, including positivism, historicism, and the rise of the social sciences.

The positivist emphasis on empirical observation and scientific analysis influenced religious studies by encouraging scholars to adopt more objective and systematic approaches. This shift was evident in the work of scholars like Max Weber (1864-1920), whose sociological studies of religion, including *The Protestant Ethic and the Spirit of Capitalism* (1905), applied empirical methods to understand the relationship between religious beliefs and economic behavior (Weber, 1905, pp. 10-15).

Historicism, with its focus on the historical context and development of ideas, played a crucial role in shaping the methodologies of religious studies. This approach emphasized the importance of understanding religious phenomena within their specific historical and cultural contexts, as demonstrated in the works of scholars like Wilhelm Dilthey (1833-1911), who advocated for a hermeneutic approach to the humanities (Dilthey, 1989, pp. 25-30).

## CONCLUSION

The early development of religious studies in Germany was characterized by significant methodological innovations and the establishment of academic standards that continue to influence the field today. From the historical-critical methods of Strauss and Wellhausen to the comparative approaches of Müller and the sociological analyses of Troeltsch and Weber, German scholars laid the foundations for a rigorous and interdisciplinary study of religion.

These early developments reflect a broader intellectual trend towards the scientific study of human phenomena, marking a departure from purely theological approaches and paving the way for religious studies as an independent academic discipline. The legacy of these early scholars continues to shape contemporary religious studies, underscoring the importance of historical context, comparative analysis, and interdisciplinary perspectives in understanding the complex and multifaceted nature of religion.

## REFERENCES

1. Schleiermacher, F. (1799). *On Religion: Speeches to Its Cultured Despisers* (Original work published in German).
2. Crouter, R. (2005). *Friedrich Schleiermacher: Between Enlightenment and Romanticism*. Cambridge University Press.
3. Tice, T. N., & Schleiermacher, F. (2006). *On Religion: Speeches to Its Cultured Despisers*. Cambridge University Press.
4. Strauss, D. F. (1835). *Life of Jesus Critically Examined* (pp. 20-25).
5. Wellhausen, J. (1878). *Prolegomena to the History of Israel* (pp. 50-55).
6. Müller, F. M. (1879-1910). *Sacred Books of the East* (Vols. 1-50). Oxford University Press.
7. Müller, F. M. (1881). *The Dhammapada*. (Sacred Books of the East, Vol. 10). Oxford University Press.
8. Müller, F. M. (1873). *Introduction to the Science of Religion*. Longmans, Green, and Co.
9. Müller, F. M. (1882). *Lectures on the Science of Religion*. Longmans, Green, and Co.
10. Müller, F. M. (1889). *Natural Religion*. Longmans, Green, and Co.
11. Frazer, J. G. (1890). *The Golden Bough: A Study in Magic and Religion*. Macmillan and Co.
12. Eliade, M. (1954). *The Myth of the Eternal Return: Cosmos and History*. Princeton University Press.
13. Harnack, A. (1886-1889). *History of Dogma* (Vols. 1-7, pp. 30-35, 35-40).
14. Troeltsch, E. (1912). *The Social Teaching of the Christian Churches* (pp. 40-45, 45-50).





15. *Deutsche Morgenländische Gesellschaft. (1845). Journal of the German Oriental Society (pp. 5-10).*
16. *Vereinigung für Religionsgeschichte. (1906). Proceedings of the Association for the History of Religions (pp. 12-18).*
17. *Weber, M. (1905). The Protestant Ethic and the Spirit of Capitalism.*



# GYMNASTIC SKILLS: CHALLENGES AND COMPENSATORY MEASURES

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Article DOI: <https://doi.org/10.36713/epra17767>

DOI No: 10.36713/epra17767

## ABSTRACT

Gymnastics, as a physical activity, plays a crucial role in enhancing the overall well-being of students. However, acquiring and mastering gymnastic skills poses unique challenges that can impede optimal performance. This study explores the challenges students face in gymnastic skill development and the compensatory measures employed to overcome these obstacles.

This study utilizes a descriptive phenomenology design to examine the challenges of third-year Bachelor of Physical Education students of Holy Name University in performing gymnastic skills. It also utilized a descriptive-statistics design and percentage to identify the profile of the final practicum grade of students in gymnastic skills. The findings revealed that students face challenges in executing gymnastic skills such as learning resources, execution, lack of interest, and a high standard. Moreover, most of the respondents could compensate for their challenges such as performance preparation, motivation, and peer support. The researchers concluded that Learning Resources was the most faced challenge mentioned and that Performance Preparation was the most compensatory measure used by students. The result indicated that learning gymnastics has many factors that must be considered, and blended learning and face-to-face classes are necessary to address the challenges.

**KEYWORDS:** challenges, compensatory measures, gymnastic skills

## INTRODUCTION

Gymnastic skills require a high level of physical prowess, coordination, and flexibility. Many students need help to grasp the fundamental movements needed for diverse gymnastic routines. These challenges may stem from individual physical ability differences, fitness levels, and learning styles. Identifying these inherent hurdles is essential in tailoring effective compensatory measures.

According to CHED, Gymnastics is a course that helps students increase their coordination, body movements and awareness. Gymnastic skills cover jumping, back bending, turns, and walks, along with balancing and manipulating various apparatuses. Gymnastic performance is dependent on a combination of physical fitness and the complex technical skills required on each piece of equipment (Mikaouer et al., 2018). Moreover, gymnastic performance is dependent on how one skillfully manipulates equipment. Therefore, having proper equipment or apparatus will improve the development of the gymnast's performance.

In the school where the Bachelor of Physical Education (BPED) students were enrolled, it was observed that their fellow students met several challenges in the Gymnastic course. This prompts the researchers to find out and document their challenges, as well as the compensatory measures the students applied. The final practicum grade of students in gymnastic skills provided a baseline understanding of the students' performance.

The study's findings will provide insights into the challenges that physical education students face when learning gymnastic skills and the compensatory measures they use to overcome these challenges. Understanding the challenges and compensatory measures can help teachers develop more effective teaching techniques to help students learn gymnastics skills better, contributing to the improvement of students' physical health and overall well-being.

In this study, the researchers aim to contribute to EPRA International Journal of Multidisciplinary Research by identifying the challenges encountered and compensatory measures employed by the BPED students. It also scrutinizes the



lived experiences of BPED students' challenges and compensatory measures in online asynchronous classes.

**Descriptive Phenomenology Design** is a qualitative research technique meant to recognize and articulate the fundamental characteristics of phenomenology. The approach examines individuals' day-to-day experiences while putting the researchers' preconceived preconceptions about the phenomenon on hold. In order to better understand how people interpret their lived experiences, phenomenology research looks into such experiences. The emphasis is on students' difficulties in executing Gymnastic skills and compensatory measures used while performing the routine. To gather enough information and ascertain the current status of each participant chosen for the study, an interview will be conducted (Yao, 2021).

**David Perkins's Difficulty Theory** contributes to the aspect of knowing the challenges to identify the student's experiences; to compensate for strategies or approaches that can ease and benefit students (Perkins, 2007). This theory identifies learners' characteristic trouble spots for a particular area of instruction and includes some causal analysis of why they occur toward improved teaching and learning. It is a framework for understanding the challenges that students face when trying to master new concepts. This theory rejects the notion that learning should always be easy and straightforward, asserting that some level of struggle or cognitive effort is necessary for effective learning. It emphasizes the significance of thoughtful task design and instructional strategies that balance challenge and support to foster meaningful and enduring learning experiences. Thus, it is relevant to the study since it represents a student's challenges and difficulties. Students must be able to comprehend and understand the context and concepts of the learning materials given by the teacher in order to perform the appropriate skills of gymnastics, conceptual knowledge thereby improving a student's performance.

#### Related Studies

Gymnastics is a type of high-speed activity that requires a high degree of anaerobic and flexibility skills to execute well. It includes the provision of jumping, pushing, explosive strength, pulling skills, balance, and artistry on the various equipment. Gymnastics performance is dependent on a combination of physical fitness and the complex technical skills required on each piece of equipment. Accordingly, in men's artistic gymnastics (MAG), a high fitness performance level is critical to meeting the necessary requirements on various apparatuses. To perform the wide range of complex acrobatic skills effectively for gymnastics, the gymnast must achieve high levels of strength, flexibility, and coordination (Mkaouer, Hammoudi-Nassib, Amara, Chaabène, 2018). Thus, students new to gymnastics meet difficulties and must develop the high-level skills mentioned above through various compensatory measures to perform effectively.

#### Execution of Gymnastic Skills

Nevertheless, students should develop flexibility, cardiovascular, and muscular conditioning before performing the different

fundamentals of gymnastic skills, including floor skills such as rolling, walking, jumping, turning, backbends, and tumbling. Basically, a roll is a movement depicting a natural reaction to how a gymnast breaks and balances the fall properly. It used to thrust the hands toward the floor to have a clean landing. Rolls can also be performed sideways. Then the walks this clarifies the locomotor and support movement in gymnastics. This section helps the students develop their upper-body strength which is essential in gymnastics. Proceeding to jumps, this skill gained strength in the feet and legs. Students should have a strong leap when performing this skill; pike and tuck jumps are also the basic jump skill. Turns clarify how well the student/gymnast does the spot at the center, this skill determines the circular movement and the balance while doing turns. Backbends illustrate the flexibility, muscular strength, body awareness, and balance of the body. Lastly, tumbling will be performed through hand and foot. It represents the transferring of weight, a transition in one place to another. Students must learn different fundamentals of gymnastics skills, which will aid in performing the proper way of fundamental gymnastics skills without any further background (Mitchell, Davis & Lopez, 2002). One factor that contributes to the performance of gymnastic skills is practice thus, compensatory measure such as practice helps.

According to Heinen, (2016), Gymnastics is performed in a stationary environment where gymnasts skillfully control their posture and segment movements during complex aerial skills. Moreover, this signifies the implications for applications concerning the different gymnastic skills, such as complex skills, proper spotting, and guiding techniques. Also, it depicts the various indicator performances and apparatus developments.

Whittaker and Emery (2017) investigated the effects of dance training on joint pain, instability, and fatigue in dancers. Their data indicated that many participants experienced significant joint pain and fatigue, which interfered with their ability to perform dance routines accurately. The physical pain and instability reduced their overall dance performance quality.

#### Develop the Physical Fitness Skill-related Components

Romanova, Vorozheikin, and Bayankin (2023) explore innovative methods for conducting rhythmic gymnastics training sessions to improve physical and functional fitness. They address the primary challenges young gymnasts encounter, such as physical strain and injury risks. Their research underscores the necessity of incorporating health fitness elements into training regimens to alleviate these issues. Moreover, a holistic training approach that includes health fitness components enhances gymnasts' performance and well-being. Anderson and Wozny (2021) also stated the essential role of flexibility in dance proficiency, observing that dancers who lack flexibility have difficulty performing key dance skills, leading to substandard performance. The study stresses the necessity of incorporating flexibility training into regular practice to improve skill execution. Thus, without sufficient flexibility, dancers cannot meet the physical demands required by professional standards.



### ***Learning Resources***

Parlina et al. (2021) examined the challenges faced by students in distance education learning floor gymnastics. They found that the lack of proper learning resources significantly affected students' ability to perform gymnastics skills. The pandemic exacerbated these issues, making it difficult for students to access necessary equipment and facilities. The study compared public and private elementary schools, revealing that both faced similar difficulties. Teachers struggled to effectively teach gymnastics without adequate resources. The research emphasized the need for better support and resources for distance education in physical education.

Moreover, Mulyana, Soraya, Rubiana, and Herliana (2022) study emphasized the importance of learning resources. They identified a lack of learning resources as a significant obstacle. Students struggled to manipulate apparatus during lessons, hindering their skill development. The study emphasized the need for adequate equipment and facilities in gymnastics education. Teachers also faced difficulties in effectively delivering lessons without proper resources.

### ***Performance Standards of Teachers***

Smith and Johnson (2018) compared undergraduate students' perceptions of their learning experiences in gymnastics and dance. The research found that students preferred the structured nature of gymnastics over dance for teaching and learning purposes. However, both disciplines involved high standards set by teachers, which created significant pressure to perform well. Students felt stressed about meeting these expectations, receiving good grades, and mastering the necessary skills. This study shows the difficulties students face in meeting the high performance demands set by educators in physical education.

Brown and Davis (2021) explored teachers' perspectives on the challenges of implementing quality physical education programs. Teachers feel pressured to accommodate multiple dimensions, such as practicing skills, playing games, and meeting curriculum standards within limited class periods. They believe this pressure often requires students to perform well to meet high standards. The study shows that students face additional stress in physical education due to the high expectations set by teachers, which affects their overall experience and performance.

Williams and Thompson (2023) conducted a thematic analysis of how students cope with performance pressure in physical education. The findings reveal that students frequently try to avoid performance pressure and the fear of not mastering activities or situations in class. High standards and expectations set by teachers contribute significantly to this pressure, leading students to employ various techniques to hide their struggles. The research shows the psychological effects of high-performance expectations in physical education, particularly in gymnastics and dance.

Kuh et al. (2006) identify grades and GPA as the primary measures of academic success, reflecting high and low student performance. These metrics are essential for assessing academic quality, encompassing student satisfaction, skill acquisition, and persistence. The study emphasizes the importance of achieving learning objectives as a crucial part of academic success. Furthermore, the comprehensive nature of academic quality is demonstrated by integrating various aspects of student experiences. Overall, the study provides a multifaceted view of what constitutes academic success.

### ***Students' Interest to Gymnastics***

Oliveira and da Silva (2018) explore the challenge of engaging students in gymnastics, particularly when it is not their area of expertise. They note that physical education students often lack the technical skills and interest needed to fully participate in gymnastics, making it difficult to mediate the learning process effectively. Their study suggests the need for customized approaches to make gymnastics more accessible and engaging for all students.

De Steenberg (2019) found that students' interest in gymnastics is often hindered by their lack of experience and confidence in the sport. The study indicates that middle school gymnastics programs face significant challenges in maintaining student engagement. Students often cannot fully express their interests due to the perceived difficulty and lack of relevance to their personal goals.

Liang (2019) explores the slow progression of gymnastics education and the inherent challenges faced by educators in sparking interest among students. The study emphasizes the need for diverse teaching methods to attract and retain students' interest in gymnastics. Liang suggests that a more engaging curriculum could help overcome the challenges of disinterest.

The preceding discussions have clearly emphasized the importance of understanding the needs of students in developing Gymnastics skills. Difficulty theory serves as the foundation of the study, providing a framework for organizing the main themes. These themes include the challenges BPED students face in performing gymnastic skills. This advances our understanding of the antecedents of appraisal experiences and the specific difficulties that determine how students will compensate for these challenges. Difficulty theory identifies the obstacles students encounter in gymnastics and the compensatory measures they can take, addressing the question posed in the problem statement.

### **OBJECTIVES**

This study aims to determine the challenges and compensatory measures in performing Gymnastic skills of Holy Name University, Bachelor of Physical Education students in School Year 2022-2023.

1. What is the profile of the final practicum grade of students in gymnastic skills?
2. What are the different challenges encountered by the students in learning gymnastic skills?





3. What are the compensatory measures implemented by the students in response to the challenges?

## RESEARCH METHODOLOGY

### Research Design

This study used a descriptive phenomenology design, a qualitative research method that aims to understand and describe the universal essence of a phenomenon. The method investigated people's everyday experiences while suspending the researchers' preconceived notions about the phenomenon. This signifies the specific experiences of the respondents in performing the gymnastic skills. The focus of the study is on students' challenges in the execution of gymnastic skills and ways of compensating while performing the skills.

Moreover, the study utilized a descriptive-statistics design, a quantitative research method used to identify the profile of the final practicum grade of students in gymnastic skills among the third-year BPED students.

### Participants

The participants in this study were Holy Name University third-year BPED students in the school year 2022–2023 who took the PEED 134 subject, or gymnastics class completely, in an asynchronous online format. Those students who are registered for formal credit carry less than the full load called for in a given semester, and transferees were excluded from participating in this study. The researchers used simple random sampling to select the 15 students to be the respondents, answering the given questions in the interview guide. Besides that, the subject teacher was the source of data for the skills and final practicum grades of the fifteen (15) selected students.

### Instruments of the Study

The researchers created researcher-made interview guide questions. The first part of the interview guide is about the respondents' profiles. The second part included items that elicited the challenges or factors they faced while acquiring the skills in gymnastics. The final grade rating of the practicum was used to determine the students' gymnastics skills learned; the gymnastics teacher used a rubric in Rhythmic Gymnastics to assess students performance. The profile of the gymnastic skill rating of the students has been rated using the following scale: 3 are proficient; 2 are approaching mastery; and 1 is still developing. As well as the final practicum grades of the respondents gathered from the teacher.

### Procedure

Before collecting data, the researchers filled out the form needed for the ERB to ensure that the study followed all protocols. A letter was sent to Holy Name University's Dean of the COED Department, requesting permission to conduct the study for third-year BPED students. Several ethical considerations were taken into account in this report undertaken by the researchers to minimize any harm and ensure the legitimacy of this research study. Before data collection, researchers asked permission from

the subject teacher in PEED 134 to get the master list of the students who performed the final practicum. After getting the master list, researchers were selecting respondents using simple random sampling. Then, sent to the 15 selected respondents back to the subject teacher to get their final practicum grade.

Following that, researchers sent a consent form to the selected respondents via Google Forms, which includes the study's objective, inclusion and exclusion criteria, withdrawal procedure, information about the study, risks and benefits, and contact information. Researchers gave participants three days to confirm their participation before the interview. The researchers then meet with the respondents according to their preferred time availability, obtaining the final response. Afterwards, researchers asked permission to record the interview and it lasted for ten to fifteen minutes. As the researchers already had the responses, consequently transcribed them and extracted the code and themes collected from the participants' responses. The collected data were subjected to basic statistical treatment, analysis, and interpretation.

### Data Analysis

The statistical treatment used in this study is: Percentage – used to get the percentage of the population of the 3rd year BPED students. Also, used to consider the given final practicum data from the PE ED 134 professor.

Thematic analysis is used for the qualitative data. It's most commonly used to refer to a collection of texts, such as interview transcripts. The researcher scrutinizes the data for common themes, or subjects, concepts, and meaning patterns that recur again. Thus, it learns about people's perspectives, thoughts, knowledge, experiences, or values from a set of qualitative data, such as interview transcripts, social media profiles, or survey results, this is an appropriate research technique.

To comprehend the data, this must first become acquainted with it. The researchers read and re-read the transcripts. Coding is the next phase, which entails detecting text chunks – usually phrases or sentences – and constructing brief labels or "codes" to convey the content. Researchers read through each interview transcript in this area, looking for anything noteworthy or instructive. As researcher read through the material, which keep adding new codes and highlighting all phrases and sentences that match the codes. The next stage was to come up with theme ideas. Researchers analyze the codes generated, look for patterns, and begin to develop themes. Themes are more expansive than codes. The next stage was to review the themes. The researcher ensures that the themes in this part are valuable and accurate representations of the data.

### Ethical Considerations

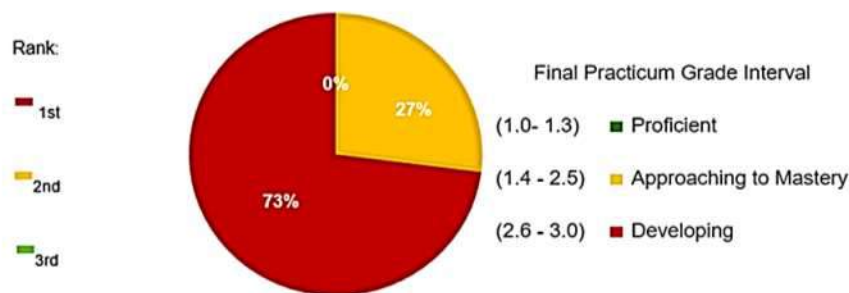
The privacy and identity of respondents who participated in this study are protected, and the data collected have been treated with the utmost confidentiality and respect. Data collected from this study have been properly disposed in the recycle bin after the



fulfillment of the study. All data gathered have been removed or erased from a file directory, application, or device used. Researchers assured that this activity would not expose the participants to any vulnerabilities or risks.

## RESULTS AND DISCUSSIONS

The study’s findings, as well as their corresponding data analysis and interpretation, are presented in this chapter. The main purpose of this study was to identify the challenges and compensatory measures of the BPED students in performing gymnastic skills.



**Figure 1. Profile of the Final Practicum Grade of Students in Gymnastic Skills**

As shown in the figure 1, out of 15 respondents the majority of their final practicum grade performance belonged to “Developing” with a frequency of 11 or 73%, ranking them first on the pie graph. On the other hand, 4 or 27% of the students belonged to “Approaching Mastery” which ranks second. None of the students were classified as “Proficient,” which corresponds to a third-place ranking. This indicates that most students received low grades for performing gymnastic skills in the final practicum during the online class. They found the skills challenging, especially since they are new to them and not flexible enough to perform them. According to the data, students faced various challenges while learning gymnastics online.

According to the study Defining and Measuring Academic Success (Kuh et al., 2006), the grades and GPA are the most commonly used measures of academic success, which means that the performance of a student represents their grades, whether they’re low or high. Thus, academic quality is measured, which includes academic success, satisfaction, skill acquisition, persistence, and the achievement of learning objectives.

This sums up the data from the respondents, indicating that the majority of responses reflect their final practicum with a low-grade performance that causes various challenges such as learning resources, skill execution, interest, and even the standard of the rubric for the final practicum performance in gymnastic skills.

**Table 1. Challenges Encountered in Performing Gymnastic Skills**

Challenges	Specific Experiences
Learning Resources	<p>Do not have a safe place in executing gymnastic skills.</p> <p>Inaccessible and unavailable apparatus.</p> <p>Lack of instructional materials on the appropriate manipulation of apparatus.</p> <p>Content of instructional materials is not enough to gain knowledge in the proper execution of gymnastic skills.</p> <p>The level of understanding of the instructional materials given by the teacher varies individually.</p> <p>Somehow cannot comprehend the skill execution base from the instructional materials given by the teacher.</p> <p>Lack of internet connectivity makes it hard to access learning materials given by the teacher in google classroom and watch instructional videos in YouTube.</p>
Execution	<p>Each skill has a different level of difficulty that some cannot properly execute by a beginner/non-gymnast.</p> <p>Experience body pains; injury, muscle spasm and bruises during and after executing gymnastic skills.</p> <p>No experience in executing gymnastic skills thus the body was astounded.</p>



	<p>Shortfall in the body preparation; did not do warm up and did not consistently perform conditioning exercises before executing gymnastic skills.</p> <p>Lack of self-esteem that results in discouragement, comparing oneself to others, getting frustrated and not confident enough to accomplish the task and executing the skills properly.</p> <p>Conscious on the body physique when executing gymnastic skills.</p> <p>Not flexible enough to execute the skills properly.</p>
Lack of Interest	<p>Not familiar with gymnastics.</p> <p>Gymnastic is not in the field of interest.</p> <p>Not his/her specialization.</p>
High Standard	<p>Performance standards are meant to be a high bar for the respondents, challenging them to get good marks.</p> <p>The performance standard requires more time to practice and acquire the necessary skills, putting respondents under time pressure to prepare.</p>

The participants identified the challenging experiences that they encountered while performing the Gymnastic Skills. Table 1 summarizes the participants' responses and the themes derived from these.

**Learning Resources.** Majority of the respondents mentioned that learning resources are one of their challenges in accomplishing the desired performance tasks in Gymnastics. Parlina et al. (2021) also found that the lack of proper learning resources significantly affected students' ability to perform gymnastics skills. In addition, Mulyana, Soraya, Rubiana, and Herliana (2022) study emphasized the importance of learning resources. They identified a lack of learning resources as a significant obstacle. Students struggled to manipulate apparatus during lessons, hindering their skill development. It is utilized for students to get information from resources, but in this case, students were challenged in terms of:

- a. **Facility.** During the performance, students' was challenged in performing the routine of the gymnastic skills due to their environment where in their location doesn't have enough and safe space to occupy their performance as what respondent 1 said, "*Dapat naa gyuy kuan proper na place kay ang giuna man gud ana is safety man gud unya mao to para naho safety gyud ang angay.*" (There should always be a proper place because we must prioritize safety, for me safety should be a priority). This suggests that availability and safety of facilities affix the challenges of students in performing gymnastic skills.
- b. **Equipment.** In gymnastic skills students have the freedom to choose what apparatus they will perform, but students were challenged to control it such as the hoola hoop, wand, ball, and ribbon. When combined, these make them more challenging, especially for students who are new to gymnastics. Additionally, some students lack the necessary tools in manipulating the equipment respondent 1, 2, 7, 10, and 11 says that "*di pud kaayo proper among equipment pud*". (The equipment is not proper). This indicates that the equipment must be adequate and is fitting for students to effectively perform gymnastic skills.
- c. **Lack of Internet Connectivity.** Students were unable to use resources when searching for other information. Respondent 4 explained that "*mutokad pa ug bud bitaw para magpa signal*"

" ( I even climbed to the highest area just to capture some signal.) such as; google, google classroom and YouTube to view videos related to the skills to be performed. Some materials were provided but could not be accessed due to a lack of signal, this hindered also in passing the final practicum performance. This emphasizes that internet connectivity is one factor that hinders the students from utilizing learning resources, the availability of learning resources helps the students in the instruction of the proper execution of gymnastic skills.

- d. **Content of Instructional Materials.** Majority of the respondents were having a hard time comprehending the materials given by the teacher since they don't have enough knowledge in performing gymnastic skills. This makes them foreign to understand just like respondent 5 said "*Syempre wala tay experience ani gymnastic ohh!*", (Of course, I don't have experience in gymnastics). This suggests that students find it hard to execute gymnastic skills without the experience and knowledge, thus content of instructional materials is of importance in executing gymnastic skills.
- Execution.** Based on the data, all of the respondents' experienced challenges. In this case, students were having difficulties in performing the fundamental skills in gymnastics. Respondents endured physical pains in the body which hindered them from doing the activity properly.
- a. **Level of Difficulty.** The gymnastic skills vary in difficulty; in this case, respondents was challenged to execute the skills effectively because most do not know how to do it correctly as what respondent 1 said "*lahi-lahi ug kaya ang studyante, bali nay uban na kani sayon ra nila ni, uban lisod pud kaayo. Bali sa level of difficulty.*" (Each student has different capabilities, to some it's easy, others find it difficult. Pertaining to the level of difficulty.) While, respondent 6 said "*Diko kamao ako ra gi perform adto kay mga basic ra gyud kaayo mga sayon ra like rolling, nakaya rato nako pero kanang mga naay cartwheel ug kanang naay backbend kay dili ko kamao mo backbend, murag mabali akong likod. Naglisod ko sa level of difficulty*" (I can't do it, I just performed the basic skills like rolling, I was able to execute it but the cartwheel and backbends I don't know how to do it, it's like my back will break. I have a hard time with the level of difficulty.) This



suggests that the teacher must consider the individual differences and the difficulty level of the student's skills.

- b. **Body Preparation.** Prior to performing gymnastic skills, the body should be ready and well-conditioned. Gymnastics conditioning exercises are essential, but students often struggle to perform them due to bruises and muscle spasms caused by insufficient warm-up. One respondent said “I didn’t have proper warm up before I performed the gymnastic skills”. This implies that warm-up exercises must be done before the execution of gymnastic skills.
- c. **Lack of Self-esteem.** When students with low self-esteem try to perform gymnastic skills, one of the obstacles they face is their body image. Respondent 2 said that “Ang pinakakuan nako samot na akong appearance bitaw” (My major concern is my appearance). Students are frustrated if they compare their performance to others, especially if the respondents are unable to perform the chosen gymnastic skills correctly. This indicates that self-confidence contributes to the performance of the students in performing gymnastic skills.

**d. Flexibility.** Lack of flexibility when gracefully perform the gymnastic skill, as the majority of respondents do not stretch or warm up before performing the skills. Respondents says that “diba dili man ta flexible so maglisod jud ta’g perform sa skills nga ipa perform ni ma’am” (We are not flexible so we find it challenging to perform the gymnastic skills that our teacher instructs us to). Also, naa may uban nga skills nga mura nag require ug split” (Also, there are gymnastic skills that require us to do split) as what respondent 14 said; which makes the respondents more complicated. This suggests that students must be flexible in order to properly perform the

gymnastic skills.

**Lack of Interest.** Students' interest was tested since they were unfamiliar with the gymnastic skills and had never performed them. Respondent 2 said “dili ko into gymnastic bitaw” (I’m not into gymnastics). Some of them do not fit their specialization, which creates difficulties during the performance. The findings align closely with Oliveira and da Silva (2018) study that physical education students often lack the technical skills and interest needed to fully participate in gymnastics, making it difficult to mediate the learning process effectively. Additionally, De Steenberg (2019) discovered that students' interest in gymnastics is frequently dampened by their lack of experience and confidence in the sport. The perceived difficulty and lack of relevance to their personal goals often prevent students from fully engaging with and expressing interest in gymnastics.

**High Standard.** Students were put under pressure by the high expectations they met throughout their performance. They were likewise under strain because of cutoff times and unfortunate time management, which upset their performance. Furthermore, the teacher expects students to perform at a higher level than they are capable of since they’re PE major. It causes students to feel frustrated since what is given or taught does not correspond to the capabilities, resulting in the majority of the respondents’ performance being low. The findings of the study conformed with Williams and Thompson (2023) which reveals that High standards and expectations set by teachers contribute significantly to students’ pressure leading them to employ various techniques to hide their struggles

**Table 2. Compensatory Measures in Performing Gymnastic Skills**

Compensatory Measures	Specific Experiences
Performance Preparation	Improvise or borrow equipment. Gradual learning of the skills. Practicing the routine. Determine priorities and manage time. Assessing oneself through video. Utilizing instructional materials given by the subject teacher. Watching instructional videos on Youtube and Google. Corrective feedback given by family and peers
Motivation	Aspire to graduate and pay back parents' sacrifices. Verbal encouragement given by peers. Driven to get good grades. Believing in oneself and being confident in performing the skills.
Peer Support	Collaborating with peers and applying given suggestions from peers.

The participants identified the compensatory measures that they utilized in performing gymnastic skills. Table 2 summarizes the participants' responses and the themes derived from them.

**Performance Preparation.** Before students perform their final gymnastics skills practice performance, they watch instructional videos on Google and YouTube to assess themselves and learn how to perform the skills correctly. In the categorization of this

helps the students to practice counter measures to lessen the injury and other body pains.

**a. Assessing oneself through video.** One way to improve their performance is to assess and film themselves during practice to see if their skills are properly executed or not. As respondents 5, 10, and 15 “Ga individual learning ragyud ko”, “practice practice gyud ko hinay-hinay ragud gihapon huang practice hangtod sa mag video ko and then aron akong tan-awon huang kaugalingon





ug naporma ba pud huang g perform”. (I just practice and practice, I take it slow until I take a video of myself and assess myself). This implies that assessing oneself is useful in performing gymnastic skills.

**b. Corrective Feedback.** Receiving feedback from parents and peers enables respondents to develop what needs to change and improve. When respondent 7 said, “nagpatabang pud kos akong igsoon, kay diba naa toy spotter? Siya nalang akong gi spotter or support bitaw para mutan-aw.” (I asked for help from my sibling like there should be a spotter, right? I decided to make him/her as my spotter or support to watch me perform). As a result, this will benefit through proper execution and forms. This suggests that students struggle to understand the lessons without the help of their professors' feedback.

**Motivation.** Majority of the respondents’ said that “gipaningkamutan nga mabuhat naho ang skills kuan man gud

pud aron makapasar ko” (I did my best to performed the skills in order to pass). Since it is one of the factors that can help them achieve their dreams and graduate.

**Peer Support.** This assists respondents in compensating for poor performance by collaborating with peers and classmates. Respondent 4 illustrated this by saying, "We asked each other if what we did was right and helped each other execute the skills properly." This practice of comparing their skill executions with those of more knowledgeable and flexible classmates provided valuable feedback, which, according to Donia et al. (2022), can significantly enhance student performance. The respondents' ability to receive and apply feedback from their peers led to notable improvements in their gymnastic skills, demonstrating the effectiveness of peer support in overcoming performance challenges.

**Table 3. Challenges and Compensatory Measures in Performing Gymnastic Skills**

Challenges	Compensatory Measures
Learning Resources	Performance Preparation
Execution	Performance Preparation Motivation Peer Support
Lack of Interest	Performance Preparation
High Standard	Motivation Performance Preparation

**Table 3 summarizes the compensatory measures students used to address challenges in performing gymnastic skills.**

To overcome learning resource challenges, respondents asked family members to act as spotters, used foam or yoga mats, sought soft surfaces like Bermuda grass, improvised or borrowed equipment, watched instructional videos on YouTube and Google, used materials from their teacher, and found places with strong internet connections. These methods helped them adapt to their challenges during the final practicum. For execution challenges, students learned the skills gradually, practiced routines, used instructional materials, watched videos for proper execution, received feedback from family and peers, collaborated with classmates, and applied their suggestions. They also relied on self-belief, confidence, and motivation to achieve good grades. To maintain interest, respondents watched videos for insights into gymnastics, received verbal encouragement from peers, believed in themselves, and felt a sense of fulfillment from completing performances. When facing high standards, students watched instructional videos, practiced routines to meet performance standards, built self-confidence, prioritized tasks, and managed their time effectively.

**CONCLUSION**

The data revealed that students faced challenges in performing gymnastic skills during asynchronous online learning. Achieving proper execution was difficult, leading to body pains and injuries, as students were not gymnasts. Many struggled to find and utilize resources to understand gymnastics better, and the high standards

were unrealistic for beginners. Despite these issues, students managed to complete the final practicum by focusing on preparation, using available materials, and practicing regularly. Motivation from peers, family, and self-belief helped them persist. Peer support also played a crucial role through collaboration with classmates. The study highlighted the need for blended learning and face-to-face classes for immediate teacher feedback. Addressing these challenges requires the combined efforts of students, teachers, and administrators.

**REFERENCES**

1. Anderson, B., & Wozny, T. (2021). *Flexibility in dance*. *Journal of Physical Education and Sport*. Retrieved from ResearchGate.
2. Brown, L., & Davis, T. (2021). *Activity levels, lesson context, and barriers to quality implementation in physical education: Teachers' perspectives*. *Physical Education and Sport Pedagogy*, 26(2), 201-215. <https://doi.org/10.1080/17408989.2021.1876100>
3. Commission on Higher Education. (2017). *CHED Memorandum Order No. 80 – Policies, standards, and guidelines for Bachelor of Physical Education (BPEd)*. Retrieved from <https://tinyurl.com/2p8k7sha>
4. De Steenberg, V. (2019). *Research on sports and health curriculum in gymnastics teaching*. *Innovation*. Retrieved from <https://cayley-nielson.com/jep/ archives/5-1/jep-5-1-13-20.pdf>



5. Donia, Magda B. L.; Mach, Merce; O'Neill, Tom A.; Brutus, Stéphane (2022). *Student Satisfaction with Use of an Online Peer Feedback System*. Retrieved from <https://tinyurl.com/3keytnrk>
6. Heinen, T., et al. (2016). *Gymnastics performance and motor learning: Principles and applications*. Nova Science Publishers, Inc. Retrieved from <https://tinyurl.com/bed4p9x7>
7. Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *Defining and measuring academic success*. *Journal of College Student Development*, 47(2), 121-135.
8. Liang, C. (2019). *Reflections on the reform of gymnastics teaching in colleges in the new era*. *Frontiers in Sport Research*. Retrieved from <https://francispress.com/uploads/papers/jj19TuO1cPRvogyR658sCvkZgQqsoPrLi8uYt49B.pdf>
9. Mitchell, D., Davis, B., & Lopez, R. (2002). *Teaching FUNDamental gymnastics skills*. Retrieved from <https://tinyurl.com/55bpdehb>
10. Mkaouer, B., Hammoudi-Nassib, S., & Amara, S. (2018). *Evaluating the physical and basic gymnastics skills assessment for talent identification in men's artistic gymnastics proposed by the International Gymnastics Federation*. Retrieved from <https://tinyurl.com/yunh3mau>
11. Mulyana, F., Soraya, N., Rubiana, I., & Herliana, M. N. (2022). *Socialization and training of basic gymnastics skills based on sports science and technology*. *Journal of Physical Education Recreation and Dance*, <https://dx.doi.org/10.26877/jpom.v3i2.13877>.
12. Oliveira, M. S., & da Silva, Y. T. G. (2018). *Pursuing gymnastics for all and by all*. *Science of Gymnastics Journal*. Retrieved from [https://www.researchgate.net/profile/Paula-Silva-56/publication/323720323\\_Pursuing\\_a\\_gymnastics\\_for\\_all\\_and\\_by\\_all/links/5aa82e91458515b024fb05a3/Pursuing-a-gymnastics-for-all-and-by-all.pdf](https://www.researchgate.net/profile/Paula-Silva-56/publication/323720323_Pursuing_a_gymnastics_for_all_and_by_all/links/5aa82e91458515b024fb05a3/Pursuing-a-gymnastics-for-all-and-by-all.pdf)
13. Parlina, N., Anugrahsari, S., Sujanto, B., Suryadi, W. P., Triyanta, S., & Khoirurahmat, A. I. N. (2021). *Identifying the difficulties in learning floor gymnastics in distance education: A case study of public and private elementary schools*. *Journal of Physical Education and Sport*, <https://dx.doi.org/10.7752/jpes.2021.s4307>.
14. Perkins, D. (2007). *Theories of difficulty*. Retrieved from <https://tinyurl.com/263u6fhj>
15. Romanova, E., Vorozheikin, A., & Bayankin, O. (2023). *Enhancing physical and functional fitness through the integration of health fitness elements in young gymnasts*. *Journal of Physical Education and Sport*. Retrieved from <http://efsupit.ro>
16. Smith, J., & Johnson, M. (2018). *Physical education undergraduate students' perceptions of their learning experiences: A comparison of gymnastics and dance*. *Physical Education and Sport Pedagogy*, 23(4), 417-432. <https://doi.org/10.1080/17408989.2018.1429584>
17. Whittaker, J. L., & Emery, C. A. (2017). *The effects of dance training on joint pain, instability, and fatigue in dancers*. *Journal of Dance Medicine & Science*, 21(3), 121-128.
18. Williams, R., & Thompson, J. (2023). *A thematic analysis of hiding techniques in physical education: Coping with performance pressure*. *Physical Education and Sport Pedagogy*, 28(1), 123-137. <https://doi.org/10.1080/17408989.2023.2167890>
19. Yao, P. (2021). *Qualitative research designs*. Retrieved from <https://tinyurl.com/5fj64xv6>



# EVALUATING IMPACT OF COVID-19 ON THE LIQUIDITY AND PROFITABILITY OF SELECTED PRIVATE BANKS: EMPIRICAL EVIDENCE FROM INDIA

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Article DOI: <https://doi.org/10.36713/epra17773>

DOI No: 10.36713/epra17773

## ABSTRACT

This study analyses the impact of the Covid-19 Pandemic on the liquidity and profitability of the top five listed private banks of India through 7 key variables. It also evaluates and compares the performance of the banks during the period from 2017 to 2023 for the same. For analysing the data, the periods have been divided into the three phases – Pre-Covid, During Covid, and Post-Covid following which ratio and trend analysis have been used. For further comparative analysis, the Multi-Criteria Decision Analysis (MCDA) method has been employed. From the analysis, it has been broadly found during the pandemic, the selected banks' average liquidity metrics were adversely affected. However, the profitability performances were not impacted the same and rather saw a linear growth. From the comparative analysis of the banks, it has been found that based on Liquidity and Profitability, HDFC Bank and Kotak Mahindra Bank has been the top performing private banks in the last seven years among all the banks under this study.

**KEYWORDS:** Covid-19, Banks, Liquidity, Profitability, India

## 1. INTRODUCTION

Finance and banking are also known as the lifeline of commerce, business, and industries. It is imperative for an economy's growth, development, and survival. The banking sector is the backbone of modern trade and business. The health of a country's economy is heavily dependent on a sound and effective banking system of that country (Sharma et al., 2012). If the banking system in a country is efficient, effective, and disciplined, it brings about rapid growth in the various sectors of the economy and is a crucial driver for socio-economic development (Haralayya, Aithal, 2021). The Banking industry acts as the mediating bridge for every other industry to carry out their functions properly.

As Barna & Ruschshyn (2020) rightly pointed, economic growth of any nation has a huge contribution of its banking system which plays a crucial role by ensuring stable growth, providing financial services, security, and adaptability to the macroeconomic environments across the globe. Facilitating trade, credit creation, accepting deposits, lending loans, etc. are a few of the many functions which the banking industry undertakes. All these functions play a crucial part in the operations of other industries, trade and commerce, and in daily activities of general consumers as well.

Recently, the world was shaken with the Covid-19 Pandemic which disrupted the normal lives of people across the globe (Gazi et al., 2022). With staggered and reduced mobility,

lockdowns on markets and through several other factors, especially with the significantly high infection rate of the virus. The biggest dent made by this virus was on the economies of several countries in the world, especially to developing nations as their steadily growing economies went into recession at once. India, being one of the largest developing nations was no exception to the adverse effects of the Covid-19 pandemic that started in 2020. "The Indian government implemented a 55-days lockdown throughout the country that started on March 25th, 2020, to reduce the transmission of the virus", Kumar et al. (2020) noted. It took almost more than two years to bring the pandemic under control with mass vaccinations and social distancing.

In light of the immensely significant role that Banks play in today's economy, it thus becomes a necessity to properly assess and understand the impact of the covid-19 pandemic on the performance of the banks as well as on their true financial situation. Thus, this study aims to analyse the top five private banks of the country based on their market capitalisation, for their profitability performance and liquidity scenario in the last 7 years through relevant ratios.

There are two major research objectives in this study which are listed as follows:

- i. To analyse the impact of covid-19 on the liquidity position and profitability performance of top five Indian private banks based on market capitalization.

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- ii. To evaluate and compare the overall financial performance of the top five private banks during the period of study in terms of liquidity and profitability.

## 2. METHODOLOGY

### 2.1. Data and Variables

The study is based on a set of panel data of listed private sector banks in India collected from secondary sources. The relevant data has been collected and arranged from the published annual reports of the banks. Certain data has also been collected from ACE Equity database and Moneycontrol database. By the end of March 2024, there were 22 listed banks in the private sector in India. For the study, the top five banks based on their market capitalisation value as on 31<sup>st</sup> March, 2024 has been considered viz. HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra, and IndusInd Bank.

Since the primary research objective of this study is to examine the impact of Covid-19 Pandemic on the

performance of the banks, hence, the period of study has been taken from the year 2017 to 2023 comprising all three periods i.e. pre-pandemic, during-pandemic, and post-pandemic.

As we are studying the liquidity positioning and profitability performance of the banks, we have identified 7 key ratios which are our variables for this study. The variables pertaining to the liquidity position are [1] Cash-Deposit Ratio (CHDR) [2] Credit-Deposit Ratio (CRDR) [3] Net Non-Performing Assets (NNPA) Ratio. For measuring the profitability position, the following variables have been selected [4] Net Interest Margin (NIM) [5] Return on Assets (ROA) [6] Return on Equity (ROE) [7] Net-Profit Growth Percentage (NPG). The detailed description of these variables are provided in Table 1 below. The next section delves into the research methods used in order to measure the impact of covid-19 on the banks' performance as well as to rank the performance of the banks in each year and in an overall ranking.

**Table 1: Description of Ratios**

Type	Variable	Ratio	Description
Liquidity	[1] CHDR	Cash-Deposit Ratio	CDR of scheduled commercial banks is the ratio of cash in hands and balances with the RBI as a percentage of aggregate deposits. The amount of money a bank should have available as a percentage of the total amount of money its customers have paid into the bank. This ratio helps customers know if they can take their money out of the bank if they want to.
	[2] CRDR	Credit-Deposit Ratio	It tells how much of money banks have raised as deposits has been deployed as loans. A high CD ratio would mean there is a strong demand for credit with relatively lower deposit growth.
	[3] NNPA	Net Non-Performing Assets Ratio	NNPA simply means the present NPAs of the bank over the number of loans provided. $NNPA \text{ Ratio} = \frac{\text{Net NPA}}{\text{Total Loans Given}}$ Net NPA= Gross NPA-provisions A high NNPA would mean the bank has too many loans that are not rendering any interest income for the banks.
Profitability	[4] NIM	Net-Interest Margin	Net interest margin (NIM) is a measurement of profitability obtained by comparing the net interest income with outgoing interest expenses expressed in a percentage.
	[5] ROA	Return on assets	Measures how much profit a company makes from the sale of goods and services after deducting the direct costs.
	[6] ROE	Return on Equity	Measures the amount of profit a company can generate from the utilisation of its assets.
	[7] NPG	Net Profit Growth	Measures the year-on-year growth of the net profit.

[Source: Author's Compilation]

### 2.2. Research Methods

For analysing the collected data of the variables, a few research techniques have been applied based on the concerned research objectives. To achieve the first objective, we have used trend analysis to investigate any signs of recurring patterns or variation in the variables within the three segments in the period of study viz. 2017-19, 2020-21, and 2022-23. Hence, we have obtained the arithmetic mean of all the five banks' values for

each variable (except NPG where median has been used due to presence of extreme values) for each year. We then grouped the averages based on the relevant periods to map for the impact during the covid-19 affected years and compare it with the other two periods. Ratio analysis was further used to understand the different variables in order to interpret their impact. Further, to compute the overall comparative performance of each of the banks in the respective years we have used the Multi-Criteria





Decision Analysis (MCDA) method. We have assigned scores from 1 to 5 for each of the variables for each of the 7 years, which are assigned based on the performance of the banks, wherein 5 is awarded to the best performing or positioned bank and 1 for the lowest performer and all intermediate scores are assigned accordingly. We have then calculated the total scores for each of the bank for each year by adding all of their seven variable scores to obtain the ranking of banks for the respective years. Finally, we have measured the arithmetic mean of the ranks of the banks across the seven years to assign overall seven-year liquidity and profitability performance ranks.

### 3. RESULTS AND DISCUSSION

#### 3.2. Liquidity Performance

Through liquidity ratios, we get a brief understanding about the liquidity condition of the banks. As (Vasiu et al., 2015) pointed,

“Liquidity ratios are used to measure a company's ability to pay short-term debt, assessing the amount of cash and cash equivalents that it has on the short term.” Table 2 summarizes the average data of the variables grouped as per the three sub-periods. The observed values of CHDR indicate a rise from the covid-19 period which increased from the previous 0.08 to 0.09 during covid and further increased to 0.13 post covid. A higher CHDR is a bad signal for banks, hence the impact has been adverse in terms of liquidity. The CRDR decreased by 4.37% from pre covid to the covid period signalling that the banks became more conservative in lending which can be seen as a direct impact of the economic slowdown of businesses due to the pandemic. Even for the post covid period, the average CRDR is at 85.22%, which is 5.26% lesser than what it was at the pre-covid period.

**Table 2: Summary of Variables**

PERIOD	CHDR	CRDR	NNPA	NIM	ROA	ROE	NPG
Pre Covid [2017-19]	0.08	90.48	1.83	3.39	1.25	11.21	19.06
Covid-19 [2020-21]	0.09	86.53	0.97	3.57	1.26	10.62	21.54
Post Covid [2022-23]	0.13	85.22	0.53	3.62	1.60	12.85	35.88

[Source: Author's Compilation]

However, the NNPA % can be seen reducing significantly from the pre-covid to covid phase and further to the post covid phase as well. This indicates that the banks have become more liquid throughout these phases which might be the outcome of various other forces as well.

during the covid phase indicating an adverse impact of covid on the profitability to shareholders. The average ROE has later jumped up to 12.85 post covid showcasing recovery in profitability. In terms of average growth in the net profit (NPG), a linear growth trend can be observed throughout the three phases with a 66.57% increase from the covid phase to the post-covid phase. Such an increase indicates that the banks have been recovering well after the pandemic in terms of growing their net profitability.

#### 3.2. Profitability Performance

A group of financial measurements known as profitability ratios are employed to evaluate a company's potential to create profits over time in relation to its revenue, operational expenses, balance sheet assets, and shareholders' equity. We can observe an almost steady average NIM (i.e. between 3-4 %) throughout the three phases with an incremental increase. This indicates that the profitability of the banks did not get any major in regards to the difference in lending and borrowing interest rates. The average ROA has depicted almost no change from 2017-2021, and a 0.34 increase from 2021 to 2023. However, the average ROE has dipped from 11.21 in pre-covid phase to 10.62

#### 3.2. Ranking of Combined Performance

The results upon exploring the second objective of the study, i.e. to evaluate and compare the overall financial performance of all the banks, we assigned the respective scores (ranging from 1 to 5) for each of the ratios based on the banks' performance. The final summarized results of the scoring are presented below in Table 3.

**Table 2: Summary of Variables**

RANK	BANK	CHDR	CRDR	NNPA	NIM	ROA	ROE	NPG	FINAL SCORE
1	HDFC	23.5	27	35	27	32	34	20	198.5
4	ICICI	24	27	9	16	17	20	21	134
5	AXIS	13.5	14	16	7	8	9	19	86.5
2	KOTAK M.	33	22	22.5	31	30	21	20	179.5
3	INDUSIND	11	15	22.5	24	18	21	25	136.5

[Source: Author's Compilation]

After assigning the scores to the banks based on their performance as per the ratios' nature for each of the variables for the 7 years, we have then summed up their total overall scores. Based on the final scores, HDFC Bank has been ranked the top performer in the last 7 years in terms of liquidity positioning and profitability performance, which is followed by Kotak Mahindra Bank at the second rank. IndusInd Bank has been ranked third with a very narrow margin of 2.5 points pushing ICICI Bank to the fourth rank. Axis bank has been

ranked fifth as it has scored the lowest and has a deficit of 47.5 points from the next ranked bank.

As per the yearly scores for the banks, HDFC bank has been at the first position for 5 out of the 7 years. Kotak Mahindra Bank has been the second-best performer for 6 of the 7 years and the best performer in the year 2020. In the most recent year, ICICI bank has performed significantly better than earlier and secured the first rank.



#### 4. CONCLUSION

Through this study, we have attempted to examine the impact of the covid-19 pandemic upon the liquidity and profitability performance of the top Indian private banks. Alongside, we also tried to compare these performances of the referred banks to get an idea of the overall robustness of their liquidity and profitability positions in these past several years. We have gained several useful insights from the segmented trend analysis of the bank's performances across the several relevant variables that have been studied. One of the key insights achieved is that the banks' liquidity positions were adversely affected due to the covid-19 pandemic but at the same time their profitability performances were not affected as much and were rather at a brighter end.

This study has certain shortcomings as we have not considered other key areas for a bank's performance and level of functioning such as capital adequacy, size of the firm, etc. and have only looked at their positions from a liquidity and profitability dimension. Due to this reason, the overall performance scores of liquidity and profitability may not depict the actual overall comparative performance of the banks due to the influence of the other unknown factors.

There is ample scope of further study following this research wherein the other factors through models such as CAMELS can also be taken into consideration to get a more accurate overall scenario of the banks' performance. The number of banks under study may also be considered to be increased for a broader dataset.

#### REFERENCES

1. Barna, M., & Ruschysyn, N. (2020). *Banking system of the country: Elements, functions and potential in ensuring economic growth.* , 23, 54-67. [https://doi.org/10.48077/SCIHOR.23\(10\).2020.54-67](https://doi.org/10.48077/SCIHOR.23(10).2020.54-67).
2. Gazi, M., Nahiduzzaman, M., Harymawan, I., Masud, A., & Dhar, B. (2022). *Impact of COVID-19 on Financial Performance and Profitability of Banking Sector in Special Reference to Private Commercial Banks: Empirical Evidence from Bangladesh.* Sustainability. <https://doi.org/10.3390/su14106260>.
3. Kumar, S., Kumar, D., Christopher, B., & Doss, C. (2020). *The Rise and Impact of COVID-19 in India.* Frontiers in Medicine, 7. <https://doi.org/10.3389/fmed.2020.00250>.
4. Vasiiu, D. E., Baltes, N., & Gheorghe, I. N. (2015). *Liquidity ratios. A structural and dynamic analysis, during 2006-2012, of the companies having the business line in industry and construction, listed and traded on the Bucharest Stock Exchange.* In *Theoretical and Applied Economics, Theoretical and Applied Economics: Vol. XXII-XXII (pp. 187-206)*. <https://store.ectap.ro/articole/1119.pdf>
5. Hafsal K., Suwvari A. and Durai S.R.S. (2020). *Efficiency of Indian banks with non-performing assets: evidence from two-stage network DEA.* Future Bus J, 6(26):1-9.
6. Haralayya, Aithal, 2021 *IMPLICATIONS OF the BANKING SECTOR ON ECONOMIC DEVELOPMENT IN INDIA* <https://www.openaccessjournal.com/article-file/20210807431626880378fluss.pdf>
7. Liang H.Y. and Reichert A. (2006). *The relationship between economic growth and banking sector development.* Banks and Bank Systems, 1(2):19-35.
8. Murphy, C. B. (2021, December 7). *How the loan-to-deposit ratio (LDR) measures a bank's liquidity.* Investopedia. Retrieved November 29, 2022, from <https://www.investopedia.com/terms/l/loan-to-deposit-ratio.asp>
9. Published by Statista Research Department, & 17, O. (2022, October 17). *India: Loan to deposit ratio of private sector banks 2022.* Statista. Retrieved November 29, 2022, from <https://www.statista.com/statistics/794874/india-loan-to-deposit-ratio-of-private-sector>
10. Sharma S., Raina D. and Singh S. (2012). *Measurement of technical efficiency and its sources: An experience of Indian banking sector.* International Journal of Economics and Management, 6(1):35-57.



# ENHANCING MATHEMATICS AND SCIENCE LEARNING THROUGH IMPROVED READING COMPREHENSION: A SYSTEMATIC LITERATURE REVIEW

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Article DOI: <https://doi.org/10.36713/epra17754>

DOI No: 10.36713/epra17754

## ABSTRACT

This literature review explores the critical role of reading comprehension in enhancing mathematics and science learning outcomes. Proficiency in reading comprehension is foundational for understanding complex concepts and technical texts, crucial in interdisciplinary education. Theoretical frameworks and empirical evidences, highlight the influence of factors like family income and parental education on reading comprehension. Educational strategies integrating diverse learning styles and collaborative approaches aim to support individual student needs. Methodologically, a systematic literature review identified key theoretical frameworks and empirical studies, synthesizing recurring themes and gaps in current research. Results underscored the effectiveness of scaffolding, motivation strategies, and explicit instruction in enhancing comprehension. Strategies such as vocabulary scaffolds and multimodal presentations cater to diverse learning preferences, supported by Thorndike's Laws of Exercise and Effect and Vygotsky's social constructivism. Collaborative Strategic Reading and parental involvement further enrich comprehension development. This review concludes with recommendations for educators to adopt research-based interventions that foster inclusive learning environments and enhance students' reading comprehension abilities.

**KEYWORDS:** mathematics, science, reading comprehension, systematic literature review

## INTRODUCTION

Proficiency in reading comprehension is foundational to success in mathematics and science education. As emphasized by various studies (IMU, n.d.; Centre for Education in Science & Technology, n.d.; Akbasli et al., 2016; Bearnard-Brak et al., 2017; Karacaoglu & Kasap, 2023), strong reading comprehension skills enable students to understand complex concepts, interpret technical texts, and solve mathematical problems effectively. This capability is pivotal in fostering interdisciplinary understanding across subjects, as noted in recent assessments like PISA (Chi, 2023), which highlight the Philippines' need for improvement in these areas.

Theoretical frameworks (Vygotsky, n.d.; Bandura, 1994; Rumelhart & McClelland, 1986) and empirical evidence (Mustikasari & Maysarah, 2020; Manguilimotan et al., 2024; Kennedy & Trong, 2006) underscore that factors such as family income levels, parental education, and learning environments significantly influence reading comprehension outcomes. Addressing psychological barriers (Mustikasari & Maysarah, 2020) and enhancing motivational factors (Taylor & Hart, 2014) are crucial steps towards improving these skills.

Educational strategies should integrate diverse learning styles (Learnings About Learning Styles, 2023) and collaborative learning approaches (Andreev, 2024), aligning with theories such as Vygotsky's Zone of Proximal Development (Billings & Walqui, n.d.) and Bruner's Modes of Representation (Main,

2023) to support varied student needs. By applying these insights, educators can create inclusive instructional practices that cater to individual strengths, thereby enhancing overall academic achievement in mathematics and science.

## METHODS

The study employed a systematic literature review and theoretical analysis to investigate the learning need through a theoretical lens, a systematic literature review was conducted, targeting academic databases. Selection criteria included peer-reviewed articles published within the last decade, focusing on relevant theoretical frameworks and empirical studies addressing similar learning needs. Thematic analysis was employed to synthesize the literature, revealing recurring themes, patterns, and gaps in current research. This process facilitated the development of a comprehensive theoretical framework, integrating diverse perspectives and findings. Critical analysis was performed to evaluate the strengths and limitations of the existing literature, guiding the interpretation of results. Based on these synthesized insights, we proposed intervention strategies, justified through the theoretical and empirical evidence gathered.

## RESULT AND DISCUSSION

### *Thematic Analysis of Literature*

Scaffolding and vocabulary supports are crucial elements in enhancing reading comprehension, as evidenced by Diprossimo et al. (2023). Their study highlights the



effectiveness of scaffolds, particularly vocabulary scaffolds, in digital reading settings. These supports provide contextual clues that aid learners in understanding and retaining information, thereby narrowing performance gaps among diverse student populations. This approach not only facilitates comprehension but also promotes independence in reading, as students learn to apply strategies effectively in varying contexts.

A conducive learning environment plays a pivotal role in student success, according to Shrestha et al. (2019). They emphasize the importance of classrooms being quiet, comfortable, and free from distractions. Such environments are conducive to focused reading tasks and support deep engagement with texts. Additionally, a supportive classroom atmosphere that encourages questions and collaboration enhances motivation and participation, ultimately fostering a positive learning experience.

Motivation is a critical factor in teaching and learning, influencing both engagement and learning outcomes (Filgona et al., 2020). Strategies such as setting achievable goals and offering choices in reading materials help cultivate intrinsic motivation. When students are motivated, they are more likely to invest effort in understanding texts, persist through challenges, and actively participate in learning activities. This intrinsic drive enhances comprehension by encouraging students to connect personally with the material and see its relevance to their own lives and interests.

Recognizing and addressing diverse learning styles is essential in scaffolding reading comprehension effectively (Rezaeinejad et al., 2015). Visual aids, auditory supports, and multimodal presentations cater to different learning preferences, ensuring that all students have access to information in ways that resonate with their strengths. By tailoring interventions to accommodate these variations, educators can enhance comprehension and retention of information across a broader spectrum of learners, promoting inclusivity and equity in education.

The laws of learning by Edward Thorndike underscore foundational principles in education that apply directly to reading comprehension (Oxford University Press, 2007; Kyonka, 2011). The Law of Exercise highlights the importance of regular practice in reinforcing comprehension skills, suggesting that repeated exposure to varied texts and contexts strengthens understanding. Meanwhile, the Law of Effect emphasizes the role of positive reinforcement in motivating continued engagement with reading tasks, thereby fostering a positive attitude towards learning.

Explicit instruction provides a structured approach to teaching reading comprehension strategies (Lexia, n.d.). By systematically guiding students through the process of applying strategies like summarizing, predicting, and questioning, educators empower learners to actively monitor their understanding and make meaning from texts. This method aligns with Vygotsky's theory of social constructivism, which emphasizes the role of social interaction and collaboration in cognitive development, underscoring the

importance of classroom discourse and shared learning experiences (Rogoff, 1990; Ben-Ari & Kedem-Friedrich, 2000, as cited in Alharbi, 2015).

Effective instructional elements identified through research provide further insights into optimizing reading comprehension interventions (Archer & Hughes, 2011). Skill sequencing ensures that students master prerequisite skills before advancing to more complex tasks, establishing a solid foundation for comprehension. Segmenting reading comprehension skills into manageable components facilitates mastery and application. Additionally, providing multiple practice opportunities with constructive feedback reinforces learning and corrects misconceptions, promoting deeper understanding over time.

Collaborative Strategic Reading (CSR) integrates multiple components to enhance reading comprehension (IRIS | Page 3: Introduction to CSR, n.d.). By incorporating prior knowledge activation, vocabulary development, effective questioning techniques, and ample practice opportunities, CSR promotes active engagement and deepens understanding. This comprehensive approach not only supports comprehension during reading but also encourages critical thinking and reflection, aligning with research-based strategies endorsed by the National Reading Panel (n.d., as cited in Lexia Learning, 2023).

### ***Comprehensive Theoretical Framework***

In constructing a theoretical framework for enhancing reading comprehension, cognitive constructivism provides a foundational perspective. Vygotsky's social constructivism emphasizes the role of social interaction in cognitive development (Rogoff, 1990; Ben-Ari & Kedem-Friedrich, 2000, as cited in Alharbi, 2015). This theory underscores the importance of explicit instruction and collaborative learning strategies in scaffolding comprehension skills, suggesting that learning is optimized through meaningful interactions and shared experiences in the classroom.

Behaviorist theories, particularly Thorndike's Laws of Exercise and Effect, contribute principles that inform instructional practices in reading comprehension (Oxford University Press, 2007; Kyonka, 2011). The Law of Exercise supports the value of repeated practice in reinforcing comprehension skills, highlighting the benefit of varied and consistent exposure to texts. Meanwhile, the Law of Effect underscores the motivational impact of positive reinforcement, advocating for strategies that celebrate student successes and foster a supportive learning environment.

Motivational theories, such as Self-Determination Theory, further enrich the theoretical framework by emphasizing the importance of intrinsic motivation in learning (Filgona et al., 2020). Strategies that empower students to set goals, make choices in their learning, and connect personally with reading materials promote engagement and persistence. By tapping into intrinsic motivations, educators can cultivate a deeper appreciation for reading and its relevance in students' lives, thereby enhancing comprehension outcomes.





Considering diverse learning styles and modalities is essential in designing effective reading comprehension interventions (Rezaeinejad et al., 2015). Howard Gardner's Multiple Intelligences theory posits that learners have varied strengths and preferences for processing information. Utilizing multimodal presentations that combine text with visuals, audio elements, and interactive tools accommodates these differences, ensuring that all students can access and comprehend information effectively. This approach promotes inclusivity and supports personalized learning experiences in diverse classroom settings.

### ***Critical Analysis of Existing Research***

The strengths of current research on reading comprehension interventions lie in their empirical support and comprehensive approach. Studies consistently demonstrate the effectiveness of scaffolding techniques, explicit instruction, and collaborative reading strategies in enhancing comprehension across diverse student populations. By integrating cognitive, behaviorist, and motivational theories, educators can implement evidence-based practices that address the complex interplay of factors influencing reading comprehension.

However, limitations exist, primarily related to the context-specific nature of some findings. While vocabulary scaffolds and specific instructional methods show promise in digital and traditional settings, their applicability across all educational contexts requires further investigation. Longitudinal studies are needed to assess the sustained impact of these interventions on students' reading abilities over time, providing insights into the durability and transferability of comprehension skills beyond immediate instructional settings.

### ***Proposed Intervention Strategies***

Integrated scaffolding approaches that combine vocabulary supports with comprehension strategies offer a promising avenue for improving reading comprehension (Diprossimo et al., 2023). By embedding vocabulary scaffolds within broader instructional frameworks, educators can enhance students' ability to derive meaning from texts while fostering independence in reading comprehension skills.

Creating a conducive learning environment involves designing classrooms that support focused reading activities and encourage student engagement (Shrestha et al., 2019). Quiet, comfortable spaces free from distractions facilitate deep comprehension and sustained attention to reading tasks. Moreover, cultivating a supportive classroom atmosphere that values inquiry, collaboration, and active participation enhances motivation and promotes a positive learning experience for all students.

Enhancing intrinsic motivation through goal setting, choice in reading materials, and personal connections to content motivates students to invest in their reading comprehension (Filgona et al., 2020). By aligning instructional goals with students' interests and aspirations, educators can foster a sense of ownership and purpose in learning, thereby increasing engagement and persistence in reading activities.

Addressing diverse learning styles requires implementing multimodal presentations that appeal to visual, auditory, and kinesthetic learners (Rezaeinejad et al., 2015). Utilizing graphic organizers, interactive digital tools, and differentiated instruction accommodates varied learning preferences, ensuring that all students can access and comprehend information effectively. This inclusive approach promotes equity in education and supports personalized learning experiences tailored to individual strengths and needs.

Implementing explicit instruction in reading comprehension strategies involves systematically teaching skills such as summarizing, predicting, and questioning (Lexia, n.d.). By providing clear, step-by-step guidance and opportunities for guided practice, educators empower students to monitor their understanding and apply strategies independently. This methodological approach aligns with Vygotsky's theory of social constructivism, emphasizing the role of collaborative learning and shared experiences in cognitive development (Rogoff, 1990; Ben-Ari & Kedem-Friedrich, 2000, as cited in Alharbi, 2015).

Utilizing Collaborative Strategic Reading (CSR) and reciprocal teaching techniques offers structured frameworks for enhancing reading comprehension (IRIS | Page 3: Introduction to CSR, n.d.; Palincsar & Brown, 1984, as cited in Ardiansyah & Ujhanti, 2018). By incorporating prior knowledge activation, vocabulary development, effective questioning techniques, and ample practice opportunities, CSR promotes active engagement and deepens understanding. Reciprocal teaching strategies such as summarizing, predicting, clarifying, and questioning empower students to actively monitor their comprehension and engage in meaningful dialogue about texts, fostering critical thinking and collaborative learning experiences.

Engaging parents in literacy activities through home literacy interventions enhances students' reading comprehension (Farrel, 2014; Dong et al., 2020). By involving parents in reading routines, setting literacy expectations, and providing strategies for supporting reading at home, educators extend learning beyond the classroom. Parental involvement strengthens the connection between school and home environments, reinforcing literacy skills and promoting a culture of reading within families.

By integrating these evidenced-based strategies into instructional practices, educators can create a comprehensive framework for enhancing reading comprehension. Addressing diverse learning needs, leveraging motivational factors, and fostering collaborative learning environments are key components in promoting lifelong literacy skills and academic success among students.

### **CONCLUSION**

In conclusion, enhancing students' reading comprehension skills requires a multifaceted, research-based approach that incorporates scaffolding, a conducive learning environment, motivation, recognition of diverse learning styles, and explicit instruction. Evidence demonstrates that vocabulary scaffolds



significantly improve comprehension, particularly in digital settings. Creating supportive, distraction-free learning spaces, along with strategies to boost intrinsic motivation, can enhance engagement and academic success. Tailoring interventions to diverse learning preferences, including the use of multimodal presentations, further reinforces understanding. Thorndike's principles of regular practice and positive reinforcement underscore the need for consistent reading activities and encouraging feedback. Explicit, systematic instruction in reading strategies, supported by collaborative and reciprocal teaching methods, effectively builds comprehension skills. Finally, involving parents in literacy activities amplifies the impact of these interventions. By adopting these comprehensive strategies, educators can effectively address diverse student needs and create an optimal environment for reading comprehension development.

#### ACKNOWLEDGEMENT

To my Professor in Teaching Mathematics and Science, thank you for the guidance and suggestions to make this study meaningful.

#### REFERENCES

1. Alharbi, M. A. (2015, November 7). *Reading Strategies, Learning Styles and Reading Comprehension: A Correlation Study*. *Journal of Language Teaching and Research*. <https://doi.org/10.17507/jltr.0606.13>
2. Akbasli, S., Sahin, M., & Yaykiran, Z. (2016). *The Effect of Reading Comprehension on the Performance in Science and Mathematics*. <https://shorturl.at/hlZ68>
3. Andreev, I. (2024, April 5). *What Is Collaborative Learning? Theory, Examples of Activities*. Valamis. <https://www.valamis.com/hub/collaborative-learning>
4. Archer, A. L., & Hughes, C. A. (2011) *Explicit Instructions | Effective and Efficient Teaching*. <https://explicitinstruction.org/>
5. Ardiansyah, W. & Ujihanti, M. (2018). *Social constructivist learning theory and reciprocal teaching to teach reading comprehension*. *International Journal of Learning and Teaching*. 10(1), 70-77
6. Barnard-Brak, L., Stevens, T., & Ritter, W. (2017). *Reading and mathematics equally important to science achievement: results from nationally-representative data*. *Learning and Individual Differences*, 58, 1-9. <https://doi.org/10.1016/j.lindif.2017.07.001>
7. Billings, E., & Walqui, A. (n.d.). *Zone of Proximal Development: An Affirmative Perspective in Teaching ELLs*. WestEd. <https://www.wested.org/resources/zone-of-proximal-development/#:~:text=The%20Zone%20of%20Proximal%20Development,collaboration%20with%20more%20capable%20peers>.
8. Çigdemir, S., & Akyol, H. (n.d.). *The Relationship between Environmental Factors and Reading Comprehension*. <https://eric.ed.gov/?id=EJ1351925>
9. Cherry, K. (2022, October 14). *How Social Learning Theory Works*. Verywell Mind. <https://www.verywellmind.com/social-learning-theory-2795074#:~:text=Social%20learning%20theory%2C%20introduced%20by,motivation%2C%20attitudes%2C%20and%20emotions>.
10. Cherry, K. (2022, November 8). *What Is Sociocultural Theory?* Verywell Mind. <https://www.verywellmind.com/what-is-sociocultural-theory-2795088#:~:text=Sociocultural%20theory%20stresses%20the%20role,who%20are%20%22more%20skilled.%22>
11. Cherry, K. (2022, November 8). *What Is Self-Determination Theory?* Verywell Mind. <https://www.verywellmind.com/what-is-self-determination-theory-2795387>
12. Chi, C. (2023, December 9). *Philippines still lags behind world in math, reading and science – PISA 2022*. Philstar.com. <https://shorturl.at/ntS58>
13. Cronin, V., Farrell, D., & Delaney, M. (1999). *Environmental print and word reading*. *Journal of Research in Reading*, 22(3), 271-282. <https://doi.org/10.1111/1467-9817.00090>
14. DeFrance, N., Khasnabis, D., & Palincsar, A. S. (2010, January 1). *Reading and Technology*. Elsevier eBooks. <https://doi.org/10.1016/b978-0-08-044894-7.00736-3>
15. Diprossimo, L., Ushakova, A., Zoski, J., Gamble, H., Irej, R., & Cain, K. (2023, April 1). *The associations between child and item characteristics, use of vocabulary scaffolds, and reading comprehension in a digital environment: Insights from a big data approach*. *Contemporary Educational Psychology*. <https://doi.org/10.1016/j.cedpsych.2023.102165>
16. Dong, Y., Wu, S. X.-Y., Dong, W.-Y., & Tang, Y. (2020). *The effects of home literacy environment on children's reading comprehension development: A meta-analysis*. *Educational Sciences: Theory and Practice*, 20(2), 63 - 82. <http://dx.doi.org/10.12738/jestp.2020.2.005>
17. Farrel, L., Hunter, M., Davidson, M., & Osenga, T. (n.d.). *The Simple View of Reading | Reading Rockets*. Reading Rockets. <https://www.readingrockets.org/topics/about-reading/articles/simple-view-reading>
18. Farrell, Holly Bond, "A Home Literacy Intervention To Improve Student Reading and Parental Self-Efficacy" (2014). *Theses, Dissertations and Capstones*. Paper 824.
19. Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020, September 9). *Motivation in Learning*. *Asian Journal of Education and Social Studies*. <https://doi.org/10.9734/ajess/2020/v10i430273>
20. Glanz, K. (2001, January 1). *Current Theoretical Bases for Nutrition Intervention and Their Uses*. Elsevier eBooks. <https://doi.org/10.1016/b978-012193155-1/50008-8>
21. Guy-Evans, O. (2024). *Bronfenbrenner's Ecological Systems Theory*. (2024, January 17). *Simply Psychology*. <https://www.simplypsychology.org/bronfenbrenner.html>
22. *Importance of science in schools – Centre for Education in Science & Technology*. (n.d.). <https://shorturl.at/qyHI9>
23. IRIS | Page 3: *Introduction to CSR*. (n.d.). <https://iris.peabody.vanderbilt.edu/module/csr/cresource/q2/p03/#content>
24. Islam, M. H. (2015, June 1). *Thorndike Theory and It's Application in Learning*. CORE. [https://core.ac.uk/display/288101368?utm\\_source=pdf&utm\\_medium=banner&utm\\_campaign=pdf-decoration-v1](https://core.ac.uk/display/288101368?utm_source=pdf&utm_medium=banner&utm_campaign=pdf-decoration-v1)
25. Karacaoglu, O.C. & Kasap, Y. (2023). *The Effect of Reading Comprehension Skills on Mathematics and Science*.
26. Kennedy, A.M., & Trong, K.L. (2006). *Influence of the Home Literacy Environment on Reading Motivation and Reading Comprehension*.



- [https://www.iea.nl/sites/default/files/2019-04/IRC2010\\_Kennedy\\_Trong.pdf](https://www.iea.nl/sites/default/files/2019-04/IRC2010_Kennedy_Trong.pdf)
27. Kyonka, E.G.E. (2011). *Law of Effect*. In: Goldstein, S., Naglieri, J.A. (eds) *Encyclopedia of Child Behavior and Development*. Springer, Boston, MA.  
[https://doi.org/10.1007/978-0-387-79061-9\\_1624](https://doi.org/10.1007/978-0-387-79061-9_1624)
28. *Learnings About Learning Styles*. (2023, November 13). Western Governors University.  
<https://www.wgu.edu/blog/learnings-about-learning-styles2201.html>
29. Main, P. (2023, May 3). *Jerome Bruner's Theories*. Structural Learning.  
<https://www.structural-learning.com/post/jerome-bruners-theories>
30. Manguilimotan, R. P., Zabala, J. T., Encog, C. A., Padillo, G. G., & Capuno, R. G. (2024, March 1). *Factors Affecting the Reading Comprehension Skills of Grade 3 Learners*. *International Journal of Social Science Research and Review*. <https://doi.org/10.47814/ijssrr.v7i3.1930>
31. Mullis, I.V., Martin, M.O., & Foy, P. (2011). *The impact of reading ability on TIMSS mathematics and science achievement at the fourth grade demands: An analysis by item reading*. *TIMSS and PIRLS*, 67-108.  
[https://timssandpirls.bc.edu/timsspirls2011/downloads/TP11\\_Chapter\\_2.pdf](https://timssandpirls.bc.edu/timsspirls2011/downloads/TP11_Chapter_2.pdf)
32. Mustikasari, Maysarah (2020) *Psychological Barriers In Reading Comprehension Encountered by the Students at fourth semester of English Education Study Program of University of Muhammadiyah Kotabumi Academic Year 2019/2020*.
33. Neri, N. C., & Retelsdorf, J. (2022, June 1). *The role of linguistic features in science and math comprehension and performance: A systematic review and desiderata for future research*. *Educational Research Review*.  
<https://doi.org/10.1016/j.edurev.2022.100460>
34. Nickerson, C. (2024, February 2). *Schema Theory In Psychology*. *Simply Psychology*.  
<https://www.simplypsychology.org/what-is-a-schema.html>
35. Niklas, F., Wirth, A., Guffler, S., Drescher, N., & Ehmiq, S. C. (2020, July 21). *The Home Literacy Environment as a Mediator Between Parental Attitudes Toward Shared Reading and Children's Linguistic Competencies*. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2020.01628>
36. Obali, B. (2009). *The relationship between students' science and technology academic achievement and their reading comprehension and mathematics achievement in Turkish [Master's thesis]*. Sakarya University.
37. Oxford University Press. (2007). *Law of exercise*. Oxford Reference.  
<https://doi.org/10.1093/acref/9780198568506.013.3906>
38. Potot, A., Kyamko, L. N., Reponte-Sereño, R. R., & Bustrillo, H. (2023, November 4). *Differentiated Instruction as Strategy in Improving Reading Comprehension*. *Journal of English Language Teaching and Applied Linguistics*.  
<https://doi.org/10.32996/jeltal.2023.5.4.12>
39. Pratiwi, A. (2022, June 20). *The Relationship between Learning Strategies and Learning Style Preferences toward Learners' Reading Comprehension*. *Jurnal Sustainable*.  
<https://doi.org/10.32923/kjmp.v5i1.2293>
40. Rosenblatt, L. M. (1994). *The transactional theory of reading and writing*. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed., pp. 1057–1092). International Reading Association.
41. Rumelhart, D. E., & McClelland, J. L. (1986, January 1). *Parallel Distributed Processing*.  
<https://doi.org/10.7551/mitpress/5236.001.0001>
42. Shrestha, E., Mehta, R. S., Mandal, G., Chaudhary, K., & Pradhan, N. (2019, October 21). *Perception of the learning environment among the students in a nursing college in Eastern Nepal*. *BMC Medical Education*.  
<https://doi.org/10.1186/s12909-019-1835-0>
43. Stanovich, K. E. (1984). *The Interactive-Compensatory Model of Reading*. *Remedial and Special Education*.  
<https://doi.org/10.1177/074193258400500306>
44. Sweller, J. (2011, January 1). *Cognitive Load Theory. ~ the Psychology of Learning and Motivation/~ the Psychology of Learning and Motivation*.  
<https://doi.org/10.1016/b978-0-12-387691-1.00002-8>
45. Soysal, T. (n.d.). *The Relationship of Reading Attitude with Reading Speed and Reading Comprehension*.  
<https://eric.ed.gov/?id=EJ1363084>
46. Taylor, J., & Hart, S. A. (2014, October 1). *A chaotic home environment accounts for the association between respect for rules disposition and reading comprehension: A twin study*. *Learning and Individual Differences*.  
<https://doi.org/10.1016/j.lindif.2014.07.020>
47. *The role of mathematics in the overall curriculum | International Mathematical Union (IMU)*. (n.d.)  
<https://shorturl.at/aMNRO>
48. *Top 5 Intervention Strategies for Reading Comprehension | Lexia*. (2023). Lexia Learning Systems.  
<https://www.lexialearning.com/blog/top-5-intervention-strategies-for-reading-comprehension>
49. Torres, R. (2019). *Factors Affecting the Reading Comprehension of Intermediate Level Learners: Basis for An Intervention Program*.  
<http://dx.doi.org/10.13140/RG.2.2.25114.77766>





# DIAPHYSEAL FRACTURES OF THE FEMUR IN CHILDREN, SCOPING REVIEW

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**Article DOI:** <https://doi.org/10.36713/epra17775>

**DOI No:** 10.36713/epra17775

## ABSTRACT

**Introduction:** Fractures of the femur in young ages, both diaphyseal, intertrochanteric and femoral neck, are usually associated with high energy mechanisms. The treatment of femoral diaphysis fractures in children is controversial because the procedures used in adults are not applicable in the growth period.

**Objective:** to detail the current information related to femoral diaphyseal fractures in children, generalities, epidemiology, mechanism of production, physiopathology, characteristics of consolidation, treatment and complications.

**Methodology:** a total of 34 articles were analyzed in this review, including review and original articles, as well as clinical cases, of which 21 bibliographies were used because the other articles were not relevant to this study. The sources of information were PubMed, Google Scholar and Cochrane; the terms used to search for information in Spanish, Portuguese and English were: diaphyseal fractures, femur fractures in children, femur fractures, treatment of fractures in children, child trauma.

**Results:** Femoral diaphysis fractures are more common in males with a 3 to 1 ratio. According to age, 11 percent involve children under 2 years old, 21 percent involve children between 3 to 5 years old, 33 percent between 6-12 years old and 35 percent between 13-18 years old. The incidence of exposed fractures is relatively low, being approximately less than 5%.

**Conclusions:** the management of femur fractures in children is still controversial, so that at present we do not have a general consensus on the ideal treatment, nor is there an effective treatment method that ensures the treatment of all fractures. Each of the various types of treatment has its advantages and disadvantages. The therapeutic alternative chosen will be based on the clinical





stability of the affected individual, as well as on the characteristics of the fracture, diameter of the medullary cavity and weight of the individual.

**KEY WORDS:** children, fractures, trauma, diaphysis, femur.

## INTRODUCTION

Fractures of the femur in young ages both diaphyseal, intertrochanteric and femoral neck are usually associated with high energy mechanisms. These injuries can generate potentially fatal sequelae, so the correct, rapid intervention and meticulous treatment lead to the best results in affected individuals. Diaphyseal fractures in pediatric patients are usually treated with flexible rods to achieve bone growth. The treatment of femoral shaft fractures in children is controversial because the procedures used in adults are not applicable in the growing period. However, there seems to be some degree of consensus that the method of choice should be aimed at reducing the length of hospital stay, be comfortable for the affected individual, provide proper stability to the fracture and have as few complications and sequelae as possible. It also seems to be unanimous that in children under 5 years of age, conservative methods such as the Pavlik harness and the early plaster cast are the alternatives of choice, unless it is the case of a complex situation or it is contraindicated; after 6 years of age and up to 13 years of age, is the age zone in which the indication of one method or another may be more under discussion, causing more controversy(1-4).

## METHODOLOGY

A total of 34 articles were analyzed in this review, including review and original articles, as well as cases and clinical trials, of which 21 bibliographies were used because the information collected was not important enough to be included in this study. The sources of information were Cochrane, PubMed and Google Scholar; the terms used to search for information in Spanish, Portuguese and English were: diaphyseal fractures, femur fractures in children, femur fractures, treatment of fractures in children, child trauma.

The choice of bibliography exposes elements related to femur diaphyseal fractures in children; generalities, epidemiology, mechanism of production, physiopathology, characteristics of consolidation, treatment and complications.

## DEVELOPMENT

### General

The femur contains the following parts: head, neck, intertrochanteric area, subtrochanteric area, diaphysis, supracondylar and condylar. In this article we focus on diaphyseal fractures in the child.

### Epidemiology

Femoral diaphysis fractures are more common in males with a 3 to 1 ratio. According to age, 11 percent involve children under 2 years of age, 21 percent involve children between 3 and 5 years of age, 33 percent between 6-12 years of age and 35 percent between 13-18 years of age. The most common location is at the level of the middle third and transverse trace in about 60%, followed by those that settle in the proximal third with 20%, with those in the distal third being uncommon with 10%.

The incidence of exposed fractures is relatively low, being approximately less than 5%(2).

### Mechanism of Production.

The most common mechanism of production of femoral diaphysis fractures in children under 3 years of age is casual falls at home or in recreational areas or physical abuse. In older children, they are traffic accidents or accidents in sports or physical activity. There are cases in which the fracture settles on pathological bone due to some other underlying disease such as osteogenesis imperfecta(5).

### Pathophysiology

The femur is the largest bone in the human body, along the posterior middle third of the diaphysis, there is an elevated ridge called the linea aspera, which is the insertion site for muscles, fascia and as a strut to offset the anterior arch.

The usual deformity that is generated following a femoral fracture is because of the powerful lower extremity muscles that insert into the femur. The proximal part is held in flexion and abduction, the iliopsoas muscle, which inserts on the lesser trochanter, gives a strong flexion vector. The gluteus medius and gluteus minimus, which insert on the greater trochanter, generate an abduction force. The distal part remains in varus and extension, the adductor muscles insert on the medial femoral condyle and give a force in varus. The gastrocnemius muscle inserts into the posterior distal femoral area, pulling the fragment in a posterior and inferior direction, giving an extension deformity in the fracture(3).



**Figure 1. Left femur fracture in an 8-year-old patient with obesity**

Source: The Authors.



### Characteristics of Consolidation

The age of the affected individuals gives special characteristics different from those presented in fractured adults:

Rapid consolidation with abundant bone callus.

Phenomenon of hypergrowth of the femur for about 12-18 months post-fracture.

Possibility of spontaneous correction of residual deformities by remodeling phenomena, with the exception of rotational deformities(2).

### Treatment

Ideally, it would be the one that allows control of the fracture reduction, besides being comfortable for the child, that presents the least possible psychological impact, that allows easy nursing management, hygiene and does not generate sequelae.

Management will depend on multiple factors, such as weight, age, soft tissue injuries, type of fracture, fracture site, if there are other traumas or other associated fractures. It also depends on the experience of the orthopedist, the hospital conditions and the psychosocial situation.

Treatment can be divided into conservative and surgical.

### Conservative Treatment

There are several procedures that will depend on the application of skin or bone traction and its direction with subsequent cast immobilization. In recent times some orthopedists are dispensing with traction time immobilizing the fractured limb with plaster or other devices early.

#### A. Bryant or Zenith Traction

Properly placed and meticulously monitored, it is indicated in children weighing less than 18kg and under 2 years of age who have a displaced fracture. Avoid in cases of spasticity, hamstring contracture and verify that the hips can flex to 90° with the knees in extension. Avoid in individuals with CPI, arthrogryposis and others with decreased hip mobility. Skin traction is exerted on the 2 legs, placing a weight usually around 15-20% of body weight on each leg. Securing the pelvis and trunk of the child to the crib with a modified diaper or sheet is indicated.

In infants, the formation of a bony callus is generated very quickly and 2 or 3 weeks after the trauma the pain disappears and most of the time the fracture will be stable enough to allow the suppression of traction and the placement or not of a pelvic cast for 3 to 4 weeks. The possibility of skin, vascular or neurological complications should be evaluated. Circulatory problems are infrequent. It is important that the circulation, temperature, mobility and sensitivity of the toes are checked periodically. Care should be taken in the placement of the bandages and adhesive traction strips so as not to generate soft tissue lesions(6).

#### B. Cutaneous or skeletal traction and subsequent pelvic cast

This is considered the treatment of choice for fractures of the femoral diaphysis in children from 2 years of age up to 13 years of age, as it avoids surgical intervention. For this, a soft or skeletal traction is placed in the femoral supracondylar or tibial infratuberosity region. The weight to be placed ranges from 2

to 4kg with the lower extremity resting on pillows or Braun splint. The traction time varies from 2-4 weeks, with weekly radiographic controls for possible shortening, angular deviations and the appearance of periosteal callus that allows us to remove the traction system and immobilize the affected person with a pelvic cast. Sometimes, traction is a provisional treatment method until surgical stabilization of the fracture is programmed, it is preferable to use soft traction because it does not require much analgesia for pain, can be performed without sedation and does not contaminate a possible surgical entry.

Some complications presented with this treatment are angular and rotational deviations and excessive shortening of the fracture, in addition to paralysis of the external popliteal sciatic nerve, difficult management of the polytraumatized patient and poor tolerance during the period of traction and immobilization(7).

There are multiple types of traction that help in control, the so-called 90°-90° skeletal traction that relaxes the calf, hamstring and iliac psoas muscles, due to the 90° position of the hip and knee. Despite that, traction should be performed under general anesthesia, using a Steinmann nail or Kirschner wire, these are placed above the adductor tubercle, at the junction of the posterior third and the two anterior thirds of the femoral diaphysis, thus avoiding injury to the growth plate and the suprarrotulian bursa. The nail should be placed perpendicular to the longitudinal axis of the femur. Transtibial traction at the level of the anterior tibial tuberosity should not be used because of the risk of injuring the proximal tibial physis, creating a physeal bridge and an alteration in the recurvatum of the knee(8).

#### C. Closed reduction and immediate immobilization with bipelvic cast

Recommended in children under 6 years of age. The greatest advantage is the shortening of the hospital stay, however, maintaining the reduction is more difficult and constant control is necessary, which can be done through radiographs, if necessary a correction could be made by means of plaster casts.

Likewise, it is recommended to do it under anesthesia. The estimated time of immobilization in weeks is done by adding "3" to the age of the affected person, so as an example, a 3 year old child should keep the cast for 6 weeks.

The technique has good results. In cases of obesity, edema, shortening and comminution of the fracture site, another method should be chosen because of the difficulty of maintaining the reduction. Some of the complications of the method can be: vicious consolidation, shortening of the affected limb, abrasions, skin ulcers.

There are multiple variations of the method such as early immobilization with pelvipedic cast with hip and knee at 90° and rapid immobilization with the Irani technique: immediate reduction, under general anesthesia and simple traction, with immobilization with bilateral pelvipedic cast with the knee flexed between 40-60°(2,9).

### D. Simple immobilization with Pavlik Harness

Usually used in newborns and infants up to one year of age. The proximal fragment in these fractures usually has a remarkable flexion position due to the physiological flexion attitude of the lower extremities in neonates. Applying the sling brings the distal fragment closer to the proximal fragment in flexion. It is usually immobilized for 4 weeks, the antecurvatum and associated shortening may disappear in the controls due to the strong remodeling capacity. Despite this, it presents inconveniences such as pain during the first days of use when compared to a limb in zenithal traction or in a pelvipedic cast. Fractures in infants from 0 to 18 months can be effectively managed with a Pavlik harness; the herringbone cast is safe and effective in children up to about 6 years of age or 100 pounds(2,10).

**Figure 2. Fracture of the left femur after osteosynthesis with plate and screws in an 8-year-old patient with obesity.**



Source: The Authors.

### Surgical Treatment

Traditionally the indications are:

- Polytrauma.
- Vascular injury.
- Pathological fracture.
- Soft tissue injury.
- Multiple fractures of the same limb.
- Associated brain injury.
- Isolated fracture in which reduction or stabilization is not achieved orthopedically.

The indications have been extended to all open or closed displaced diaphyseal fractures in children older than 5 years due to the high rate of malunions, long hospital stay, increased cost, among others. Cruel treatment has some advantages such as

reaching an anatomical reduction and/or stabilization of the fracture, with lower rate or without axial and rotational deviations(9,11,12).

### A. Screw-In Plates

Used for decades with excellent immediate results. The need for an open reduction and a second intervention for the removal of the material can generate excessive femoral hypergrowth, up to 4cm (13).

A good indication for this method of osteosynthesis is subtrochanteric fractures, which are difficult to manage with orthopedic methods. Currently, AO plates have gained popularity due to their percutaneous application; at the moment there are no long-term studies on hypergrowth with this technique(14).

### B. Rigid intramedullary nail with or without locking

The use of the rigid intramedullary nail began to be placed in children after the promising results in adults with Kuntscher nails. It presents excellent immediate results and does not require the opening of the fracture site, however, there are studies that show that the entry of the nail through the tip of the greater trochanter or the piriform fossa generates significant changes in the growth of the proximal femur and risk of necrosis of the femoral head, so it is generally recommended in individuals close to or having already completed growth. There are new models of nails, however, long-term results with evidence of injury to the trochanterocervical growth plate of the proximal femur are not yet available(2,15-17).

### C. Elastic Intramedullary Nailing

Used as the method of choice for the treatment of displaced diaphyseal fractures in children. It is performed with titanium or steel nails of multiple calibers depending on the diameter of the diaphyseal medullary cavity with diameters between 2-4mm. In adolescents, 3-4mm nails can usually be used, according to weight, diameter of the medullary cavity and growth remnant. Between 7 and 10 years of age, 2.5-3mm nails can be used. The formula to be used is usually to measure the diameter of the medullary cavity and multiply it by 0.4 with the objective of occupying 80% of the medullary space in the medial femoral 1/3. The larger diameter of the elastic nail confers greater resistance to deformation of the fracture site under axial compression and torsion(18).

The nails are introduced at a distance from the fracture site, respecting the physes. By bilateral retrograde supracondylar route in fractures of the middle and upper third, or external subtrochanteric in low fractures. The nails have a curved shape and provide three-point support in the bone, giving elastic stability. Normally the limb is left in unloading for 2-3 weeks, partial loading at the sixth week and according to radiological controls. Studies show good results in transverse or short oblique fractures in the middle third of the diaphysis. In comminuted fractures or fractures with great instability, elastic intramedullary synthesis may not be sufficient. Subtrochanteric fractures and distal metaphyseal-diaphyseal fractures are not a good indication to use this method, as well as adolescents with





a medullary cavity greater than 10mm or weight greater than 50kg(19,20).

The most common disadvantage of elastic intramedullary nailing is discomfort in the knee, due to the fact that sometimes the nails exceed a few centimeters to facilitate extraction. The advantages of this method are: easy application, low risk of infection, non-interference of the fracture site, no fissure aggression, fast consolidation. There is an advantage of steel nails compared to titanium nails. The greater rigidity of steel provides greater stability with fewer vicious consolidations(2).

#### D. External Fixation

It presents common indications such as: polytrauma, open diaphyseal fractures, comminuted, with loss of bone substance and some pathological fractures. In distal metaphyseal-diaphyseal fractures, a fixator temporarily bridging the physis stabilizes and controls the fracture until healing. Modular monolateral systems that allow different configurations and with an intrinsic resistance that provides stability until healing are recommended. In the supracondylar region, sometimes, the placement of needle-mounted rings can provide an appropriate setup in fractures with intercondylar trace or with a distal comminution that does not allow the insertion of 5-6mm screws used in the usual monolateral external fixation.

The type of screw to be used should be 5-6mm, except in small children with femoral diaphyseal diameter of less than 2cm, where 4-5mm is recommended. The use of high speed motors (< 500rpm) should be avoided, due to the risk of thermal necrosis and secondary osteolysis. To reduce the incidence of osteolysis around the screw, self-drilling screws or screws with hydroxyapatite coating are used. The use of 6 screws at the femoral level is recommended if possible. When there is radiological evidence of consolidation, greater support is allowed. Unlike adults, conversion from external to internal fixation is not usually necessary in children, since consolidation times are faster. One of the complications seen is refracture after removal of the external fixator, also infection around the screws, axial deviations and hypergrowth phenomenon. Knee stiffness usually disappears 3 months after removal of the external fixation device(2,21).

#### Complications

##### Early Complications

- **Thromboembolism:** rare, may occur in the pubertal period and in predisposed individuals with antithrombin III deficiency.
- **Fat embolism:** in the first 72 hours after fracture, unusual in children under 10 years of age.
- **Hypovolemic shock:** in polytrauma.
- **Infection:** in exposed fracture with soft tissue injury, in opening of the focus to reduce the fracture.
- **Osteomyelitis:** adversely affects the hypergrowth of the extremity.

##### Late Complications.

They occur along the consolidation process or in the subsequent evolution, they are influenced by the characteristics of the

fracture, in addition to the injured individual and by the chosen treatment. Some of these are:

- Refracture.
- Discrepancy in the length of the limbs.
- Delay of consolidation or pseudoarthrosis.
- Rotational deformity.
- Axial deviations.
- Premature fissure closure.
- Sciatic nerve injury.

#### CONCLUSIONS

The management of femur fractures in children is still controversial, so that at present there is no general consensus on the ideal treatment, nor is there an effective treatment method that ensures the treatment of all fractures. Each of the various types of treatment has its advantages and disadvantages. The therapeutic alternative chosen will be based on the clinical stability of the affected individual, as well as on the characteristics of the fracture, diameter of the medullary cavity and weight of the individual.

#### BIBLIOGRAPHY

1. Bryam Esteban Coello García, Esteban Eugenio Iñiguez Avila, Damián Fabricio Flores Vega, Fátima Viviana Benalcázar Chiluisa, Marlon Leonardo Ordóñez Ramos, Milton Patricio Campoverde Campoverde, et al. FEMORAL NECK FRACTURES, EPIDEMIOLOGY, ANATOMICAL DESCRIPTION, MECHANISM OF ACTION, CLASSIFICATION, CLINICAL EVALUATION, IMAGING EVALUATION, TREATMENT AND COMPLICATIONS. EPRA Int J Multidiscip Res IJMR. 2023 Jul 24;239-48.
2. González-Herranz P, Rodríguez Rodríguez MLI, Castro Torre MA. Fracturas diafisarias del fémur en el niño: actualización en el tratamiento. Rev Esp Cir Ortopédica Traumatol. 2011 Jan;55(1):54-66.
3. Medda S, Unger T, Halvorson J. Diaphyseal Femur Fracture. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jul 2]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK493169/>
4. Bryam Esteban Coello García, Byron Xavier Cabrera Castillo, Holger Xavier Rojas Espinoza, Gerson Santiago Salinas Salinas, Sthefany Natali Loyola Banegas, Aracely Johmara Borja Loja, et al. INTERTROCHANTERIC FEMUR FRACTURE. EPRA Int J Multidiscip Res IJMR. 2023 Mar 4;3-11.
5. Loder RT, O'Donnell PW, Feinberg JR. Epidemiology and Mechanisms of Femur Fractures in Children. J Pediatr Orthop. 2006 Sep;26(5):561-6.
6. Scheerder FJM, Schnater JM, Sleeboom C, Aronson DC. Bryant traction in paediatric femoral shaft fractures, home traction versus hospitalisation. Injury. 2008 Apr;39(4):456-62.
7. Vanlaningham CJ, Schaller TM, Wise C. Skeletal Versus Skin Traction Before Definitive Management of Pediatric Femur Fractures: A Comparison of Patient Narcotic Requirements. J Pediatr Orthop. 2009 Sep;29(6):609-11.
8. Aronson DD, Singer RM, Higgins RF. Skeletal traction for fractures of the femoral shaft in children. A long-term study. J Bone Joint Surg Am. 1987 Dec;69(9):1435-9.
9. Irani RN, Nicholson JT, Chung SM. Long-term results in the treatment of femoral-shaft fractures in young children by





- immediate spica immobilization. *J Bone Joint Surg Am.* 1976 Oct;58(7):945-51.
10. Anglen JO, Choi L. Treatment options in pediatric femoral shaft fractures. *J Orthop Trauma.* 2005;19(10):724-33.
  11. Reeves RB, Ballard RI, Hughes JL. Internal fixation versus traction and casting of adolescent femoral shaft fractures. *J Pediatr Orthop.* 1990;10(5):592-5.
  12. Kay RM, Skaggs DL. Pediatric Polytrauma Management. *J Pediatr Orthop.* 2006 Mar;26(2):268-77.
  13. Hansen TB. Fractures of the femoral shaft in children treated with an AO-compression plate. Report of 12 cases followed until adulthood. *Acta Orthop Scand.* 1992 Feb;63(1):50-2.
  14. Hedequist D, Bishop J, Hresko T. Locking Plate Fixation for Pediatric Femur Fractures. *J Pediatr Orthop.* 2008 Jan;28(1):6-9.
  15. Sanders JO, Browne RH, Mooney JF, Raney EM, Horn BD, Anderson DJ, et al. Treatment of femoral fractures in children by pediatric orthopedists: results of a 1998 survey. *J Pediatr Orthop.* 2001;21(4):436-41.
  16. Keeler KA, Dart B, Luhmann SJ, Schoenecker PL, Ortman MR, Dobbs MB, et al. Antegrade Intramedullary Nailing of Pediatric Femoral Fractures Using an Interlocking Pediatric Femoral Nail and a Lateral Trochanteric Entry Point. *J Pediatr Orthop.* 2009 Jun;29(4):345-51.
  17. Jencikova-Celerin L, Phillips JH, Werk LN, Wiltout SA, Nathanson I. Flexible Interlocked Nailing of Pediatric Femoral Fractures: Experience With a New Flexible Interlocking Intramedullary Nail Compared With Other Fixation Procedures. *J Pediatr Orthop.* 2008 Dec;28(8):864-73.
  18. Mahar A, Sink E, Faro F, Oka R, Newton PO. Differences in biomechanical stability of femur fracture fixation when using titanium nails of increasing diameter. *J Child Orthop.* 2007 Sep;1(3):211-5.
  19. Lascombes P, Haumont T, Journeau P. Use and Abuse of Flexible Intramedullary Nailing in Children and Adolescents. *J Pediatr Orthop.* 2006 Nov;26(6):827-34.
  20. Vierhout B, Sleeboom Chr, Aronson D, Van Walsum A, Zijp G, Heij H. Long-Term Outcome of Elastic Stable Intramedullary Fixation (ESIF) of Femoral Fractures in Children. *Eur J Pediatr Surg.* 2006 Dec;16(6):432-7.
  21. Ramseier LE, Bhaskar AR, Cole WG, Howard AW. Treatment of Open Femur Fractures in Children: Comparison Between External Fixator and Intramedullary Nailing. *J Pediatr Orthop.* 2007 Oct;27(7):748-50.

### Conflict of Interest Statement

The authors report no conflicts of interest.

### Funding

The authors report no funding by any organization or company.



# M. K. GANDHI AND HIS IDEA OF NON-VIOLENCE: A CRITICAL ANALYSIS

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## ABSTRACT

Gandhi's philosophy of nonviolence, or ahimsa, was central to his approach to conflict resolution. He saw nonviolence as a way of being a harmonious way of thinking, feeling, and acting that rejects exploitation and violence. His concept of satyagraha, or 'holding firmly to truth' involved nonviolent resistance to injustice through methods like noncooperation and civil disobedience. Gandhi believed reason and conscience could persuade opponents to change, making violence unnecessary. However, some argue Gandhi's nonviolence had limits, he allowed violence in certain cases and recognized reason alone was insufficient for social transformation. While Gandhi's nonviolence had a profound impact, a critical analysis reveals tensions and ambiguities in his philosophy. Examining these complexities can shed light on the challenges and potential of nonviolent conflict resolution today. This paper will try to analyse the Gandhi's idea of non-violence. The views of various modern historians about Gandhi's idea of non-violence will also be looked in. Apart from the impact, one of the important aspects of this paper is to do critical analysis of his idea of non-violence.

**KEY WORDS:** Gandhi, Non-Violence, Ahimsa, Satayagraha, Non-Cooperation, Critical Analysis.

## 1. INTRODUCTION

Mohandas Karamchand Gandhi, also known as Mahatma Gandhi, was a prominent Indian political and spiritual leader who played a pivotal role in India's struggle for independence from British rule. Born in 1869, Gandhi dedicated his life to the principles of non-violence (ahimsa) and truth (satya), which he termed as 'satyagraha'. Gandhi's philosophy of non-violence was rooted in the ancient Hindu, Jain, and Buddhist traditions, which emphasized the importance of non-injury (ahimsa) and truth (satya). However, Gandhi gave these concepts a new dimension by applying them to the social and political spheres. He believed that non-violence was not just the absence of physical violence but also a positive force of love and truth.

The core of Gandhi's non-violent philosophy was satyagraha, which literally means 'truth force'. Satyagraha involved using non-violent resistance and moral force to fight injustice and oppression. Gandhi applied satyagraha in his campaigns against British rule in India, such as the Salt March, as well as in other social causes like the abolition of untouchability. Gandhi saw non-violence as more than just a tactic; it was a way of life (Bondurant, 1988). He believed that man is essentially a violent being but can gradually become non-violent if he desires. Gandhi recognized that man is a conditional being and is subject to the determination of the physical world. For him, the ultimate end in man's life is realizing the Absolute (Erikson, 1969).

Gandhi's non-violent approach inspired leaders like Martin Luther King Jr. in their own struggles for civil rights and social justice. He believed that non-violence was a universal principle that could be applied by anyone, not just the weak. Gandhi's philosophy of non-violence aimed to change the very character of every individual in society, where he lived. One who merely refrains from violence can be regarded as non-violent in the negative sense. The very use of words like ahimsa and

nonviolence with negative prefixes like 'a' and 'non' indicates that they are not positive concepts but only counter-concepts. Gandhi firmly believed that nonviolence was not only a moral choice but also a practical and effective strategy for social and political transformation (Guha, 2000).

Gandhi's life and principles have had a profound and lasting impact on the world. His leadership during India's fight for independence, combined with his unwavering commitment to nonviolence, advocacy for social justice, and dedication to equality, as well as his personal philosophy of simplicity and self-sufficiency, collectively contribute to his lasting legacy. Gandhi's legacy serves as a beacon of hope and a source of inspiration for those who seek to bring about positive change in the face of oppression and injustice (Dalton, 1993). His life and teachings serve as a reminder that, even in the face of immense challenges, the principles of nonviolence and the pursuit of justice hold the potential for profound societal transformations. Mahatma Gandhi's enduring legacy stands as a testament to the indomitable power of the human spirit (Ibid).

## 2. GANDHI'S CONCEPT OF NON-VIOLENCE (AHIMSA)

In Gandhi's view, the ultimate end of man's life was realizing the Absolute. Non-violence was a means to this spiritual end, as it helped purify the individual and bring them closer to the divine (Nagler, 2004). He recognized that man is a conditional being subject to the physical world, but believed that through non-violent discipline, one could gradually overcome these limitations and achieve inner peace and harmony. Gandhi firmly believed that non-violence was not just a moral choice, but also a practical and effective strategy for social and political transformation. He saw it as a universal principle that could be applied by anyone, not just the weak (Mantena, 2012). However, Gandhi emphasized that practicing ahimsa required great inner strength and discipline, like that of a



soldier. It was not easy and demanded constant vigilance. Without the cooperation of mind, body and speech, outward non-violence would be mere hypocrisy (Iyer, 1973).

The core of Gandhi's non-violent philosophy was satyagraha, which literally means 'truth force'. Satyagraha involved using non-violent resistance and moral force to fight injustice and oppression. Gandhi applied satyagraha in his campaigns against British rule in India, such as the Salt March, as well as in other social causes like the abolition of untouchability. Gandhi believed that satyagraha was a more powerful weapon than violence (Parekh, 1997). He argued that "nothing enduring can be built upon violence" and that the results of non-violent methods, though slow, were durable and long-lasting. Violence, in contrast, only bred more violence and hatred in the long run (Parekh, 2001).

Gandhi put his philosophy of non-violence into practice through various campaigns and movements. His non-violent approach inspired leaders like Martin Luther King Jr. in their own struggles for civil rights and social justice. One of Gandhi's most famous acts of non-violent civil disobedience was the Salt March in 1930 (Nanda, 1958). In response to the British salt monopoly, Gandhi led a 240-mile march to the sea to make salt, defying British law. The march sparked a nationwide campaign of non-cooperation against British rule. Gandhi also led the Quit India movement in 1942, calling for Indian independence from British rule. Despite facing severe repression, Gandhi responded with steadfast non-violence, refusing to retaliate even when provoked (Orwell, 1946).

Gandhi's life and principles have had a profound and lasting impact on the world. His leadership during India's fight for independence, combined with his unwavering commitment to non-violence, advocacy for social justice, and dedication to equality, collectively contribute to his enduring legacy. Gandhi's non-violent approach has inspired countless individuals and movements worldwide in their struggles against oppression and injustice. Leaders like Martin Luther King Jr., Nelson Mandela, and Cesar Chavez all drew inspiration from Gandhi's philosophy and tactics of non-violent resistance. Today, Gandhi's message of non-violence, truth, and justice continues to resonate globally (Nussbaum, 2003). His life and teachings serve as a beacon of hope and a reminder that, even in the face of immense challenges, the principles of non-violence and the pursuit of justice hold the potential for profound societal transformations. Mahatma Gandhi's enduring legacy stands as a testament to the indomitable power of the human spirit (Ramesh, 2005).

### 3. SATYAGRAHA: THE CORE OF GANDHI'S NON-VIOLENT PHILOSOPHY

Satyagraha, which literally means 'truth force', was the core of Mahatma Gandhi's non-violent philosophy. Developed during his time in South Africa, Gandhi applied satyagraha as a method of non-violent resistance to fight injustice and oppression. It involved using moral force and non-violent civil disobedience to achieve political and social change (Jayaram, 2000). The concept of satyagraha was influenced by Gandhi's study of Hinduism, Buddhism, Christianity, and other religious

and philosophical traditions that emphasized non-violence. He was particularly inspired by the Bhagavad Gita's teachings on non-attachment and the importance of fighting against injustice (Guha, 2002). Gandhi also drew from the writings of thinkers like Henry David Thoreau, who advocated civil disobedience, and Leo Tolstoy, who promoted non-violence and non-resistance. However, Gandhi gave these ideas a new dimension by applying them to the social and political struggles of his time (Guha, 2000).

#### 3.1 Satyagraha was based on several key principles

At the heart of satyagraha was the belief in satya (truth) and ahimsa (non-violence). Gandhi saw truth as the ultimate reality and non-violence as the most powerful force for positive change. Satyagraha involved non-cooperation with unjust laws and systems. This could take the form of strikes, boycotts, civil disobedience, and other non-violent actions to withdraw support from oppressive authorities. Satyagraha required a willingness to suffer and accept punishment for disobeying unjust laws. Gandhi believed that this suffering, combined with non-violence, had the power to transform the hearts and minds of the oppressors (Ramesh, 2005).

By appealing to the conscience of the oppressors through moral pressure and non-violent resistance, satyagraha aimed to bring about a change of heart and a recognition of the justice of the cause. Alongside non-cooperation, Gandhi emphasized the importance of a 'constructive program' to build the foundations of a just society (Parekh, 2001). This included initiatives like promoting khadi (homespun cloth), abolishing untouchability, and empowering the poor and marginalized. Gandhi put the principles of satyagraha into practice in numerous campaigns throughout his life. Gandhi led a non-violent protest against the oppressive policies of British indigo planters in Champaran, Bihar, which led to significant reforms. This nationwide campaign involved the withdrawal of Indians from British institutions and the boycott of British goods in response to the Rowlatt Acts and the Jallianwala Bagh massacre (Sharp, 1973). The Civil Disobedience Movement (1930-1931): Gandhi launched the famous Dandi March to protest the salt tax, leading to widespread civil disobedience and the arrest of thousands of Indians. During World War II, Gandhi called for the British to leave India, leading to a massive civil disobedience campaign that was met with severe repression by the colonial authorities (Todd, 2000). Satyagraha had a profound impact on the Indian independence movement and inspired countless individuals and movements around the world. Gandhi's non-violent approach demonstrated the power of moral force and the transformative potential of suffering for a just cause. Leaders like Martin Luther King Jr., Nelson Mandela, and Cesar Chavez all drew inspiration from Gandhi's philosophy of satyagraha in their own struggles for civil rights and social justice. Gandhi's legacy continues to inspire people to fight oppression and work for a more just and peaceful world through non-violent means (Roberts, 2014).

However, Gandhi's philosophy of non-violence was not without its critics. Some argued that it was a weak and ineffective strategy, while others questioned its practicality in the face of extreme violence and oppression. Gandhi himself



acknowledged the challenges and limitations of satyagraha, but remained steadfast in his belief in its moral and practical power. In short, satyagraha was the core of Gandhi's non-violent philosophy, a method of fighting injustice through moral force, non-cooperation, and a willingness to suffer. Its principles and tactics continue to shape movements for social change around the world, serving as a testament to the enduring power of non-violence in the face of adversity (Brown, 1989).

#### 4. NON-VIOLENCE IN PRACTICE: GANDHI'S SATYAGRAHA

Mahatma Gandhi's philosophy of non-violence, or ahimsa, was not merely a moral or ethical stance - it was a practical strategy for social and political change that he termed 'satyagraha'. Satyagraha, which means 'truth force' or 'soul force' was the core of Gandhi's non-violent approach and was put into practice through various campaigns and movements throughout his life (Chaudhuri, 1987). The concept of satyagraha was developed by Gandhi during his time in South Africa, where he faced racial discrimination and sought non-violent ways to fight injustice. Gandhi was influenced by a range of philosophical and religious traditions, including Hinduism, Buddhism, Christianity, and the writings of thinkers like Henry David Thoreau and Leo Tolstoy (Ibid).

Gandhi put the principles of satyagraha into practice in numerous campaigns and movements throughout his life. Gandhi led a non-violent protest against the oppressive policies of British indigo planters in Champaran, Bihar, which led to significant reforms. This nationwide campaign involved the withdrawal of Indians from British institutions and the boycott of British goods in response to the Rowlatt Acts and the Jallianwala Bagh massacre. Gandhi launched the famous Dandi March to protest the salt tax, leading to widespread civil disobedience and the arrest of thousands of Indians. During World War II, Gandhi called for the British to leave India, leading to a massive civil disobedience campaign that was met with severe repression by the colonial authorities. In each of these campaigns, Gandhi and his followers employed a range of non-violent tactics, including strikes, boycotts, marches, and acts of civil disobedience. They faced violence and repression from the authorities but responded with steadfast non-violence, a willingness to suffer, and an unwavering commitment to their cause (Tuchman, 1982).

#### 5. A CRITICAL ANALYSIS OF GANDHI'S IDEA OF NON-VIOLENCE

Mahatma Gandhi's philosophy of non-violence, or ahimsa, was a central tenet of his approach to social and political change. Gandhi viewed non-violence as more than just a moral stance - it was a practical strategy for achieving his goals through what he termed 'satyagraha' or 'truth force' (Dalton, 1993). However, Gandhi's idea of non-violence has been the subject of much debate and analysis by modern historians and scholars. At the core of Gandhi's non-violence was his belief in the inseparability of truth (satya) and non-violence (ahimsa). He saw these as two sides of the same coin, with truth being the ultimate reality and non-violence the means to realize it. Gandhi was influenced by Hindu, Jain, and Buddhist traditions that

emphasized the principle of non-injury, as well as the writings of thinkers like Thoreau and Tolstoy on civil disobedience and non-resistance (Erikson, 1969).

Orwell believed that Gandhi's emphasis on non-violence was impractical and that it failed to address the underlying structural inequalities and power imbalances that perpetuated oppression. He saw Gandhi's approach as a way for the weak to avoid confronting the violence of the strong, rather than a genuine solution to the problems faced by the Indian people (Bard, 2005). Another critique comes from those who question the universality of Gandhi's non-violence. Some argue that it was a uniquely Indian approach, rooted in the country's cultural and religious traditions, and that it may not be applicable or effective in all contexts. They point to the fact that Gandhi's non-violent campaigns were often met with brutal repression by the colonial authorities, suggesting that non-violence alone may not be sufficient to overcome entrenched power structures (Bard, 2001).

Gandhi himself acknowledged the limitations and challenges of non-violence. He recognized that it required immense discipline, courage, and self-sacrifice, and that it was not a panacea for all social and political problems. Gandhi was aware that non-violence could not always prevent violence from being used against the non-violent, and that it might not always lead to the desired outcomes. Moreover, some have argued that Gandhi's non-violence was too passive and that it failed to address the root causes of oppression and inequality. They contend that while non-violence may be effective in certain situations, it is not enough to bring about the transformative change that Gandhi sought (Iyer, 1973).

#### 6. IMPACT OF GANDHI'S NON-VIOLENCE ON MODERN INDIA

Mahatma Gandhi's philosophy of non-violence (ahimsa) and non-violent resistance (satyagraha) had a profound and lasting impact on the Indian independence movement and the shaping of modern India. Gandhi's ideas not only helped India achieve freedom from British rule, but also influenced the country's approach to social and political issues in the decades following independence (Nanda, 1958).

The principles of non-violence and non-discrimination enshrined in Gandhi's philosophy found their way into the Indian Constitution. The Preamble to the Constitution affirms the nation's commitment to "justice, social, economic and political" and "fraternity assuring the dignity of the individual and the unity and integrity of the Nation" (Roberts, 2014). The Constitution also outlaws "untouchability" and its practice in any form, reflecting Gandhi's lifelong crusade against caste discrimination and his vision of a just and egalitarian society. Gandhi's non-violence had a significant impact on India's foreign policy in the post-independence era (Shanker, 1999). India's first Prime Minister, Jawaharlal Nehru, was deeply influenced by Gandhi's ideas and sought to promote non-violence and peaceful coexistence in international relations. India's policy of non-alignment, which aimed to maintain equidistance from the Cold War superpowers, was rooted in





Gandhi's philosophy of non-violence and opposition to military alliances. India also played a leading role in the Non-Aligned Movement, which sought to promote world peace and development (Spiro, 2002).

Gandhi's non-violent methods have inspired numerous social movements in India and around the world. The Chipko movement, which sought to protect forests from commercial exploitation, drew inspiration from Gandhi's satyagraha. The anti-liquor movement in Gujarat and the anti-corruption movement led by Anna Hazare also employed non-violent tactics reminiscent of Gandhi's approach. These movements have used non-violence as a powerful tool to challenge entrenched power structures and bring about social change. They have also kept alive the spirit of Gandhi's non-violence in contemporary India (Tuchman, 1982).

## 7. CONCLUSION

Mahatma Gandhi's philosophy of non-violence (ahimsa) and non-violent resistance (satyagraha) has left an indelible mark on the world. Though he was not the first to advocate for non-violence, Gandhi's unwavering commitment to this principle and his ability to put it into practice on a mass scale, make him a towering figure in the history of non-violent social and political movements. At the core of Gandhi's non-violence was his belief in the inseparability of truth (satya) and non-violence. He saw these as the twin pillars that could bring about transformative change, not just for India's independence, but for the betterment of all humanity. Gandhi's non-violence was not merely a moral stance, but a practical strategy for fighting injustice and oppression. Through campaigns like the Salt March and the Quit India movement, Gandhi demonstrated the power of non-violent civil disobedience to challenge the might of the British Empire. His ability to unite diverse groups of Indians in a shared struggle, transcending barriers of caste, class, and religion, was a testament to the unifying force of non-violence.

Despite these critiques, Gandhi's idea of non-violence remains a powerful and influential concept that has inspired countless individuals and movements around the world. His commitment to truth, moral force, and the transformation of the individual and society continues to resonate with those seeking to create a more just and peaceful world. However, as with any complex philosophical and political idea, Gandhi's non-violence must be critically examined and understood within its historical and cultural context. While his approach may not be a universal panacea, it remains a valuable and thought-provoking contribution to the ongoing struggle for human rights, social justice, and the peaceful resolution of conflicts.

Notwithstanding these criticisms, Gandhi's philosophy of non-violence remains a powerful and influential idea in India and beyond. It has shaped the country's approach to social and political issues, inspired countless individuals and movements, and left an indelible mark on the Indian psyche. As India grapples with new challenges in the 21st century, the principles of non-violence, unity, and social justice enshrined in Gandhi's thought continue to provide a guiding light for the nation. While

the path to realizing Gandhi's vision may be long and arduous, his ideas remain a beacon of hope for those who believe in the transformative power of non-violence.

## REFERENCES

1. Bard, Judith M. (2001). *Gandhi: A Very Short Introduction*. Oxford University Press.
2. Bard, Judith M. (2005). *Practicing Nonviolence: Social Change Through Action in the Twenty-first Century*. Herndon House Publishers
3. Bondurant, J. V. (1988). *Conquest of Violence: The Gandhian Philosophy of Conflict Resolution*. University of California Press.
4. Brown, J. (1989). *Gandhi: Prisoner of Hope*. New Haven. Yale University Press.
5. Chaudhuri, H. (1987). *Nonviolence in Theory and Practice*. Sage Publications India.
6. Dalton, D. (1993). *Mahatma Gandhi: Nonviolent Power in Action*. Columbia University Press.
7. Erikson, E. H. (1969). *Gandhi's truth: On the origins of militant nonviolence*. W. W. Norton & Company.
8. Guha, R. (2000). *An Architecture of Violence: Areas of Darkness and the Twilight of Liberalism*. Penguin Books India.
9. Guha, R. (2002). *Gandhi: The Life and Times of Mahatma Gandhi*. New York: Alfred A. Knopf.
10. Iyer, R. (1973). *The Moral and Political Thought of Mahatma Gandhi*. Oxford University Press.
11. Jayaram, R. (2000). *Gandhi's Swaraj: A Decolonized Concept*. Palgrave Macmillan.
12. Mantena, K. (2012). *Alibis of Empire: Henry Maine and the Ends of Liberal Imperialism*. Princeton University Press.
13. Nagler, M. N. (2004). *The Search for a Nonviolent Future: A Promise of Peace for Ourselves, our Families, and our World*. Inner Ocean Publishing.
14. Nanda, B. R. (1958). *Mahatma Gandhi: A Biography*. Asia Publishing House.
15. Nussbaum, M. C. (2003). *Upheavals of Thought: The Intelligence of Emotions*. Cambridge University Press
16. Orwell, G. (1946). "Some Thoughts on the Common Toad" in *The Collected Essays, Journalism and Letters of George Orwell*, Vol. 2: *My Country Right or Left* (pp. 1-12). Harmondsworth: Penguin.
17. Parekh, B. (1997). *Gandhi's Political Philosophy: Power, Meaning, and Peace*. Palgrave Macmillan.
18. Parekh, B. (2001). *Gandhi: A very Short Introduction*. Oxford University Press.
19. Ramesh, B. (2005). *The Craft of Nonviolence: How the Gandhian Bhangi Movement Changed India*. Columbia University Press.
20. Roberts, P. (2014). *Gandhi and Hinduism: A Study of the Nexus*. Manchester University Press.
21. Sharp, G. (1973). *The Politics of Non-Violent Action*. Boston: Porter Sargent.
22. Spiro, R. H. (2002). *Gandhi: The Burden of History*. Oxford University Press.
23. Todd, J. (2000). *Civil Disobedience and the Politics of Resistance*. Columbia University Press.
24. Tuchman, G. (1982). *A Distant Mirror: The Calamitous 14th Century*. Alfred A. Knopf.



# STRATIFIED APPROACH FOR LEARNERS TO ENTICE WITH MADRASAH (SALEM): AN AMPLIFIED STRATEGY TO ENHANCE MUSLIM LEARNERS IN MADRASAH EDUCATION

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## ABSTRACT

*The Stratified Approach for Learners to Entice with Madrasah (SALEM) is a comprehensive educational strategy designed to enhance the learning experiences and outcomes of Muslim students in madrasah education. This approach seeks to address the diverse needs of learners by implementing differentiated instruction techniques, culturally responsive teaching, and inclusive curricula that honor Islamic traditions while integrating modern educational practices. SALEM emphasizes the importance of creating a supportive and engaging learning environment that fosters academic excellence, critical thinking, and personal development. By stratifying learners based on their individual abilities, interests, and learning styles, educators can tailor their teaching methods to better meet each student's unique needs. This personalized approach not only helps to improve academic performance but also boosts students' confidence and motivation. Additionally, the strategy promotes the involvement of parents and the community in the educational process, recognizing their crucial role in reinforcing learning and providing a holistic support system. Through professional development programs, teachers are equipped with the necessary skills and knowledge to effectively implement the stratified approach, ensuring that all students have the opportunity to succeed and thrive in their educational journey.*

**KEYWORDS:** *Stratified Approach, Entice with Madrasah, SALEM, Madrasah Education, Mixed Method Study*

## I. INTRODUCTION

Islamic education, or madrasah, is thought to have originated in the Philippines at the same time that Islam began to spread due to Arab missionaries and Malay explorers who landed in western Mindanao and Sulu. According to the Sulu Genealogy, a man named Tuan Mashaika came to Sulu in the 13th century and brought Islam to the locals (Abubakar, 1983). Another Arab missionary, Sayyid Abū Bakr, also called Sharif-ul Hashim, arrived on Jolo Island at the start of the 15th century. By establishing the sultanate as a political structure and becoming its first sultan, Abu Bakr solidified his own authority. During his thirty years in power, madaris (Abubakar) were established and mosques were built.

Madaris are now found all across the country, mostly in Central and Western Mindanao. Between 600 and 1,000 madaris are thought to exist in Mindanao, where there are between 60,000 and 100,000 students enrolled overall. Lanao del Sur, Basilan, and Maguindanao are the provinces that have more than 100 madaris apiece. In addition to madaris, 459 public schools around the country are using madrasah, according to the Department of Education (DepEd). The Autonomous Region in Muslim Mindanao (ARMM), which has its own regional DepEd and is theoretically autonomous of the national DepEd, is not included in this figure. A comprehensive initiative for the educational advancement of Filipino Muslims, the Road Map for Upgrading Muslim Basic Education, was created by the Philippine government through the Department of Education.

Under DepED Order No. 51, s. 2004, the Department of Education approved and defined the legal framework for the development and institutionalization of Madrasah education, as well as the standard curriculum for primary public schools and private Madaris. Furthermore, Executive Order No. 13-A, Section 2004 This order elevates the Madrasah educational system to the status of a vital component of the national educational system, comparable to the mainstream school system ("Status of Madrasah Education in the Philippines and Its Development and Institutionalization as a Component of the Philippine System of Education," 2006).

The Madrasah Education Program is being undertaken, in response to the demand for worldwide commitment to education for all, as stated in DepED Order No. 57, S.2010. It is guided by a Roadmap for Improving Muslim Basic Education, which includes (1) Arabic Language and Islamic Values Education in Public Schools, (2) Standard Madrasah Curriculum in Private Mandaris (Islamic educational institutions), and (3) Arabic Language and Islamic Values Education for Muslim Out-of-School Youth and Adults. The ALIVE initiative is being implemented in 981 public schools around the country (DepED Order No. 56, Section 2010).

According to Dr. Manaros B. Boransing, a madrasah is a Muslim private school that focuses on Islamic studies and Arabic literacy. These are Mindanao's oldest educational institutions and are widely regarded as the single most essential element in the preservation of Islamic faith and culture in the Philippines. In the Philippines, there are three broad descriptive



categories of madrasah: traditional or weekend madrasah, developmental or formal madrasah, and standard private madrasah. Traditional Madrasah education is primarily religious in nature. Classes are only held on Saturdays and Sundays; there is no official curriculum; classes are not graded or have multi-age groups; and the professors are graduates of a madrasah or an imam (Muslim priest). The developing madrasah provides structured teaching and sequential learning that is compatible with the official education system. The formal education system is followed, with pupils progressing from Madrasah edadi (pre-school) to Madrasah sanawi (high school).

The curriculum focuses on Islamic religion and culture, as well as certain mathematics and scientific classes, and Arabic is used as the medium of instruction. Because the DepED's standard curriculum is not followed, Madaris students lack competitive skills essential for employment and are ineligible for transfer to normal schools. The Department of Education does not recognize or accredit this sort of program (Boransing, M.B.).

Through the issuing of DepED Order No. 51, s. 2004, the regular private madrasah became a component of the Philippine education system. It follows the Standard Curriculum for Elementary Public Schools and is eligible for government recognition and certification. The enhanced curriculum stipulates the teaching of Arabic language and Islamic principles to Muslim pupils in public schools throughout the country in regions with a Muslim presence. Boransing went on to say that Madrasah pursues a six-point plan to develop its educational system.

These elements are as follows:

1. Development and institutionalization of Madrasah education.
2. upgrading quality secular basic education in formal elementary and secondary schools serving Muslim students.
3. Developing and implementing an alternative learning system for Filipino Muslim Out-of-School Youths.
4. Developing and implementing appropriate livelihood skills education and training for present-day students of private madaris. And Out-of-School youths;
5. Supporting government efforts to provide quality Early Childhood Care and Development (ECCD) Program for Filipino Muslim preschool children; and
6. Creation of a Special Fund for Assistance to Muslim Educational (FAME) by an Act of Congress. Islamic education is an essential component of the Muslim community.

The foundation for the formation of Islamic schools is built on two goals: a religious emphasis and protecting pupils from the undesired behaviors of the dominant population. Parents have stated that they send their children to Islamic schools for three reasons: (a) to provide an Islamic atmosphere; (b) to provide religious instruction; and (c) to preserve their children's faith and identity (Badawi, 2006). The establishment of madrasahs, or Islamic schools, in the Philippines is said to have coincided with the spread of Islam, which was brought about by Arab missionaries and Malay adventurers who landed in Sulu and

western Mindanao. According to the Sulu Genealogy, a certain Tuan Mashaika came to Sulu in the 13th century and introduced Islam to the locals (Abubakar, 1983).

Under the current government, DepEd Secretary and Vice President Sara Z. Duterte has stated that the Department of Education (DepEd) is committed to promoting equal access to excellent and inclusive education. She emphasized the need to eradicate the culture of 'othering' that harms persons who are not of social standing or who belong to minority or disadvantaged groups. She also reiterates her commitment to the SDGs, the UNESCO convention against discrimination in education, and the Education 2030 framework for action, which emphasizes inclusion and equity as the cornerstones of great education. VP Sara emphasized that the integration of programs for Muslim learners is also being focused on.

Furthermore, VP Sara assured that the DepEd will prioritize the integration of Arabic Language Islamic Values Education, or the ALIVE program, in which learners will develop their language and literacy skills while gaining a deeper understanding of the Islamic faith and its teachings through the study of Arabic.

There are four schools in DepEd Calamba that provide Madrasah education. Parian Elementary School, Jose Rizal Memorial Elementary School, Crossing Elementary School, Looc Elementary School, and, most recently, Calamba Elementary School are among these schools. Student accomplishment is the extent to which a student has met their short- or long-term educational objectives. Individual disparities in academic achievement are closely connected with personality and IQ differences. According to statistics collected from the SALAM Coordinator, few learners are attending the ALIVE classes over the weekend. In line with the challenges presented, and with the DepEd Mantra and MATATAG flagship by the VP and DepEd Secretary, there should be the heightened inclusivity in education and minorities should be given a chance bring their utmost potentials. Moreover, ALIVE education also embodies the countries cultural, religious, and historical significance as part of the Philippine intangible heritage. In summation, the researchers came up with the idea of having a stratified approach to entice Muslim learners in Madrasah education at Parian Elementary School which is a pilot study in the Schools Division of Calamba City, Philippines.

### Research Question

This study aimed to determine the effectiveness of Stratified Approach for Learners to Entice with Madrasah (SALEM): An Amplified Strategy to Enhance Muslim Learners in Madrasah Education Achievement in Parian Elementary School, Schools Division of Calamba City.

Specifically, it seeks to answer the following questions:

1. What are the challenges encountered by learners in madrasah education?
2. What are the themes that emerged from the learners' interview?





3. What was the performance of learners before and after the implementation of the SALEM approach?
4. Based on the results of the study, what improvements may be proposed for the SALEM approach implemented by the school?

This action research aimed to strengthen and improve Muslim learners' achievement in Madrasah education. Based on the report from the Madrasah Coordinator, numerous students were not attending the ALIVE classes. Some of the reasons are the following: learners want to take a rest after regular weekday schooling; some learners are tasked by their parents to do household chores; and some learners are not interested in attending the class at weekend.

In line with the DepEd mantra of inclusivity and with the legal basis of Madrasah education, the researchers are motivated to come up with a proposal that aims to entice the learners who are not interested to attend the weekend Madrasah schooling, likewise motivating the learners who are achievers in Madrasah classes by giving them recognitions at the end of the quarter.

Since this strategy, which is described as stratified refers to approaches which are different for various types of learners. But first, the researchers had profile the learners in terms of socio-economic status and the reasons, challenges, and motivations for attending the weekend classes. As a result, to crafting of stratified approach to entice all learners to attend the ALIVE classes during the weekend. The researchers crafted a framework that become the baseline of the enticement program for Muslim learners with the help of expert in the field of pedagogy, research and Madrasah education. (*Please see the framework at figure 1.*)

## II. METHODOLOGY

This research employs a mixed method study where explores both the qualitative data and quantitative data. The study's participants were the 59 Muslims students of Madrasah education at Parian Elementary School and the two (2) Aztatids.

The qualitative data analysis was done through thematic analysis, moreover, for the quantitative data analysis, this research utilized the mean, standard deviation, and t-test to determine the performance of the learners before and after the implementation of the SALEM project at Parian Elementary School. The information collected from the participants remained confidential and used only according to the purpose, as indicated in the research.

## III. RESULTS and DISCUSSION

This section specifies the results of data collection and analysis and reports findings concerning the research questions for this study.

***On the challenges highlight the complexities faced by learners in Madrasah education and the need for comprehensive support to enhance their educational experiences.***

Most of the learners stated that there is a Limited Curriculum Diversity. Madrasah education often focuses predominantly on

religious studies, which may limit exposure to other subjects like science, mathematics, and literature.

In addition, there is a challenge in language or so-called as Language Barrier. Madrasahs often teach in Arabic or another specific language, which can be challenging for students whose first language is different. This might hinder comprehension and engagement.

Another thing to consider is the Social Stigma. There can be societal perceptions that Madrasah-educated individuals have limited career prospects or are not equipped for roles outside religious contexts, affecting students' self-esteem (Escalaw, 2022; Escalaw, 2023; Escalaw, 2024) and opportunities (Paynor, 2024).

Moreso, the Integration into Mainstream Education. Transitioning from Madrasah to mainstream educational systems or workplaces may pose challenges due to differing curricula, teaching methods, and cultural norms.

Furthermore, as to normal learning centers, a challenge in resources as the so-called Resource Constraints. Madrasahs may lack adequate resources such as modern educational technology, libraries, and qualified teachers, impacting the quality of education and learning outcomes.

Lastly, the aspect of Modern Relevance. Balancing traditional religious teachings with contemporary knowledge and skills required for today's world can be difficult, potentially leaving graduates unprepared for diverse career paths or higher education outside religious studies.

***On the themes that emerged from the learners' interview.*** The themes that emerged from learners' interviews in the context of Madrasah education can vary depending on the specific interviews conducted and the focus of the research. However, some common themes that often emerge include:

**The Curriculum and Learning Experience.** Learners may discuss the content and structure of the curriculum, including the balance between religious studies and secular subjects, the relevance of what they are taught to their future aspirations, and the teaching methods used (Escalaw, 2022; Escalaw, 2023; Escalaw, 2024a; Escalaw, 2024b; Paynor, 2024; Cuenca & Cuenca, 2024).

**The Language and Communication.** Issues related to language proficiency, especially when Arabic or another specific language is the medium of instruction, can be a significant theme. Learners may discuss challenges in understanding the material, expressing themselves, or integrating their language skills into broader contexts (Tenzer et al., 2021).

**The Identity and Social Integration.** Learners may reflect on how their Madrasah education shapes their identity, both religiously and socially. This can include discussions on cultural identity, interactions with peers from different





backgrounds, and perceptions from broader society about Madrasah-educated individuals (Sali & Marasigan, 2020).

**Career and Future Prospects.** Discussions often revolve around the perceived impact of Madrasah education on their career options and future prospects. Learners may talk about whether they feel adequately prepared for higher education or entering the workforce outside religious contexts (Glover-Chambers et al., 2024).

**The Challenges and Support Systems.** Learners may highlight challenges they face within the Madrasah system, such as academic pressure, resource limitations, or the availability of support services. They may also discuss what forms of support—whether academic, emotional, or social—are beneficial or lacking (Johnson et al., 2022).

**The Perceptions and Stereotypes.** Learners may share their experiences regarding societal perceptions and stereotypes associated with Madrasah education. This can include feelings of discrimination or misunderstandings about the quality and value of their educational experiences (Durante & Fiske, 2017; Escalaw, 2022; Escalaw, 2023; Escalaw, 2024a; Escalaw, 2024b).

Therefore, these themes provide a broad overview of the topics that often arise from interviews with learners in Madrasah education settings. They reflect the complexities and varied experiences within this educational framework, highlighting areas for improvement and potential avenues for further research and support.

On the result of the performance of learners before and after the implementation of the SALEM approach

**Table 1. Results of the performance of learners before and after the implementation of the SALEM approach**

Grade Level	No. of Students	Pretest Mean	Posttest Mean	p-value	t-value	Remarks
Kader	6	7.17	13.67	0.004	5.160	Significant
One	9	8.56	12.33	0.006	3.688	Significant
Two	8	6.75	12.13	0.002	4.744	Significant
Three	6	9.00	15.17	0.002	5.793	Significant
Four	10	8.50	14.22	0.001	5.089	Significant
Five	9	8.56	13.70	0.006	3.688	Significant
Str	11	9.64	15.45	< .00001	16.849	Significant

*See the larger table 1 on the last page of this research.*

The study, titled "Stratified Approach for Learners to Entice with Madrasah (SALEM): An Amplified Strategy to Enhance Muslim Learners in Madrasah Education," conducted multiple statistical tests. Each test yielded significant results with t-values ranging from 3.68 to 10.849 and corresponding p-values ranging from .00615 to < .00001, meeting the significance criterion of  $p < .05$ .

The consistently low p-values indicate strong evidence against the null hypothesis, suggesting robust statistical significance across all tests. The increasing t-values suggest larger effect sizes or significant differences between groups, highlighting the effectiveness of the SALEM strategy in enhancing educational outcomes for Muslim learners in Madrasahs.

Therefore, these findings underscore the efficacy of the SALEM approach in improving educational experiences and outcomes for Muslim students in Madrasah education. They support the strategy's role in addressing educational challenges and fostering enhanced learning environments within Madrasahs, with implications for educational policy and practice in similar contexts.

**Based on the result of mixed method data analysis the following are the recommendations for Improving Madrasah Education.**

**Strengthen Curriculum Integration.** Balanced curriculum in Madrasahs should work towards integrating both religious and secular subjects in their curriculum. This can be achieved by collaborating with education experts, religious scholars, and curriculum developers to create a comprehensive and balanced curriculum that aligns with national educational standards. Regular reviews and updates to the curriculum should be conducted to ensure its relevance and effectiveness.

**Enhance Teacher Training and Professional Development.** Comprehensive Training Programs. Develop and implement regular training programs for madrasah teachers, focusing on modern teaching methods, classroom management, and subject-specific pedagogy. These programs should be designed to equip teachers with the skills necessary to deliver high-quality instruction. Ongoing Professional Development. Create opportunities for continuous professional development, including workshops, seminars, and conferences. Establishing a certification program for teachers can ensure they meet minimum teaching standards and maintain a high level of competency.

**Improve Infrastructure and Resources.** Infrastructure Development. Secure funding from government sources, NGOs, and private donors to improve madrasah facilities. Invest in building and upgrading classrooms, libraries, laboratories, and other essential infrastructure to provide a conducive learning environment.

**Resource Allocation.** Ensure adequate allocation of resources for textbooks, learning materials, and technological tools. Providing modern educational resources will enhance the overall learning experience for students.

**Promote Social and Cultural Integration and Extracurricular Activities.** Encourage student participation in extracurricular activities that foster cultural exchange and social integration, such as sports, arts, and community service. These activities can help students develop a broader understanding of different cultures and social norms.

**Interfaith Dialogues.** Organize interfaith dialogues and collaborative projects with students from diverse religious and cultural backgrounds. This can promote mutual understanding and respect among students from different communities.



Counseling Services. Provide counseling services to support students in adapting to diverse social environments and addressing any integration challenges they may face.

Implement Effective Monitoring and Evaluation. Develop clear and measurable performance indicators to assess the success of the implemented actions. These indicators should cover various aspects of madrasah education, including academic performance, teacher competency, and student integration.

Regular Assessments. Conduct regular assessments and surveys to gather feedback from students, teachers, and parents. Use this feedback to identify areas for improvement and make necessary adjustments to the action plan.

Continuous Improvement. Establish a continuous improvement process to ensure that the recommendations are effectively implemented and lead to sustained enhancements in madrasah education.

By following these recommendations, madrasahs can address the identified challenges and work towards providing a more balanced, high-quality education that prepares learners for both religious and secular success in the school.

## REFERENCES

1. Abdullah, M. (2018), "A pedagogical framework for teacher discourse and practice in Islamic schools", in Abdalla, M., Chown, D. and Abdullah, M. (Eds), *Islamic Schooling in the West*, Palgrave Macmillan, Cham, pp. 195-226.
2. Abu Bakar, M. (Ed.) (2018), *Rethinking Madrasah Education in a Globalised World*, Routledge Taylor and Francis Group, New York, NY.
3. Ambat-Escalaw, M. (2024). THE EMERGENCE OF TECHNOLOGICAL LEADERSHIP AMID THE PANDEMIC: REALIZING POTENTIALS AND PRACTICES. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 10(5), 177-184.
4. Arsad, N. (2007), *A Framework for Integration of Madrasah into the Basic Education, A Masteral Thesis*, College of Education, University of the Philippines, Diliman.
5. Asian Development Bank (2002), *Conceptual Issues Issues in the Role of Education Decentralization in Promoting Effective Schooling in Asia Developing Countries*, Asian Development Bank, Manila.
6. Ball, E.W. and Harry, B. (1993), "Multicultural education and special educati
7. Cuenca, R., & Cuenca, G. (2024, July 16). UNLOCKING SUCCESS: FOUR PHASE TECHNIQUES FOR PILING LARANG STUDENTS. *EPRA Journals*. <https://eprajournals.com/IJSR/article/13590>
8. Durante, F., & Fiske, S. T. (2017). How social-class stereotypes maintain inequality. *Current Opinion in Psychology*, 18, 43-48. <https://doi.org/10.1016/j.copsyc.2017.07.033>
9. Escalaw, M. A. (2024). REVOLUTIONIZING MATH EDUCATION: THE IMPACT OF MULTIMODAL TEACHING APPROACHES. *EPRA International Journal of Research and Development (IJRD)*, 9(7), 21-26.
10. Escalaw, M. A. (2024). REVOLUTIONIZING MATH EDUCATION: THE IMPACT OF MULTIMODAL TEACHING APPROACHES. *EPRA International Journal of Research and Development (IJRD)*, 9(7), 21-26.
11. Escalaw, M. A., Ambat, E. J. C. T., Ambat, M. C. E. T., & Ambat, R. T. Collaborative Reflective Activity for Online Learners: *Technological Pedagogical Innovation in the New Normal Education*.
12. Escalaw, Mariefe. (2023). THE EMERGENCE OF TECHNOLOGICAL LEADERSHIP AMID THE PANDEMIC: REALIZING POTENTIALS AND PRACTICES. *EPRA International Journal of Multidisciplinary Research (IJMR)*. ISI Value: 1.188. 177-184.
13. Escalaw, M. A., Ambat, E. J. C. T., De Leon, M. M., & Orlinga, E. B. (2023). *The Effects of an Integrated STEM Education Approach for Online Learners in Grade 10 Mathematics: A Research Study*. *Asian Journal of STEM Education for their selfless assistance to our mission. The next issue*, 4(1).
14. Glover-Chambers, T., Dean, B. A., Eady, M. J., West, C., Ryan, S., & Yanamandram, V. (2024). Academics' practices and perceptions of career development learning in the curriculum. *Higher Education Research & Development*, 1-16. <https://doi.org/10.1080/07294360.2024.2347621>
15. Hashim, R. (2013). *Educational Dualism in Malaysia: Implications for Theory and Practice*. Oxford University Press.
16. Hefner, R. W., & Zaman, M. Q. (Eds.). (2007). *Schooling Islam: The Culture and Politics of Modern Muslim Education*. Princeton University Press.
17. History. (n.d.). DepEd ALIVE Program. <https://depedaliveprogram.weebly.com/history.html>
18. Johnson, C., Gitay, R., Abdel-Salam, A. G., BenSaid, A., Ismail, R., Al-Tameemi, R. a. N., Romanowski, M. H., Fakh, B. M. K. A., & Hazaa, K. A. (2022). Student support in higher education: campus service utilization, impact, and challenges. *Heliyon*, 8(12), e12559. <https://doi.org/10.1016/j.heliyon.2022.e12559>
19. Paynor, R. D. (2024). EXPLORING MULTIMODAL TEACHING STRATEGIES AND CULTURAL INTEGRATION LEADING THE WAY TO ENHANCE ACADEMIC ACHIEVEMENT IN ENGLISH LANGUAGE ARTS. *EPRA International Journal of Multidisciplinary Research*, 586-590. <https://doi.org/10.36713/epra17586>
20. Paynor, R. D. (2024, July 3). EXPLORING MULTIMODAL TEACHING STRATEGIES AND CULTURAL INTEGRATION LEADING THE WAY TO ENHANCE ACADEMIC ACHIEVEMENT IN ENGLISH LANGUAGE ARTS. *EPRA Journals*. <https://eprajournals.com/IJMR/article/13515>
21. Sali, A. H. A., & Marasigan, A. C. (2020). Madrasah Education Program implementation in the Philippines: an exploratory case study. *International Journal of Comparative Education and Development*, 22(3), 201-217. <https://doi.org/10.1108/ijced-06-2019-0034>
22. Sikand, Y. (2005). *Bastions of the Believers: Madrasas and Islamic Education in India*. Penguin Books India.
23. Sikand, Y. (2005). *Bastions of the Believers: Madrasas and Islamic Education in India*. Penguin Books India.
24. Tan, C. (2014). *Educative tradition and Islamic schools in Indonesia*. *Journal of Arabic and Islamic Studies*, 14, 59-70.

25. Tenzer, H., Pudelko, M., & Zellmer-Bruhn, M. (2021). *The impact of language barriers on knowledge processing in multinational teams*. *Journal of World Business*, 56(2), 101184. <https://doi.org/10.1016/j.jwb.2020.101184>
26. Zaman, M. Q. (2010). *The Ulama in Contemporary Islam: Custodians of Change*. Princeton University Press

Figure 1. SALEM Framework

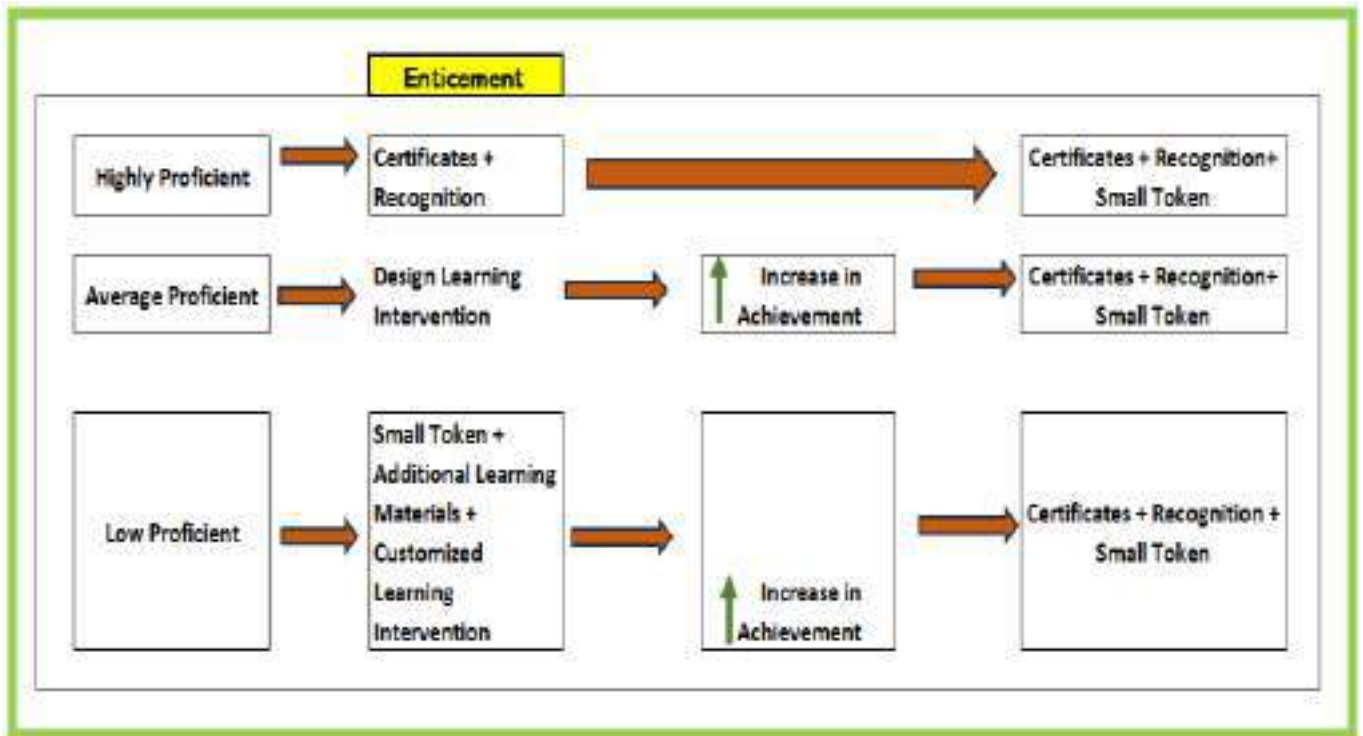


Table 1. Results of the performance of learners before and after the implementation of the SALEM approach

Grade Level	No. of Students	Pretest Mean	Posttest Mean	p-value	t-value	Remarks
Kinder	6	7.17	13.67	0.004	5.160	Significant
One	9	8.56	12.33	0.006	3.688	Significant
Two	8	6.75	12.13	0.002	4.744	Significant
Three	6	9.00	15.17	0.002	5.723	Significant
Four	10	8.50	14.22	0.001	5.099	Significant
Five	9	8.56	13.78	0.006	3.688	Significant
Six	11	9.64	15.45	< .00001	10.849	Significant



# THE METHODOLOGICAL BASIS OF FORMING SPIRITUAL AND MORAL QUALITIES IN STUDENTS BASED ON THE WORK “AKHLOKI NOSIRI” BY NOSIRIDDIN TUSI

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Article DOI: <https://doi.org/10.36713/epra17748>

DOI No: 10.36713/epra17748

## ABSTRACT

*This article highlights the methodological basis of forming spiritual and moral qualities in students based on the work “Akhloki Nosiri” by Nosiriddin Tusi. This work as a collection of ethical issues and their analysis serve to teach the better approaches in teaching pedagogy.*

**KEY WORDS:** *ethics, aesthetics, education, mental health, elimination of mental illnesses, family structure, rules of behavior, modesty, household management, child upbringing, moral development, systematic thinking, personal ethics, just society*

The work “Akhloki Nosiri” consists of 30 chapters, including “Introduction to the book and the reason for its writing”, “First notes and science section” and others. A pedagogical and educational work like “Akhloki Nosiri”, which is considered an immortal work in ethics and aesthetics, could only be written by a person with high knowledge, ability, and speech style. Not only the compatriots of the scientist, but also the people of the whole world can be proud of such a citizen. After the work was completed, soon Nosiriddin Tusi was arrested and sent to the Hashshoshi fortress “Alamut”. If there were several reasons for the arrest of the author, the most correct of them could be the following: the progressive ideas clearly manifested in the work “Akhloki Nosiri” aroused the anger of Muslim scholars and this could have been the real reason for his arrest. Nosiriddin Tusi lived in exile in Alamut fortress. The scientist, who was deprived of the right to leave the fortress, managed to write several scientific works, such as “Sharh ul-Isharat”, “Tahriri Majasti”, “Tahriru Uglidis”. He wrote the book “Tahriru Uglidis” in 1248, and then the second edition of this book (consisting of 13 parts).

The work “Akhloki Nosiri” is an eternal work that does not lose its importance for all times, rich in valuable thoughts on education, ethics and other rules of behavior. In “Akhloki Nosiri”, chapters important for the science of education, such as “Mental Health”, “Elimination of Mental Illnesses” occupy an important place. As stated here, education can achieve its goal after identifying the cause of children's misbehavior and correcting them. “If the dyer does not clean the clothes, they will not have the right color” [1].

Tusi advised to sit with healthy, polite, honest, talented and decent friends to maintain mental health. He believed that useful work is the main condition for the health of the human spirit. According to Nosiriddin Tusi, a person who does not like useful work will face disaster sooner or later.

In the work “Akhloki Nosiri”, special attention is paid to the issue of family structure. Nosiriddin Tusi compared the family to the whole body. He compared the art of providing for the family with the art of medicine, which wants to keep the body healthy. He showed that when some parts of the body hurt, just like the whole body hurts, a defect in the upbringing of one of the family members can affect the whole family. That's why he considered treating all family members equally, not giving priority to any of them, correct division of labor among them, creating strong family discipline as the pillar of a strong family. Nosiriddin Tusi emphasized that in order to create an educated family, it is necessary to choose a place of residence, build a house, collect goods to feed the family, be thrifty, and know the laws of household management [2].

Tusi also put forward valuable ideas about the rules of adoption and upbringing of children in his work “Akhloki Nosiri”. He considered instilling a sense of modesty in a child as the first aspect of education. When talking about raising children, he considered it a terrible thing to give them money, to tempt them with material things. As a method of education, he recommended conducting logical conversations that affect children's minds and perceptions, being demanding and kind, and using motivations that arouse love. Criticizing forced feeding of children and dressing them in expensive clothes, he wrote that simple clothes are the main condition for showing the real condition of children. He believed that teachers and educators should pay attention to the fact that children dress neatly and cleanly and move a lot. He emphasized the need to educate children in this way.

The book “Akhloki Nosiri” (“Ethics of Nosiri”) belongs to prose mural in terms of style and consists of an introduction, conclusion and three sections devoted to the issues of ethics, each of them is divided into certain sections. The second section consists of five to six chapters, and the third section consists of eight chapters.





After the chapters “Tahzib ul-Akhloq” (“About Morality”), Nosiriddin moves to the second chapter called “Rules of Home Improvement”. This chapter consists of five sections, and the most important weak issues related to the education are presented in the fourth section entitled “Politics and Children’s Education”. In this essay, Nosiriddin Tusi tries to focus on the main stages of education, its necessity, the child’s mental state and psychological methods, concepts, essence, goals and tasks, educational programs and ethical methods and factors of education” [3].

Talking about the upbringing of girls in his work, Tusi considered it important to teach them housework, to inculcate the virtues of modesty and chastity. He recommended that it is necessary to teach girls useful professions suitable for their gender, to give them education, to teach them all the qualities necessary for them to grow up as mothers. According to Tusi, the most sacred duty of education is to refrain from lying, not to allow false or true swearing [4]. In general, the thinker, who considered swearing to be a bad habit, wrote that “perhaps it is necessary to lie to adults, but it is absolutely not necessary for children”. Knowing that education should begin at a young age, Tusi wrote: “They asked Socrates: Why do you always talk to teenagers? He said: because it is easy to make thin young branches. A tree that has lost its freshness, whose bark has dried up, and whose face has hardened cannot be repaired” [3]. In general, the thinker, who considered swearing to be a bad habit, wrote that “perhaps it is necessary to lie to adults, but it is absolutely not necessary for children”.

The work “Akhloki Nosiri” is an eternal work that does not lose its importance for all eras, rich in valuable thoughts on education, ethics and other rules of behavior. The author of “Akhloqi Jalali” is Maulana Jalaluddin Davvani. “Akhloki Nosiri” is a work written by Nosiriddin Tusi. These two great books are soul and soul in one cover. It is written in a very beautiful handwriting” [5].

One of the most important merits of the book “Akhloki Nosiri” is that the system theory, which is now widespread at the time of the book’s writing, approaches the issue with a very serious systematic way of thinking. A period in which there were no systematic methods of approach. That is, one of the main aspects of this book is that, unlike the thinkers of that time, Tusi put forward the idea that the work does not end only with the improvement of personal ethics. If the environment surrounding a person is not in accordance with high moral standards, if he does not work, the intended goal cannot be achieved.

At the same time, it is necessary to try to adapt the family in which the person grows up and manages it, the society in which the person lives, and the whole world in general, to high moral standards. He put it this way, and his concept revealed a precise, fluid, rigorously scientific mechanism for implementing his approach. In creating this mechanism, he used all the important sources of ancient Greek scientists that were available up to his time, and revealed a unique approach. This is Tusi's greatest success in writing a book.

By writing this book, Nosiriddin Tusi made fundamental works that are very important for modern systems theory, sociology, social psychology, social management and pedagogy. Unfortunately, this activity of Tusi has not been studied in the existing scientific literature. The presence of these qualities distinguishes him from all oriental scholars. It was this systematic thinking ability that made him deeply feel that the work does not end only with the improvement of personal ethics. With a comprehensive approach to the issue, the ultimate goal is to build a just society where people can feel happy, he considered the idea of peace on earth more important and brought it to the fore. Based only on this content, he gave a scientific justification of how the individual and the family should be formed and showed specific methods for this. He didn't talk about some utopian world so that the earth could live harmoniously and people feel happy, he showed clear ways to do it.

Tusi highly appreciates the role of teachers and educators as the main person in educational work, he considered it important that they should be highly educated, knowledgeable, moral, demanding, kind, sweet-talking, and respectful. The thinker, who highly valued spiritual purity, moral purity, and purity of conscience in the educational process, considered it necessary to instill these qualities into the minds of children from a young age.

A thinker who highly valued spiritual purity, moral purity, and purity of conscience in the educational process, considered it necessary to instill these qualities in the minds of children from a young age.

## REFERENCES

1. <http://www.anl.az/el/t/tsn-en.pdf>
2. <http://www.anl.az/el/t/tsn-en.pdf>
3. Алирза М.Р. Сопоставительный анализ нравственных взглядов в педагогических произведениях Абу Хамида Газали и Насриддина Туси : диссертация ... кандидата педагогических наук . - Душанбе, 2014. - 164 с.
4. Махмуди М.М. Интеллектуальное развитие детей в педагогических воззрениях Ходжа Насреддина Туси : диссертация ... кандидата педагогических наук. - Душанбе, 2016. - 150 с.
5. <https://kh-davron.uz/kutubxona/uzbek/tarix/ziyo-sadr-sharifjon-maxdumning-shaxsiy-kutubxonasi-02.html>
6. Халимов А.Х. ВОСПИТАНИЕ, ЗАРОЖДЕНИЕ ШКОЛ И ПЕДАГОГИЧЕСКОЙ МЫСЛИ ТАДЖИКОВ В ЭПОХУ САМАНИДОВ : диссертация ... доктора педагогических наук : - Душанбе, 2012. - 320 с.
7. Пак Мостафа Хосейн. Учения Насриддина Туси о воспитании и ее значимости в системе общеобразовательных учреждений Ирана : диссертация ... кандидата педагогических наук : - Душанбе, 2014. - 153 с.



# THE IMPACT OF EMOTIONAL AND SPIRITUAL INTELLIGENCES ON EMPLOYEE JOB PERFORMANCE IN COMMERCIAL BANKS IN NUWARA-ELIYA DISTRICT

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Article DOI: <https://doi.org/10.36713/epra17774>

DOI No: 10.36713/epra17774

## ABSTRACT

The workplace environment keeps on changing, indicating its dynamic nature as well as unpredictability. Organizations require its employees to be more committed as well as to have a better cohesive working interrelationship. Emotional intelligence (EI) and spiritual Intelligence (SI) are the most important concepts introduced to psychology and management in the last decade and individual job performance (JP) is highly important for an organization. Hence, there is a need to identify the influence of EI and SI on JP. In addition to that only few studies so far have been conducted to explore impact of EI and SI on JP of employees which show an empirical knowledge gap. Hence, the main aim of this study is to emphasize the impact of EI and SI on JP of employee. In this study EI and SI are independent variables and JP as dependent variable. EI has four dimensions and SI has three dimensions.

A cross-sectional survey using structured questionnaire was used to collect data from 165 employees in selected Commercial Banks in Nuwara-Eliya District and all the items in the independent and dependent variables were tested through reliability test to ensure the consistency of the scale. Univariate analysis was carried out and the results show employees have high level of contribution of EI and SI to determine the JP. The correlational analysis was carried out and the result indicated there was a medium positive relationship between SI and EI, EI and JP and also SI and JP. The multi linear regression analysis was carried out and the results revealed that EI and SI significantly and positively impact on JP of employees. Moreover the above stated empirical knowledge gap has been filled certain extent through this research findings in banking sector.

**KEYWORDS:** emotional intelligence, spiritual intelligence, job performance

## 1. INTRODUCTION

In today's uncertain environment, any organization should try to apply its resources correctly to achieve competitive advantage. Due to very rapid growth of banking industry in Sri Lanka many Commercial Banks performs momentous functions in the present day for overall economic development and even for social and environmental development of the country with their dynamic employees and they are competing in perfectly competitive market conditions. Consequently, there is an increased need for banks to differentiate themselves from competitors at the augmented product level. One way is that this might be achieved to develop longer-term relationships with their key customers through effective and well developed employees who have cognitive as well as non-cognitive abilities to deal with the customers.

Therefore banking sector is increasingly turning towards their employees for differentiation and competitive advantages. In banking sector human factors always play a pivotal role in providing superior services to their customers that create some sort of a connection between employees and customers. As banks continue to survey in today's competitive business world, it is required that they have the qualified employees, and they try to keep these employees in the banks. Also, raising the success of banks depends on emotional and spiritual abilities in addition to the cognitive intelligence.

It is usually said that people with high intellectual intelligence (IQ) would achieve more in life, but recent researches indicate that greater predictor of success can be person's emotional intelligence (EI) and spiritual intelligence (SI) rather than his/her intellectual intelligence (Goleman, 1995). Moreover, EI contribute JP by allowing people to control own emotions and manage stress, further ensure good performance even under pressure by adapting to organizational change (Lopes, Grewal, Kadis, Gall, & Salovey, 2006). Parallel to the growing interest in EI, there is an emerging interest in combining the constructs of spirituality and intelligence into SI (Zohar & Marshall, 2000). With both these EI and SI happening in the workplace, the environment will be more conducive. A better working environment relates to a higher level of productivity.

Employee performance is frequently the most significant scenario in an organization. It could either impact in a negative or positive manner towards an organization. Research shown there is a relationship between both EI and SI, people with higher level of EI and SI have healthier, happier and more productive lives at work (Tischler, 2002). Businesses have increasingly recognized the importance of EI and SI. More particularly, there is a scarcity of research linking EI and SI to JP in a business relationship setting.

Hence, there is need for a theoretical synthesis on the question of how EI and SI ultimately affect JP of employees. This study search for empirical evidence in this field, by examining the



impact of EI and SI on JP in Commercial Banks. Because very little researches have examined EI and SI in the relationship area (Kaur, Sambasivam, & Kumar, 2015). In addition to that the lack of solid empirical evidence showing that emotional intelligence is related to positive workplace outcomes (Matthews, Zeidner, & Roberts, 2002).

There are only few researches investigating the relationship of EI, SI and JP in a holistic model. This may cause empirical knowledge gap in explain how the employees' EI and workplace SI predict the JP of employees in banking sector. Therefore this study wants to close the proposed gap and aim to investigate the specific and ultimate research question of this study is:

***“Whether EI and SI impact on JP of employees in Commercial Banks in Nuwara-Eliya District?”*** Therefore the main purpose of the study is to explore the impact of EI and SI on JP of employee in Commercial Banks in Nuwara-Eliya District. Meanwhile it has further Sub objectives such as to identify the level of EI, SI and JP, relationship between EI and JP, relationship between SI and EI and also relationship between SI and JP.

## 2. LITERATURE REVIEW

### 2.1 Emotional Intelligence

According to Gardner (1993) in his theory of multiple intelligences, offers a more refined view of intelligence within the context of this more general definition. He defined intelligence as *“the ability to solve problems, or to fashion products, that are valued in one or more cultural or community settings”* (p. 239). In 1993, Gardner included social intelligence as one of the seven intelligence domains in his theory of multiple intelligences which are 1) linguistic 2) logical-mathematical, 3) music, 4) bodily-kinesthetic, 5) spatial, 6) interpersonal and 7) intrapersonal. In a subsequent revision of his multiple intelligence theory, Gardner emphasized more cultural and contextual factors in the development of intelligence (Gardner, 1999). He retained the original seven intelligences, but acknowledged the possibility of adding new intelligences to the list. EI and SI are included within the context of multiple intelligences (Gardner, 1999).

The concept of EI can be discovered to Thorndike's (1920) research on social intelligence (Carmeli & Josman, 2006). Thorndike (1920) argued that intelligence is a three-faceted construct that relevant to 1) the ability to understand and manage ideas (abstract intelligence), 2) concrete objects (mechanical intelligence), and 3) people (social intelligence). In his research the concept of social intelligence defined as *“the ability to understand and manage men and women, boys and girls to act wisely in human relationships”* (Thorndike, 1920, p. 228). Therefore EI is rooted in social intelligence. Their initial definition of EI was *“the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions”* (Salovey & Mayer, 1990, p. 189).

#### 2.1.1 Theories and Models of Emotional Intelligence (EI)

There are three popular models related to EI such as 1) ability model, 2) trait model and 3) mixed model. The first model of

EI is ability model. The researchers viewed EI as an ability or skill. In 1997 Mayer and Salovey redefined EI to correspond more closely with emotional ability and proposed four abilities that contribute to EI, such as: 1) Perception: It involves accurate verbal and non-verbal expression and appraisal of emotion, 2) Assimilation: It involves generation of emotion to assist in problem-solving, 3) Understanding: It involves acquisition of emotion knowledge designed to promote intellectual and emotional growth and 4) Management of emotion: It involves regulation of emotion in the self and in others. This above conceptualization and subsequent assessment instrument is generally referred to as *“the ability model of EI”* (Mayer, Salovey & Caruso, 2004, p. 199).

Contrary to the ability model, there are also a trait model and a mixed model of EI. The second model of EI is trait model. Petrides and Furnham (2000) first introduced the trait model of EI. According to Petrides (2011) the trait model of EI defined as *“a constellation of self-perceptions located at the lower levels of personality hierarchies”* (Petrides, 2011, p. 657). The basic approach of the trait model is that EI is based on emotion-related behavioral dispositions, including empathy, optimism, impulsivity, self-awareness, motivation, and happiness (Petrides, Pita, & Kokkinaki, 2007).

The third EI model is mixed model. Bar-On and Parker (2000) model of EI and Goleman's (1995) emotional competence model are generally viewed as mainstream mixed models of EI. The basic premise of the Bar-On and Parker (2000) model indicates that EI is *“a multi-factorial array of interrelated emotional, personal, and social abilities that influence one's overall ability to cope actively and effectively with daily demands and pressures”* (Bar-On, 2000, p. 373-385).

#### 2.1.2 Dimensions of Emotional Intelligence (EI)

EI has several dimensions. Out of these dimensions, only four dimensions are highly related with research studies. In this study, we used below four dimensions to measure EI provided by Davies et al., (1998) and Law et al., (2004) such as: 1) Self-Emotion Appraisal (SEA): Appraisal and expression of emotion in the self refers to one's abilities to evaluate and express his or her emotion, 2) Others-Emotion Appraisal (OEA): Appraisal and recognition of emotions in others demonstrates the abilities to better evaluate and recognize the emotions of other people, 3) Regulation of Emotion (ROE): ROE in the self and others is related to one's abilities to better regulate his or her emotion and the emotion of others and finally 4) Use of Emotion (UOE): The UOE to facilitate performance is related to one's abilities to use his or her emotion to achieve better personal performance and behaviors.

#### 2.2 Spiritual Intelligence (SI)

The terms spiritual and spirituality relate to the spirit, the unseen makeup of humans (Garrett, 2004). According to Beazley (1997), spirituality is to identifying oneself with the spirit. Spirituality is a multidimensional notion, and hundreds of potential customs of living spiritually exist. The most prominent feature of spirituality is oneness with all beings in the universe, and therefore, Krishnan (2008) conceptualized spirituality as oneness with all other beings. Thus according to Ashmos and Duchon (2000, p. 139) defined spirituality at work





as “*recognition of an IL that nourishes and is nourished by MW that takes place in the context of community*”, and they subsequently used “*SI*” to denote the existence of this communal spiritual cognition.

Meanwhile connecting spirituality with work success and developing workplace spirituality is now a mainstream management and leadership research interest (Garcia-Zamor, 2003; George, 2006; Jurkiewicz & Giacalone, 2004), which has been dimensionalized as a team’s SOC, alignment with organizational values, sense of contribution to society, enjoyment at work, and opportunities of IL (Rego & Cunha, 2008).

### 2.2.1 Dimensions of Spiritual Intelligence (SI)

There are several dimensions to measure the SI indicated by many authors. This research framework is based on “at work” and “through work” dimensions of workplace spirituality. The “at work” dimension involves that employees consider spirituality to have a significant role in the workplace and that employees have an IL that is nourished by MW, which takes place in the context of community (Ashmos & Duchon, 2000; Marques, 2006; Stewart, 2002). The “through work” dimensions emphasize that the work itself is/can be spiritually uplifting, and that when work is oriented beyond one’s sense of self.

According to Ashmos and Duchon (2000), workplace spirituality is considered the dimensions of 1) Meaningful Work (MW): MW means engaging work. Accordant with Ashmos and Duchon (2000, p. 141), the aspect of meaning in work reflects “*a sense of what is important, energizing, and joyful about work*”, 2) Sense of Community (SOC): It is based on the idea that spiritual beings live in connection to other human beings and here community refers to “*the notions of sharing, mutual obligation and commitment that connect people to each other*” (Duchon & Plowman, 2005, p. 814) and 3) Inner Life (IL): IL means spiritual connection which means search for purpose and meaning. Mitroff and Denton (1999, p. 15) noted that spirituality is “*the basic desire to find ultimate meaning and purpose in one’s life and to live an integrated life*”. Thus this study used the above three dimensions to measure SI.

### 2.3 Employee Job Performance (JP)

Human performance is defined as a result of the actions set to achieve pre-specified goals based on a specific standard. It is the percentage of using the capacity of people in order to complete a work successfully in a certain period of time (Yildiz, Dagdeviren, & Cetinyokus, 2008). This may include actions or behavior of all non-observable mental processing such as problem solving, decision-making, program planning, reasoning (Bailey & Robert, 2003). Thus, performance should be considered in order to provide benefits to the company. This is because the benefits depend on individual employee performance (Yao, 2009).

“*Performance is associated with quantity of output, quality of output, timeliness of output, presence / attendance on the job, efficiency of the work completed effectiveness of work*

*completed*” (Mathis & Jackson 2009, p. 324). These performances may measure with quantitative and qualitative method. Qualitative performance in a sense, ability to get along with co-workers, willingness to cooperate, ability to lead, attendance, appearance and personal initiative, etc., should be evaluated. In this study qualitative work performance has taken to measure JP of employee in Commercial Banks.

### 2.4 Relationship between Spiritual Intelligence and Emotional Intelligence

According to Wigglesworth (2002), the emotional abilities come earlier than spiritual abilities. Both of these abilities are related to each other. They strengthen each other’s abilities. Further, Orr (2001) argues that growth in EI contributes to spiritual development. Conversely, EI may be developed through mindfulness meditation, a practice aimed at the spiritual development of consciousness (Cherniss & Goleman, 2001). And also some authors have asserted that SI influences EI (Hosseini et al., 2010; Zohar & Marshall, 2000). Based on recommendations by Mayer et al. (2000), it was hypothesized that a low to moderate positive correlation would be observed between the EI and SI and also Jimoh (2007) found a significant positive correlation when paired adjustment with SI and EI. On account of these arguments the first hypothesis is developed in this study as follows:

H<sub>1</sub>: There is significant positive relationship between SI and EI of employees in Commercial Banks.

### 2.5 Relationship between Emotional Intelligence and Job Performance

EI may contribute to work performance (as reflected in salary, salary increase, and company rank) by enabling people to nurture positive relationships at work, work effectively in teams, and build social capital. Work performance often depends on the support, advice, and other resources provided by others (Seibert, Kraimer & Liden, 2001). Hence, Goleman (2001) found that EI is positively related to JP. According to Goleman (1995, 1998) believes that the prediction of EI for individuals is successful life and work. Due to the influence of EI on each aspect of individuals’ work life, high-level possessed EI employees are considered as star performers. As a result, as stated in the previous sections, there exist a positive correlation between EI and JP. Based on these arguments the second hypothesis is developed in this study as follows:

H<sub>2</sub>: There is significant positive relationship between EI and job performance of employees in Commercial Banks.

### 2.6 Relationship between Spiritual Intelligence and Job Performance

In stressful situation the unlearned source which can help them is spirituality because it gives meaning and purpose to life (Faribors, Fatemeh, & Hamidreza, 2010). These would like to relate their spiritual selves with their professional lives. As a whole, it can be proposed that SI can be used as a factor of influence in work performance. Many researchers examined the significant relationship between SI and work performance (Alexander, Swanson, Rainforth, Carlisle, Todd, & Oates, 1993). Based on these earlier results the third hypothesis is developed in this study as follows:





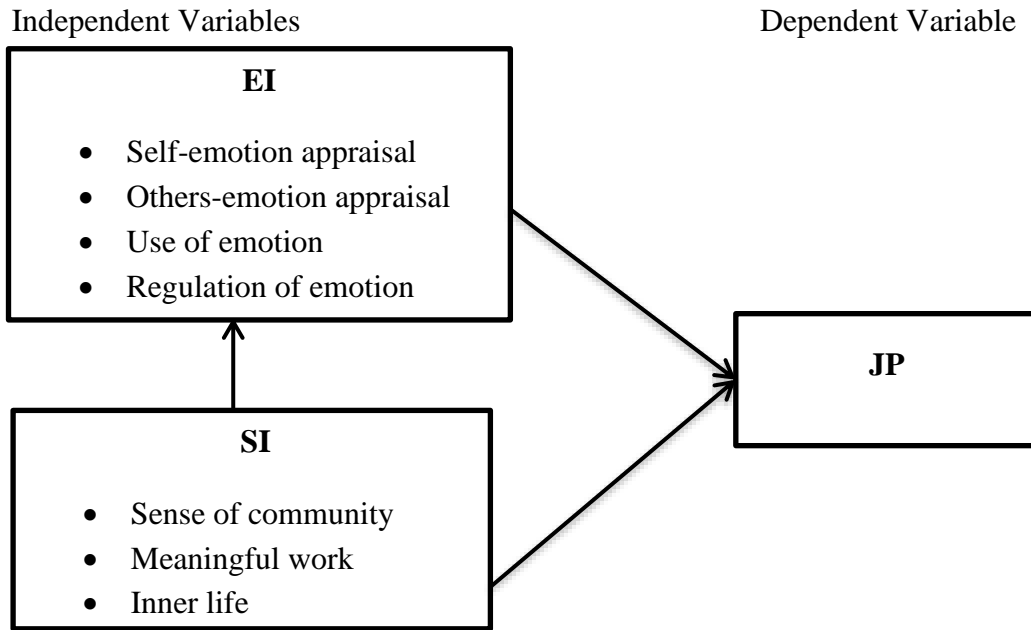
H<sub>3</sub>: There is significant positive relationship between SI and job performance of employees in Commercial Banks.

### 2.7 Conceptual Framework

This conceptual framework is used to indicate the relationship between the variables, which are involved in the study. In this

study, the JP of employees in Commercial Banks is examined with the help of two independent variables such as EI and SI. The diagram gives conceptual frame work to determine the relationship between SI and EI and impact of EI and SI on job performance.

Figure 2.1 Conceptual Framework



(Source: Adapted from Tischler, Biberman, & McKeage's (2002) five possible models).

## 3. RESEARCH METHODOLOGY

### 3.1 Participants and procedure

A cross sectional study conducted through administering questionnaire to the 165 bank employees to collect primary data for the findings of this study. The researcher has not interference with the normal activities in the selected banks. As far as this study is conducted in a non-contrived setting because this study is conducted in the natural environment where work proceeds normally. Regarding objectives of this study unit of

analysis is the individual staff of the selected Commercial Banks in Nuwara-Eliya District.

Population of this study is known by the researcher which considered as all the staff in the selected Commercial Banks such as People's Bank, Bank of Ceylon, Hatton National Bank, Commercial Bank and Seylan Bank in five divisional secretariats in Nuwara-Eliya District such as 1) Kotmale, 2) Walapana, 3) Hanguranketha, 4) Nuwara-Eliya and 5) Ambagamuwa. And also the stratify random sampling method is used to choose the sample size in selected Commercial Banks

Table 3.1: Sampling Framework

No.	Name of Commercial Banks	Population	Sample Size
1	People's Bank	190	60
2	Bank of Ceylon	180	57
3	Commercial Banks	45	14
4	Hatton National Bank	70	22
5	Seylan Bank	40	12
<b>Total</b>		<b>525</b>	<b>165</b>

(Source: Survey Data)



### 3.2 Measures

This questionnaire includes two main parts such as respondent personal information and research information. First part of respondent personal information covers age, gender, educational qualifications, job title and work experience of the employees. Second part of the questionnaire considers about research information and the questionnaire asked banking staff about their perception of EI and SI on JP.

Variable of this study are measured as follows. EI was measured with the 16 items from Wong and Law EI Scale (Wong & Law 2002). Christie, Jordan, Troth, and Lawrence (2007) used the WLEIS and reported that it is a valid measure. The WLEIS instrument assesses four sub-dimensions: 1) SEA, 2) OEA, 3) UOE and 4) ROE. SI was measured by reducing Ashmos and Duchon's (2000) original 66-items scale down to a 15 items. It included the three sub-dimensions of SOC, MW and IL. JP was measured with five items from Babin and Boles (1998) and all these items incorporating a five-point Likert scale where 1 = strongly disagree to 5 = strongly agree.

### 4.2 Reliability and Validity Analysis

**Table 4.1: Cronbach's Alpha Coefficient for Overall Variables**

Variables	Number of Statements	Cronbach's Alpha Coefficient
EI	16	.87
SI	15	.90
JP	5	.84

(Source: Survey Data)

According to this study the results of the reliability test, it is found the variable of EI against the sixteen questions, a Cronbach's Alpha of 0.87 is obtained, thus all the sixteen questions are reliable. For the variable of SI, the Cronbach's Alpha obtained is 0.90, thus the fifteen questions are reliable.

### 4.3 Univariate Analysis

**Table 4.2 Overview of Univariate Analysis**

Objectives	Variables	Mean	Std. Deviation	Level of Contribution
Objective 1	EI	3.86	.46	High Level
Objective 2	SI	3.83	.52	High Level
Objective 3	JP	3.87	.58	High Level

(Source: Survey Data)

### 4.4 Bivariate Analysis

According to employees' rating, the Table 4.1 shows the mean value for the overall EI is 3.86 and it is deviated from 0.46. Based on these findings and analysis EI dimensions and its indicators have a high level of contribution to determine the EI. Therefore overall EI is contributing in high level to determine JP of employees in Commercial Banks. SI had a mean value of

Univariate analysis is used to measure the degree of EI, SI and JP of employees. Bivariate analysis is used to measure correlation between SI and EI, EI and JP, SI and JP and to measure hypothesis. And multiple regression analysis used to measure the impact of EI and SI on JP of employees. These are the methods used to analyze the research objectives by using SPSS 19.0 version.

## 4. FINDINGS AND DISCUSSIONS

### 4.1 Demographic Profile of Respondents

Among 165 of employees 61.8% (102) of them are male, remaining 38.2% (63) of them are female. Male employees are higher than female employees and about 63.6% (105) of employees are aged between 20-30 and 66.7% (110) of employees are non-managerial staff and 33.3% (55) of them are managerial staff had majority advance level qualification of 76.4% (126) of employees with about 61.2% (101) employees have above five years experience in the Commercial Banks in Nuwara-Eliya District.

The next result for JP has found a Cronbach's Alpha of 0.84, thus the five questions are reliable (refer to Table: 5.1). Thus the reliabilities for all dimensions of variables are good and acceptable since all of the coefficients are greater than 0.70.

3.83 and it is deviated from 0.52 which shows SI dimensions show a high level of contribution of SI to determine of JP of employees in Commercial Banks. The JP is measured with five indicators and JP had a mean value of 3.87 and it is deviated from 0.58 which the findings show that most of the employees have high level of JP in Commercial Banks in Nuwara-Eliya District.



**Table 4.3: Overview of Bivariate Analysis of the Study**

Objectives	Relationship Between Variables	Pearson Correlation	Sig.(2-tailed)	Sum of Squares and Cross-Products	Covariance	N	Hypothesis
Objective 4	SI and EI	.400	.000	16.142	.098	165	P<0.05 H <sub>1</sub> : Accept
Objective 5	EI and JP	.481	.000	21.662	.132	165	P<0.05 H <sub>2</sub> :Accept
Objective 6	SI and JP	.436	.000	22.183	.135	165	P<0.05 H <sub>3</sub> : Accept

Dependent Variable: JP; (Source: Survey Data)

Based on the results the Table 4.3 shows the correlation between SI and EI is 0.400 ( $r = 0.400$ ,  $p < 0.01$ ). The significance is at 0.00 level (2-tailed), and coefficient of correlation ( $r$ ) is less than 0.5. Therefore SI and EI have significant and medium positive relationship. And also based on this evidence the null hypothesis of this study is rejected in relation to alternative hypothesis. Hence, the first hypothesis of this study is accepted. Similar to this finding, the previous study conducted by Jimoh (2007) found a significant positive correlation when paired adjustment with SI and EI. Moreover, based on recommendations indicated by Mayer et al., (2000), it was hypothesized that a low to moderate positive correlation would be observed between the EI and SI.

The correlation between EI and JP indicate that the coefficient of correlation ( $r$ ) value is 0.481 at the 0.01 (2-tailed) significant levels. The coefficient of correlation ( $r$ ) is less than 0.5 which is proved significant and a medium positive relationship between the EI and JP ( $r = 0.481$ ,  $p = 0.000$ ). Hence, in the second hypothesis, the null hypothesis is rejected and instead, the alternative hypothesis is accepted. In a similar manner several researchers have argued that EI had a positive effect on JP (Slaski& Cartwright, 2003; Goleman, 1995, 1998; Law et al., 2008) and sales performance (Wong et al., 2004). An account of this Goleman (2001) found that EI is positively related to JP.

The correlation between SI and JP indicate that the coefficient of correlation ( $r$ ) value is 0.436 at the 0.01 (2-tailed) significant levels. The coefficient of correlation ( $r$ ) is less than 0.5 fall on second decision rule and this is proved a medium positive significant relationship between the SI and JP ( $r = 0.436$ ,  $p = 0.000$ ). Hence, in the third hypothesis, the null hypothesis has been rejected and instead, the alternative hypothesis is accepted. A parallel argument in the previous study is examined the significant relationship between SI and work performance (Alexander, Swanson, Rainforth, Carlisle, Todd, & Oates, 1993).

**4.5 Multi Linear Regression Analysis**

Model summary indicates the computed value of F ( $F = 35.057$ ,  $df = (1, 163)$ ) shows that the model is statistically significant. EI and SI are significantly and strong positively related to JP of employees ( $r = 0.550$ ,  $p < 0.01$ ) and the “R Square” ( $R^2$ ) statistic in this study analysis is 0.302, which suggests that EI and SI explain 30.2% of the variance of the JP. Also Adjusted R-Square ( $R^2$ ) is adjusted value of 29.3% of changes in JP is explained by EI and SI. Multi linear regression analysis indicates EI has significant t value is 0.000 ( $t = 5.106$ ,  $p < 0.05$ ) which shows EI statistically significant and positive ( $b = 0.462$ ) impact on JP of employees. Likewise SI has significant t value of .000 ( $t = 4.038$ ,  $p < 0.05$ ) which show SI statistically significant and positive ( $b = 0.323$ ) impact on JP of employees (refer to Table 4.4).

**Table 4.4 Model Summary of Multi Linear Regression Analysis**

Objective 7	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
	EI and SI	.550	.302	.293	.494	.302	35.057	1	163
<b>Coefficient Table Summary of Regression Analysis</b>									
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound		
Constant	.852	.363		2.348	.020	.136	1.569		
EI	.462	.090	.366	5.106	.000	.283	.640		
SI	.323	.080	.289	4.038	.000	.165	.481		

Dependent Variable: JP

(Source: Survey Data)



## 5. CONCLUSION AND RECOMMENDATIONS

The finding of the study clearly show that the high level of contribution of EI to determine the JP of employees. This shows when the employees are good understanding of their own emotions, this lead to high level of EI of employees. This contributes to do their job well. SI has high level of contribution to determine JP of employees and high work engagement, provide meaningful life and job, joy in the work and spiritual environment increase the MW towards increase of SI of employees in the selected Commercial Banks. Moreover, the JP of employees has a high level in Commercial Banks is clearly shown in this study. In addition to that it shows understanding of services delivered to customers, better customer relationship and know about customer expectation of employees are high in determine high level of JP of employees in the Commercial Bank.

The study findings clearly show that SI has significant and medium positive relationship with EI of employees in Commercial Banks. Therefore when employees have SI, it reflects in their positive EI in the workplace and these are interrelated with each other in the selected Commercial Banks. And EI has significant and medium positive relationship with JP of employees in commercial Banks. Therefore emotional abilities are correlated with performance of employees in the work place. Thus, results clearly show that there is significant and medium positive relationship between SI and JP of employees in Commercial Banks. Therefore SI also has a positive correlation with JP of employees. It predicts that if SI of employees increases, that positively reflect on JP of employees in selected Commercial Banks.

In addition to that, the adjusted R square it gives 0.298, which indicates that 29.8% variation in dependent variable of JP is explained by independent variables of EI and SI. The results show, EI and SI significantly and positively impact on JP of employees in selected Commercial Banks in Nuwara-Eliya District. Thus as stated in the research problem, the empirical gap has been closed certain level throughout the study. Therefore when EI and SI of employees are positive the employees have positive performance in the work place.

### 5.1 Recommendations

The manager and employees can use these study findings as an improvement tool in their banks. Since, if they know that EI and SI positively impact their performance then they can consider on that in the workplace. In addition, relationship managers and employees should be aware of the concept of EI and SI, their level of EI and SI and also how they can improve the various elements of EI and SI. This is because an increase in EI and SI should result in enhanced to increase performance and that reflect in organizations performance.

Further, the human resource management department or administration department of Commercial Banks should consider EI and SI when recruiting staff. Staff with high EI and SI, and an awareness of its importance, should be better able to generate effective relationships, particularly in customer service positions. This study also help to banking sectors employees as conduct training in personal development so that

employee can have a better understanding in identifying, understanding and managing their own emotions and others especially emotions of their colleagues and the respective customers.

The present study has provided many potential paths for future researchers. First, future researchers might consider using a different EI instrument to compare its outcome with the findings of the present study. Second future research may consider compare study between private bank and state bank employees performance on this topic. Third it might consider about relationship between EI and SI with other variables of job satisfaction, leadership performance, organizational commitment and organizational performance are fruitful. In addition to that if this same research will be conducted to different sample like school teachers and nurses in the public hospitals, it might be worth more.

### 5.2 Limitations

As other empirical studies, this research might also have some limitations. First, this study carried out only in five Commercial banks among thirteen Commercial Banks in Nuwara-Eliya District. For this reason, results might be lack of generalizability. If it considered all Commercial banks then this findings further conformed.

Second, this study is a cross-sectional study. The causal relationships between the variables cannot be empirically validated. The third limitation is the study has used only the quantitative approach, using qualitative research approach such as interviews and observation will be effective to get more explanation regarding EI and SI on JP.

## REFERENCES

1. Alexander, C. N., Swanson, G. C., Rainforth, M. V., Carlisle, T. W., Todd, C. C., & Oates, R. M. (1993). *Effects of transcendental meditation program on stress reduction, health and employee development: A prospective study in two occupational settings. International journal of Anxiety, Stress and Coping*, 6(3), 245-262.
2. Ashmos, D. P., & Duchon, D. (2000) *Spirituality at work: a conceptualization and measure. Journal of Management Inquiry*, 9(2), 134-45.
3. Babin, B. J., & Boles, J. S. (1998). *Employee behavior in a service environment: a model and test of potential differences between men and women. Journal of Marketing*, 62(2), 77-91.
4. Bar-On, R. & Parker, J. D. A. (2000). *Theory, development, assessment, and application at home, school, and in the workplace. The Handbook of EI, Jossey-Bass, San Francisco*, 373-385.
5. Beazley, H. (1997). *Meaning and measurement of spirituality in organizational settings: Development of a spirituality assessment scale. Dissertation Abstracts International*, 58(12), 4718.
6. Carmeli, A., & Josman, Z. E. (2006). *The relationship among EI, task performance and organizational citizenship behaviors. Journal of Human Performance*, 19 (4), 403-419.
7. Cherniss, C., & Goleman, D. (2001). *Training for emotional intelligence: A model. The emotionally intelligent workplace. The Wall Street Journal of Digital Membership*, 1, 209-233.





8. Davies, M., Stankov, L., & Roberts, R. D. (1998). EI: in search of an elusive construct. *Journal of Personality and Social Psychology*, 75(4), 989-1015.
9. Duchon, D., & Plowman, D. A. (2005). Nurturing the spirit at work: Impact on work unit performance. *The Journal of Leadership Quarterly*, 16(5), 807-833.
10. Faribos, B., Fatemeh, A., & Hamidreza, H. (2010). The relationship between nurses' SI and happiness in Iran. *Procardia Social and Behavioral Sciences*, 5, 1556-1561.
11. Gardner, H. (1999). *Intelligence reframed: multiple intelligences for the 21<sup>st</sup> century*. New York: Basic Books.
12. Garrett, R. (2004). 10 Gendered bodies and physical identities. *Body knowledge and control. Studies in the sociology of physical education and health*. Routledge, Taylor & Francis Group, 140-156.
13. George, M. (2006). How intelligent are you ... really? From Intelligent Quotient to EI to SI, with a little intuition along the way. *Training & Management Development Methods*, 20 (4), 425-436.
14. Goleman, D. P. (1995). *EI: Why it can matter more than Intelligent Quotient for character, health and lifelong achievement*. Batnam books, 1-343.
15. Goleman, D. (1998). *Working with EI*. New York: Bantam Books, 1-384
16. Goleman, D. (2001). An EI-based theory of performance, in Cherniss. *Jossey-Bass, San Francisco*, 27-44.
17. Hosseini, M., Elias, H., Krauss, S. E., & Aishah, S. (2010). A review study on SI, adolescence and SI: Factors that may contribute to individual differences in SI and the related theories. *Journal of Social Sciences*, 6(3), 429- 438.
18. Jimoh M. O. (2007). *SI, EI and Intelligent Quotient as predictors of adjustment to teaching profession among the voluntary teaching corps scheme employees in Ogun State*. Dissertation, University of Ibadan.
19. Kaur, D., Sambasivan, M., & Kumar, N. (2015). Impact of emotional intelligence and spiritual intelligence on the caring behavior of nurses: a dimension-level exploratory study among public hospitals .Malaysia. *Applied Nursing Research*, 28(4), 293-298.
20. Krishnan, V. R. (2008). *The impact of transformational leadership on followers' duty orientation and spirituality*. *Journal of Human Values*, 14(1), 11-22.
21. Law, K. S., Wong, S. C., & Song, J. L. (2004). The construct and criterion validity of EI and its potential utility for management studies. *Journal of Applied Psychology*, 89(3), 483-496.
22. Lopes, P. N., Grewal, D., Kadis, J., Gall, M., & Salovey, P. (2006). Evidence that EI is related to JP and affect and attitudes at work. *Psicothema*, 18, 132-138.
23. Marques, J. (2006). *The spiritual worker: An examination of the ripple effect that enhances quality of life in- and outside the work environment*. *Journal of Management Development*, 25(9), 884.
24. Matthews, G., Zeidner, M., & Roberts, R. D. (2004). *Emotional intelligence: science and myth*. Cambridge, MA: MIT Press paperback edition. 1-30.
25. Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). EI as zeitgeist, as personality, and as a mental ability. *The Handbook of EI*, Jossey-Bass, New York.
26. Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). EI: Theory, findings, and implications. *Journal of Psychological Inquiry*, 15(3), 197-215.
27. Mayer, J. D. & Salovey, P. (1997). *What is EI? Emotional development and EI: implications for educators*. Basic Books, 3-31.
28. Mitroff, I. I. & Denton, E. A. (1999) *A study of spirituality in the workplace*. *Sloan Management Review*, 40(4), 83-92.
29. Petrides, K. V. (2011). *Ability and trait EI*. In *The Wiley-Blackwell Handbook of Individual Differences*, 657.
30. Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional Intelligence. *The Official Journal of Personality and individual differences*, 29(2), 313-320.
31. Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait EI in personality factor space. *British Journal of Psychology* 98(2), 273-289.
32. Rego, A., & Cunha, M.P., (2008). *Workplace spirituality and organizational commitment: an empirical study*. *Journal of Organizational Change Management*, 21 (1), 53-75.
33. Salovey, P., & Mayer, J. D. (1990). EI. *Imagination, Cognition and Personality*, 9(3), 185-211.
34. Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *Academy of Management Journal*, 44, 219-237.
35. Thorndike, E. L. (1920). *Intelligence and its uses*. *Harper's Magazine*, 140, 227-235.
36. Stewart, C. S. (2002). *Soul time*. *Potentials*, 35 (9), 92.
37. Tischler, L., Biberman, J., & McKeage, R. (2002). Linking EI, spirituality and workplace performance; definitions, models and ideas for research. *Journal of Managerial Psychology*, 17 (3), 203-218.
38. Yildiz, O., Dagdeviren, M., & Cetinyokus, T. (2008). *Employee performance evaluation of a decision support system and application*. *Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi*, 23(1).
39. Wigglesworth, C. S. G. (2002). *SI and why it matters*. Retrieved From <http://www.consciouspursuits.com>.
40. Zohar, D., & Marshall, I. (2000). *Spiritual intelligence: The ultimate intelligence*. Bloomsbury Publishing.



# IMPACT OF COVID VACCINATION IN INDIA: A STUDY OF MEERUT DISTRICT

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Article DOI: <https://doi.org/10.36713/epra17798>

DOI No: 10.36713/epra17798

## ABSTRACT

Early in December 2019, the COVID-19 pandemic broke out in Wuhan, China, and quickly spread throughout the world, devastating human health. To combat the COVID-19 pandemic, quick work was needed to develop and test vaccines for safety and efficacy due to the public health emergency. COVID-19 vaccines were approved for emergency use before the conclusion of traditional clinical trial phases, but there isn't a thorough analysis of the safety information provided by the vaccination trials. There is no data on vaccination effects on the Indian population that are gender-specific. This study aims to evaluate the adverse effects of different vaccines for COVID-19, particularly in young adults based on health issues they encountered, and to determine the factors linked to experiencing adverse events after vaccination, also focusing on gender-specific side effects of vaccine (if there are any). Furthermore, there was a noticeable increase in the number of individuals reporting mental illness. Therefore, this study also attempts to understand the impact of the COVID-19 vaccination on the mental health of people in India with a particular focus on the Meerut district. A structured Google questionnaire will be utilized to collect the required data for the study through a random sampling technique from 200 young adults in the Meerut district who have received at least one dose of the COVID-19 vaccine. Descriptive statistics were used to examine the frequency and length of systemic and generalized symptoms.

**KEYWORDS:** Covid-19, Health issues, vaccination,

## INTRODUCTION

The beta-coronavirus SARS-CoV-2 first appeared in China's Wuhan region in 2019. It passed through the barriers between species and infected people through human-to-human transmission.

The 2019 Coronavirus disease were declared a pandemic by The World Health Organization on 11th March 2020. The rapid spread of coronavirus caused the failure of the healthcare system and led to the global economic crises (Bilotta et al., 2021). According to the WHO as of 9 July 2024, the total number of Covid 19 cases is 775,678,432 and the total number of deceased persons due to coronavirus is 7,052,472.

The fast spread of COVID-19 infection severely impacted human health and created an emergency to formulate an effective vaccine to fight this virus. The severity of infection leads to the urgent need to the test of efficacy and safety of vaccines in a very short period (Kaur, Dutta, & Bhardwaj, et al., 2021). To fight Covid 19 pandemic two different types of vaccines were developed based on viral vectors and mRNA technology (Bilotta et al., 2021).

The government had to grant emergency approval for COVID-19 vaccines to control the situation. However, the lengthy duration of clinical trials represents a significant barrier to the rapid

development of vaccines. The United States Food and Drug Administration (FDA) and the World Health Organisation (WHO) have established guidelines that require a vaccine candidate to successfully undergo not less than a trilogy of placebo-controlled clinical trials to validate its efficacy and safety which can take years to finish.

However, the approval of Covid 19 vaccines was based on limited clinical tests conducted within a brief timeframe which was not sufficient time to access all short- and long-term adverse impacts associated with different Covid-19 vaccines (Kaur, Dutta, & Charan, et al., 2021), so it becomes very crucial to further evaluate the adverse impacts of Covid 19 vaccines to improve the safety and the efficacy of these vaccines for the well-being of the society. This research paper focuses on the side effects (if any) experienced and the types of health problems faced by people after getting vaccinated.

## LITERATURE REVIEW

Kaur et al. (2021) analyzed the data of 32044 subjects collected from the WHO database related to the adverse events of different COVID-19 vaccines and found that the adverse events were higher in European females in the age group of 18 to 64 years. The study showed that the majority of adverse events were associated with the BNT162b2 (Pfizer) vaccine. General



disorders, nervous system disorders, musculoskeletal disorders, headache, pyrexia, and fatigue were commonly reported adverse events due to the vaccination. Alhossan et al. (2022) systematically reviewed different published studies related to the adverse events of COVID-19 vaccines in Saudi Arabia. The study found that there is around 40% incidence of adverse events after the COVID-19 vaccination, and the AstraZeneca vaccine is associated with a higher risk as compared to the Pfizer-BioNTech vaccine. Chen et al. (2022) reviewed different trials related to the nervous and muscular adverse events due to the COVID-19 vaccination. The study found that nervous and muscular adverse events are common, out of which muscle pain and headaches are most common. Mushtaq et al. (2022) Reviewed different pieces of literature related to the adverse effects of various Coronavirus vaccines being used worldwide. The study found that there are short-term adverse effects of different COVID-19 vaccines, which include fever, headache, and myalgia. The study also found that thrombosis is mostly seen in people who have taken the adenoviral vector vaccines. Adverse effects associated with the mRNA vaccines are myocarditis, cutaneous eruptions, and glomerular diseases.

Balasubramanian, Faheem, Padhy, and Menon, (2022) Review the available reports of psychiatric adverse effects associated with COVID-19 vaccines. To locate relevant papers, we conducted searches using electronic resources such as PubMed and Google Scholar. Eleven reports detailed the 14 cases of psychiatric reactions that we identified; altered mental states, psychosis, mania, depression, and functional neurological disorders were the most frequent ones. The index case was usually a young or middle-aged adult. The use of vaccines based on mRNA or vectors was covered in every publication. Given that every person experienced symptoms within ten days following the vaccination, it seems that this is a high-risk window that has to be watched closely.

Pandey et al (2021) The COVID-19 pandemic, which has lasted for more than a year, has raised awareness of the virus's effects on mental and neurological health. In addition to severe symptoms like brain stroke, neurological abnormalities such inflammation, cognitive decline, and loss of smell are frequent in infected patients. Beyond the immediate consequences, social

isolation and lockdowns have had a substantial impact on mental health across all age groups, with pressures causing emotional outbursts and harmful conduct. The pandemic response is further complicated by the fact that vaccine hesitancy remains despite widespread distribution, owing to worries about both efficacy and side effects. To inform effective policy interventions aimed at mitigating the ongoing mental health crisis amidst the pandemic, this review emphasizes the necessity of addressing the direct and indirect effects of COVID-19 on mental health as well as factors contributing to vaccine hesitancy, particularly among disadvantaged populations. especially within underprivileged groups

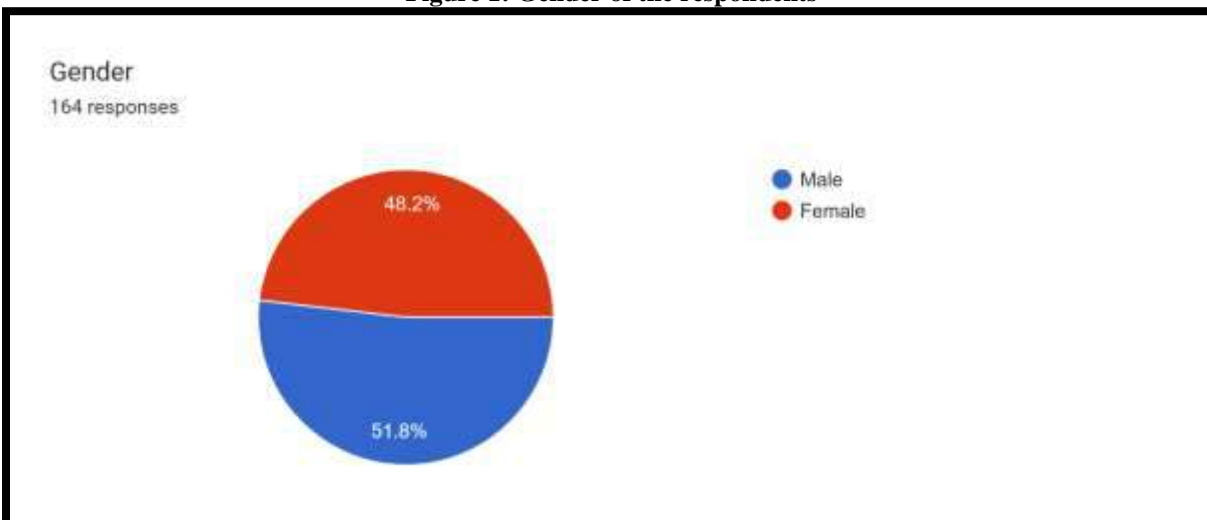
Kaur et al (2021) This study carried out a comprehensive review of published safety data from COVID-19 vaccination trials. Eleven pertinent studies were found using searches conducted between December 2019 and 2020 on PubMed, Embase, and Google Scholar. Most adverse reactions that were recorded were mild to moderate and disappeared within three to four days. Fever, tiredness, headache, and myalgia were among the systemic symptoms; discomfort, swelling, and redness at the injection site were among the local reactions. Several trials found transitory laboratory abnormalities, although they were not clinically meaningful. Severe adverse effects were rare and had nothing to do with the vaccination. All things considered, the research suggests that COVID-19 immunizations might be safe, but it also highlights the need for ongoing surveillance, especially in communities that are more vulnerable.

## METHODOLOGY

A cross-sectional study based on an online survey was carried out using Google Forms. The purpose of the survey was to determine the side effects that people reported having after getting the COVID-19 vaccine. The self-administered forms were designed using Google Forms comprising of 13 mandatory questions to collect data regarding the physical as well as psychological difficulties faced by people. After screening it was found out that a total of 164 participants participated in the study by providing information regarding their personal experiences.

## RESULTS AND DISCUSSIONS

Figure 1: Gender of the respondents

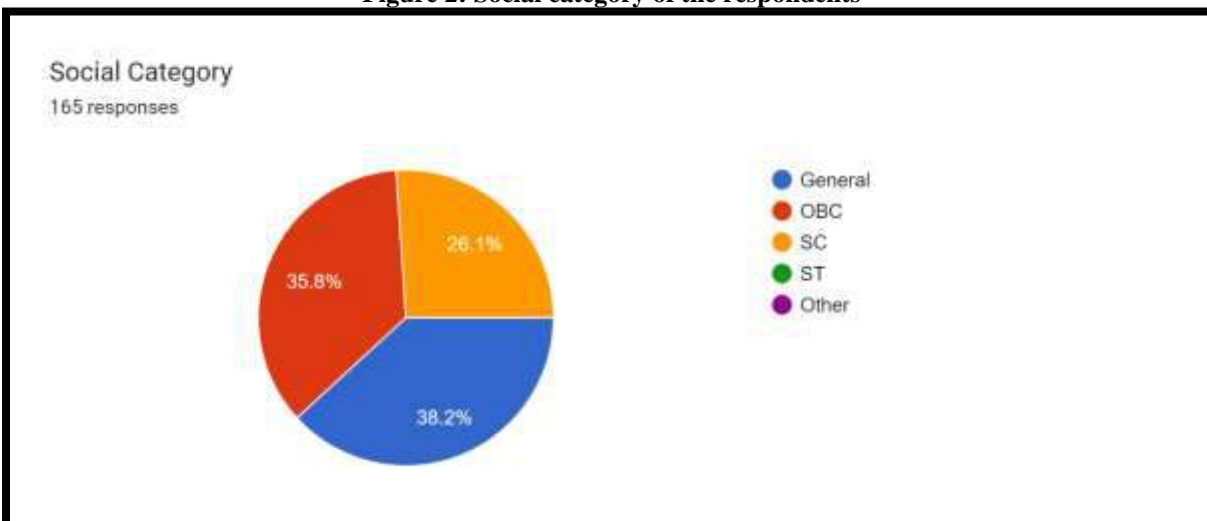


Source: Based on data collected through Google forms

The pie chart in figure 1 illustrates the percentage of respondents according to their gender. It is evident from the above chart that

51.8 % of the respondents are male and 48.2% of the respondents are female.

Figure 2: Social category of the respondents



Source: Based on data collected through Google forms

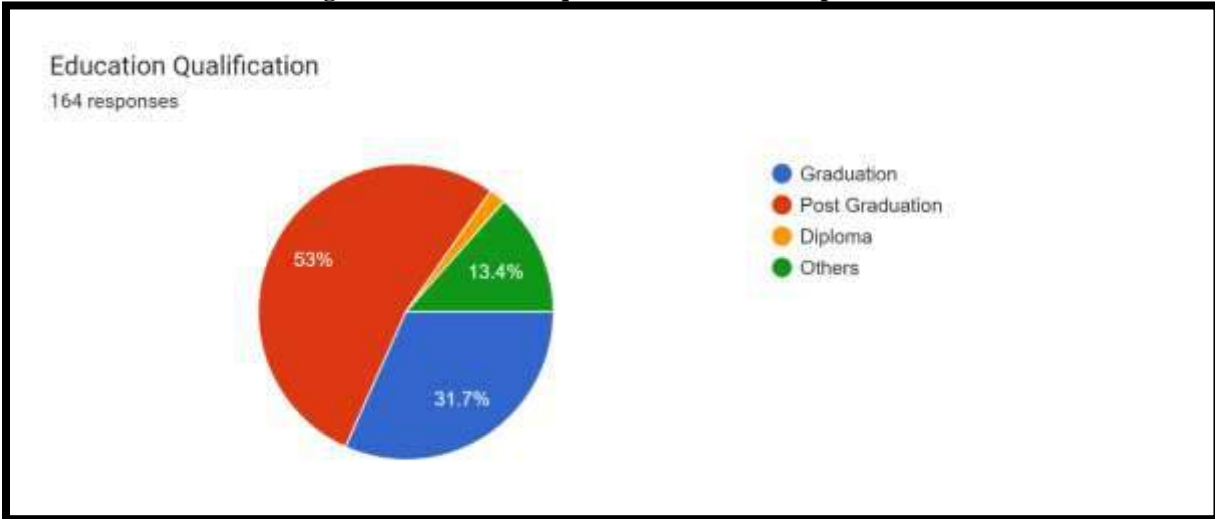
The pie chart in figure 2 depicts the percentage of respondents from different social categories. 38.2% of the respondents belonged to general category whereas 35.8% belonged to OBC

(Other Backward Castes) category and 26.1 belonged to SC (Scheduled Castes) category.





**Figure 3: Educational qualifications of the respondents**

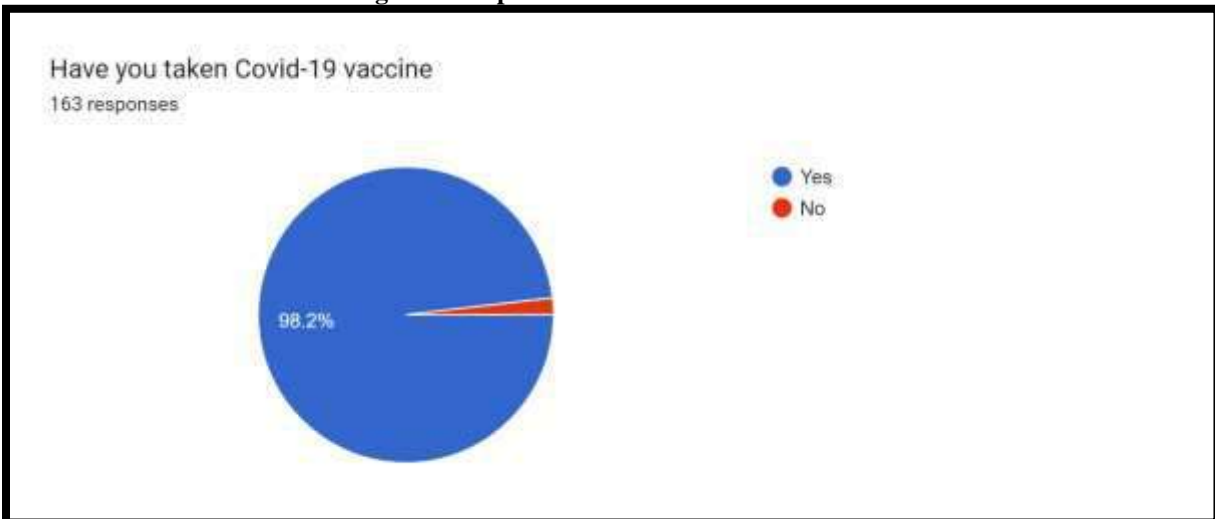


Source: Based on data collected through Google forms

The pie chart in Figure 3 depicts the educational qualifications of the respondents and it can be seen that most of the respondents have completed post-graduation (53%), 31.7% of the respondents have completed graduation, 1.9% have attained some kind of

diploma and 13.4% have some other type of qualifications. Hence it can be concluded that most of the respondents were well educated.

**Figure 4: respondents vaccinated for covid-19**

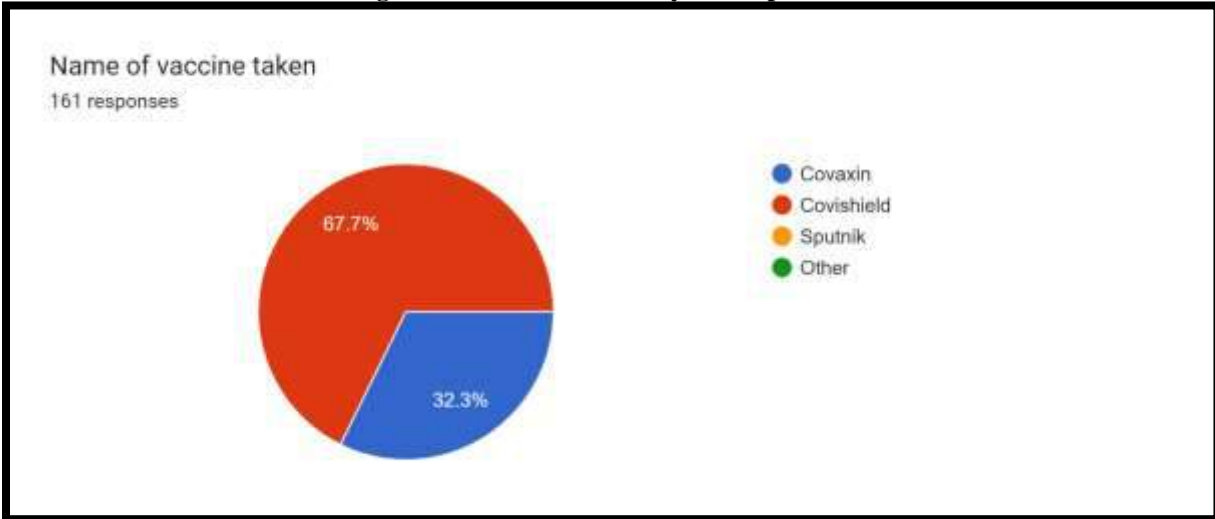


Source: Based on data collected through Google forms

The pie chart in figure 4 shows how many of the respondents have taken covid-19 vaccine and it can be seen that 98.2% had taken the vaccine and only 1.8% of the respondents were those who had not taken any vaccine for covid.



**Figure 5: vaccine received by the respondents**

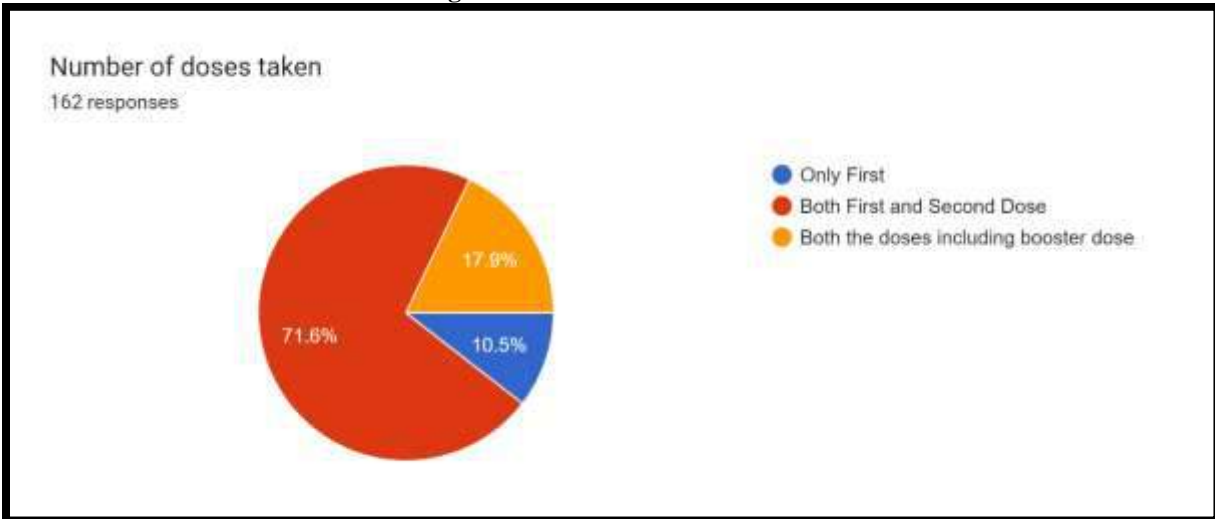


Source: Based on data collected through Google forms

Figure 5 depicts the percentage of respondents and name of vaccine which they have taken. 67% of the respondents had opted

for Covishield whereas only 32.3% of the respondents had taken covaxin.

**Figure 6: Number doses received**



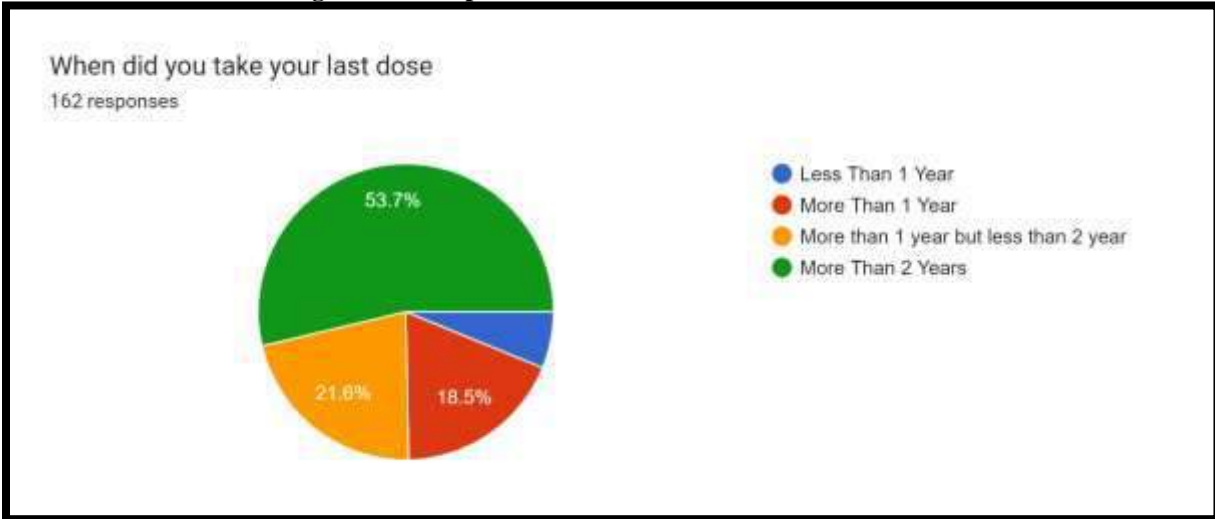
Source: Based on data collected through Google forms

Figure 6 reflects upon the number of doses of the particular vaccine received by the respondents for protection from covid-19. It is evident that 71.6% of the respondents had taken the first and the second dose whereas 17.9% of the respondents had taken first,

second as well as the booster dose and only 10.5% had taken only one dose.



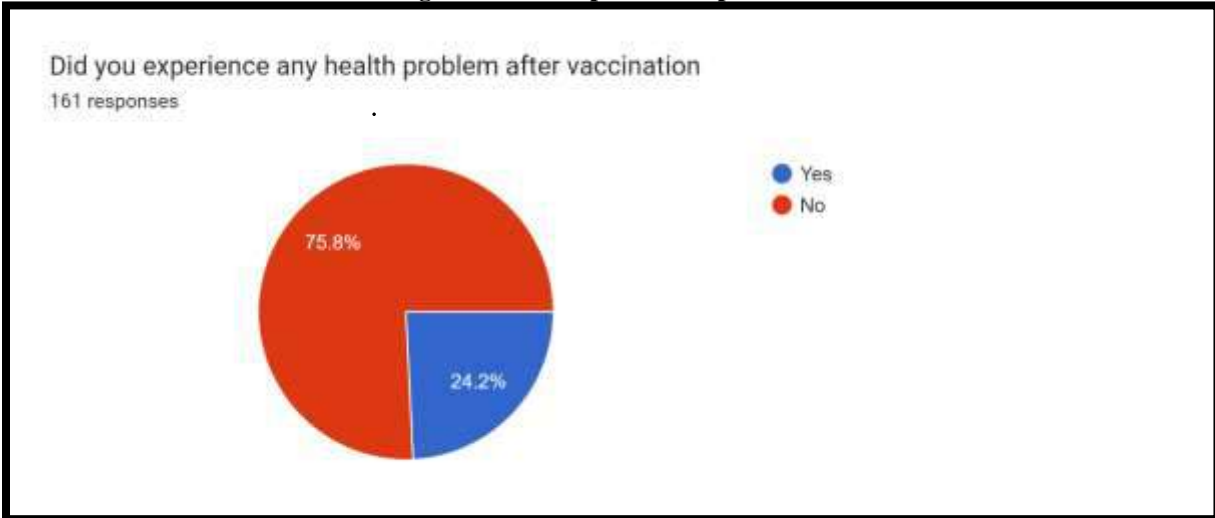
**Figure 7: Time period of the last dose of vaccine received**



Source: Based on data collected through Google forms

Figure 7 depicts when was the last dose taken by the respondents and it is clearly evident that 53.7% of the respondents took the last dose more than 2 years ago, whereas 18.5% took the last dose more than 1 year ago, 21.6% of the respondents took the last dose more than 1 year and less than 2 years ago.

**Figure 8: Health problem experienced**

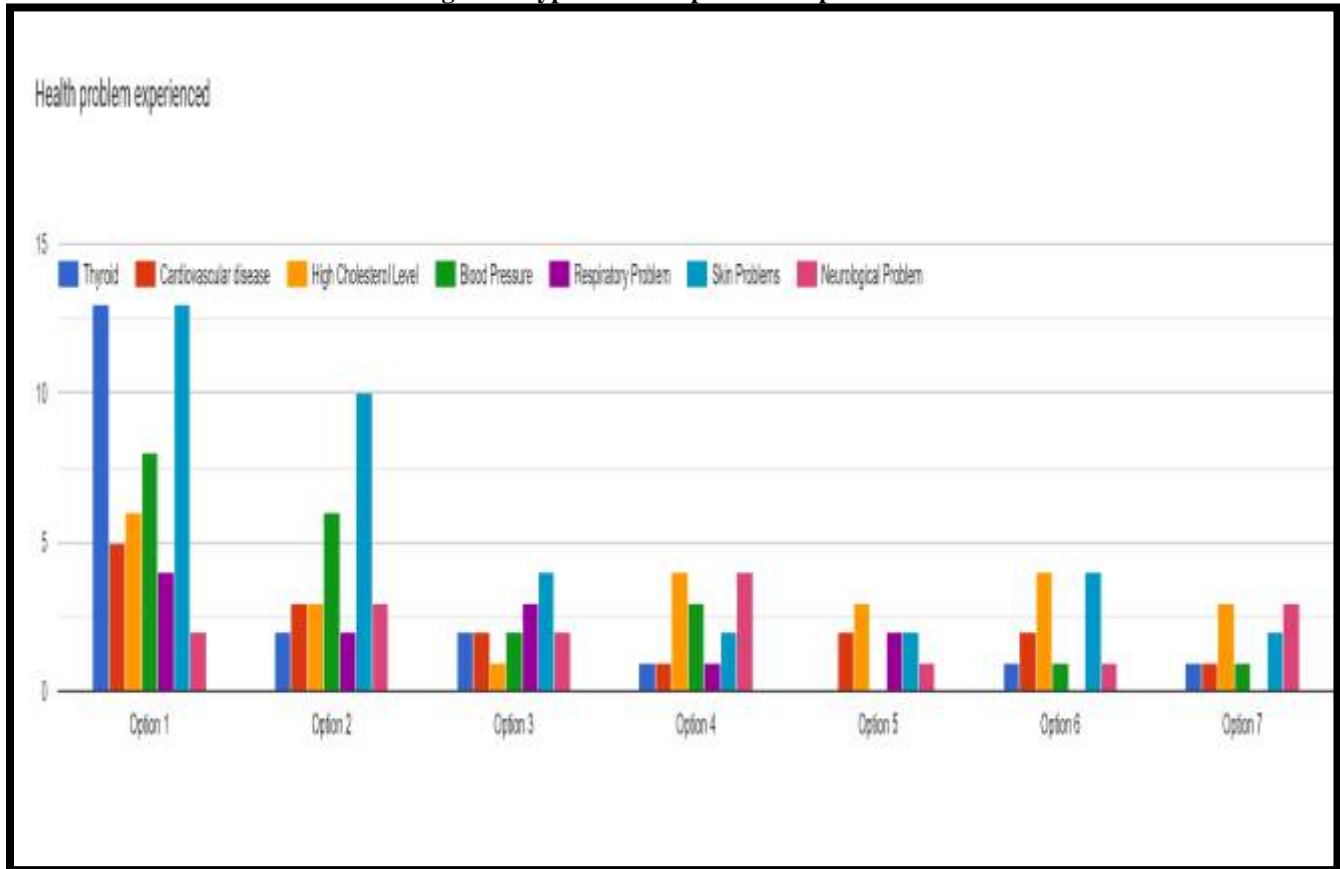


Source: Based on data collected through Google forms

The graph in figure 8 reflects the experience of the respondents regarding any health problems faced by them after the vaccination. As evident from the above graph 75.8% said that they did not experience any health problems whereas 24.2% experienced health issues after the vaccination.



**Figure 9: type of health problem experienced**

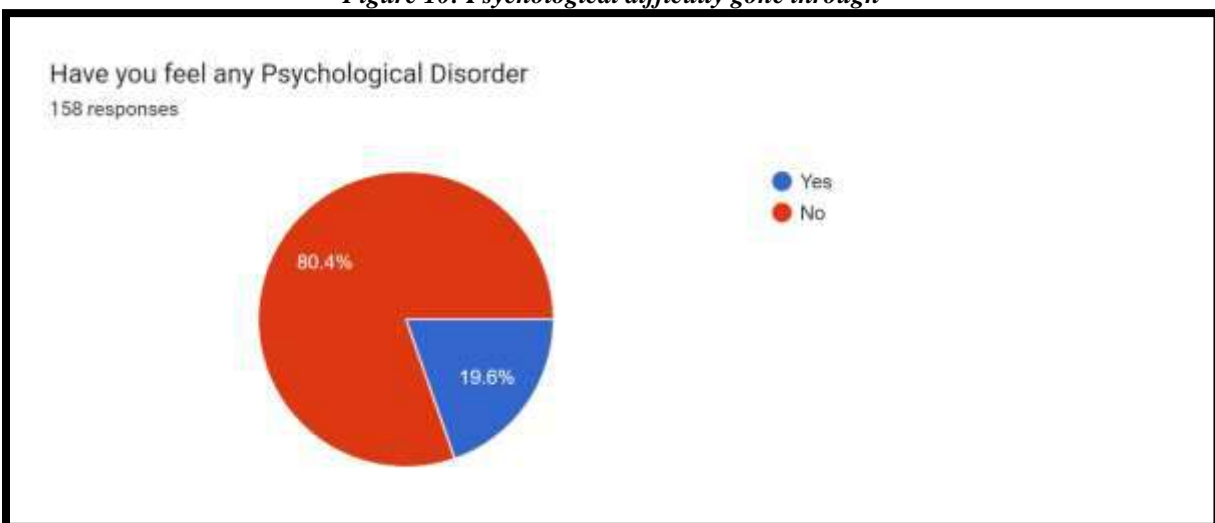


Source: Based on data collected through Google forms

Figure 9 depicts the health problems experienced by the participants after getting vaccinated for the COVID-19 virus. It is evident from the above graph that most of the respondents chose

thyroid, skin problems, and blood pressure as the most common problems being faced followed by cholesterol, neurological problems, and respiratory problems.

**Figure 10: Psychological difficulty gone through**



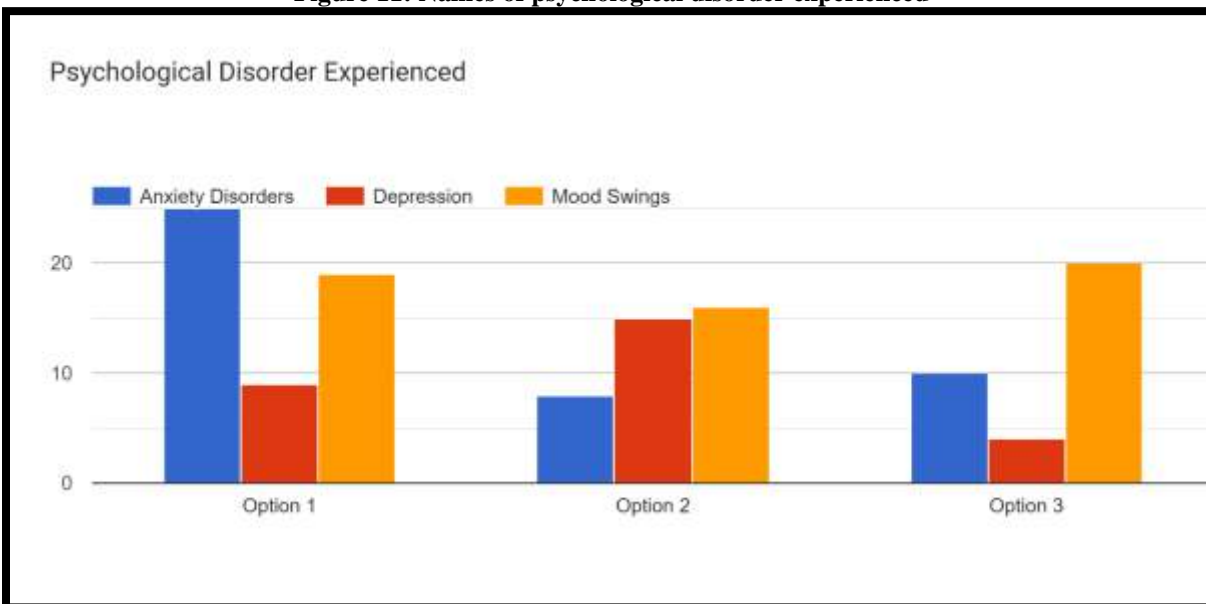
Source: Based on data collected through Google forms



The pie chart in figure 10 depicts the percentage of the respondents who believed to have gone through any type of psychological disorder after getting vaccinated. 80.4% of the

respondents denied of go through any type of psychological difficulty whereas 19.6% of the respondents claimed to have experienced psychological disorder.

**Figure 11: Names of psychological disorder experienced**

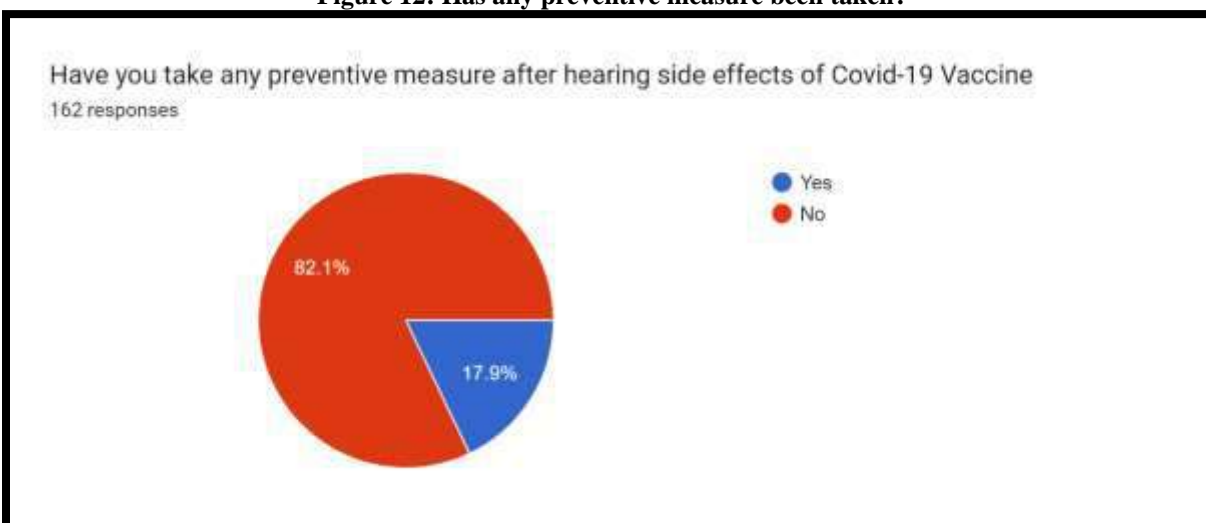


Source: Based on data collected through Google forms

Figure 12 illustrates the most common psychological disorders experienced by the respondents who claimed to have gone through psychological difficulties. Most of the respondents chose

anxiety as the first option whereas mood swings were the second and third most popular choice.

**Figure 12: Has any preventive measure been taken?**



Source: Based on data collected through Google forms

This pie chart in figure 12 shows how much percentage of the respondents took any kind of preventive measures after hearing about the side effects of the covid-1 vaccine. It shows 82.1% of

the respondents did not take any such measures whereas 17.9% of the respondents chose yes as the answer.



## CONCLUSION

- To sum up, out of the 164 participants 98.2% had taken the covid vaccine. 24.2% claimed to have gone through the side effects related to covid-19 vaccine, out of which most of the participants chose anxiety, depression, and mood swings as the psychological difficulties and thyroid, blood pressure, and high cholesterol as the physical side effects faced by them after getting vaccinated.
- It can be concluded that approximately only three-fourths of the participants experienced health issues and less than three fourth took preventive measures against them.
- But vaccines which are designed and believed to be for the betterment and protection of the mankind against different diseases is perceived to be causing side effects which may be due to the lack of proper clinical trials conducted given the lack of tie and death numbers caused by covid-19 virus.
- The sample was restricted to the adult population which left the minor and elderly out of the study.

## REFERENCE

1. Alhossan, A., Alsarhan, A. K., Almahmudi, A. H., Aljohani, Z. S., Albishi, M. R., & Almutairi, A. K. (2022). Adverse events of COVID-19 vaccination among the Saudi population: a systematic review and meta-analysis. *Vaccines*, 10(12), 2089. <https://doi.org/10.3390/vaccines10122089>.
2. Chen, J., Cai, Y., Chen, Y., Williams, A. P., Gao, Y., & Zeng, J. (2021). Nervous and muscular adverse events after COVID-19 vaccination: a systematic review and meta-analysis of clinical trials. *Vaccines*, 9(8), 939. <https://doi.org/10.3390/vaccines9080939>
3. Balasubramanian, I., Faheem, A., Padhy, S. K., Menon, V. (2022) Psychiatric adverse reactions to COVID-19 vaccines: A rapid review of published case reports. *Asian J Psychiatr*. DOI: 10.1016/j.ajp.2022.103129
4. Bilotta, C., Perrone, G., Adelfio, V., Spatola, G., Uzzo, M., Argo, A., & Zerbo, S. (2021). COVID-19 Vaccine-Related Thrombosis: A Systematic Review and Exploratory Analysis. *Frontiers in Immunology*, 12. <https://doi.org/10.3389/fimmu.2021.729251>
5. Kaur, R. J., Dutta, S., Bhardwaj, P., et al. (2021). Adverse events reported from COVID-19 vaccine trials: a systematic review. *Indian Journal of Clinical Biochemistry*, 36(4), 427-439. <https://doi.org/10.1007/s12291-021-00968-z>
6. Kaur, R. J., Dutta, S., Charan, J., et al. (2021). Cardiovascular adverse events reported from COVID-19 vaccines: a study based on WHO database. *International journal of general medicine*, 3909-3927. <https://doi.org/10.2147/IJGM.S324349>
7. Kaur et al (2021) Adverse Events Reported From COVID-19 Vaccine Trials: A Systematic Review. *Indian Journal of Clinical Biochemistry*. doi: 10.1007/s12291-021-00968-z
8. Mushtaq, H. A., Khedr, A., Koritala, T., Bartlett, B. N., Jain, N. K., & Khan, S. A. (2022). A review of adverse effects of COVID-19 vaccines. *Le infezioni in medicina*, 30(1), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8929726/>
9. Pandey et al (2021) Mental Health Issues During and After COVID-19 Vaccine Era, *Brain Research Bulletin* 161-173. DOI: 10.1016/j.brainresbull.2021.08.012
10. World Health Organization. (n.d.). COVID-19 deaths dashboard. Retrieved July 9, 2024, from <https://data.who.int/dashboards/covid19/deaths?n=c>



# A REVIEW LITERATURE ON KARSYA & IT'S MANAGEMENT WITH SANTARPANA MANTHA

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Article DOI: <https://doi.org/10.36713/epra17466>

DOI No: 10.36713/epra17466

## ABSTRACT

Undernutrition is globally considered as a major health hazards in the developing country of the world. Under nutritional status is sensitive indicator of community health and nutrition. Under nutrition which is directly known as wasting (low weight for height), stunting (low height for age), underweight (low weight for age). Karshya is the term mainly related to underweight condition of malnutrition. Due to malnutrition patients suffers from immunological deficiency and becomes more exposure to be affected with multiple diseases. A standardized study of Karshya literature and its management eradicate nutritional deficiency. Ayurveda is mainly based on preventive aspect first rather than curative. Karshya<sup>1</sup> is mentioned as Aptarpanjanya Vyadhi<sup>1</sup> in Ayurveda.

**KEYWORDS:** Undernutrition, Wasting, Stunting, Underweight, Karshya, Aptarpanjanya Vyadhi.

## INTRODUCTION

According to Acharya Charaka, over lean (Karshya) persons are considered under eight despicable persons (Ashtainditiya)<sup>1</sup> along with over obese (Medasvi) person. An over lean person (Karshya) has dried up buttocks, abdomen, neck (Shushka-sphic, Udar, Greeva)<sup>1</sup>, prominent vascular network (Dhamanjala santataha), remnant of skin and bone (Twagasthi shesho, ati krisha), and thick nodes (Sthola parva). Where as According to Acharya Shushruta, lean and fattiness of body depends upon Rasa-dhatu.<sup>[2]</sup> Karshya may be correlated with a possible condition of undernutrition or (PEM) protein energy malnutrition. Malnutrition or impaired nutrition may leads to growth retardation low resistance to infections & many other health problems. According to the WHO, malnutrition is a world wide problem, having adverse effects on the survival, health index and progress of population groups. The effects are of the highest order in the resource bound countries like India.<sup>[3]</sup>

Undernutrition is strongly associated with shorter adult height, less schooling, reduced economic productivity and for women, lower offspring birthweight. Low birthweight and undernutrition in childhood are risk factor for diabetes, hypertension, and dyslipidemia in adulthood.

## LITERARY REVIEW

### Ayurveda Literature

As far as Ayurvedic textbook is concerned, description of Karshya

(i.e. undernutrition or protein energy malnutrition) is available from the Ati - Krishta, Balshosha, Phakka Roga & Parigarbhika Roga, Shushka Rewati<sup>4</sup>. These all are from Bala Roga & Kaumarabhritya.

• Nutritional deficiency may be correlated as

1. Karshya. Balshosha - This disease is explained by Acharya Vagbhata. As the name indicate, there will be Shosha i.e., the body gets emaciated because of deterioration of subcutaneous fat and tissues.
2. Phakka Roga - Phakka-Roga is a peculiar and the only nutritional disorder or Kuposhana Janya Vyadhi described by Acharya Kashyapa. This clearly indicates that there will be persistent deterioration of general health status of the child.
3. Parigarbhika Roga - This is a different nutritional disorder mentioned in Ayurveda, which indicates the development rate of malnutrition during infancy period.
4. Shushka Rewati - This Graha disease only described by Acharya Vagbhata. In this condition, despite of taking complete or balanced food regular basis, the child is unable to gain weight and height as far as age is concerned and becomes emaciated subsequently.



## AIMS AND OBJECTIVES

1. To make the critical analysis of “ *Ashtauninditeeya Adhyaya* “ on the basis of practical approach .
2. To study the applicability of conceptual part that has been described in *Ashtauninditeeya Adhyaya* w.s.r to *Atikrusha*.
3. To study the effectiveness of application of *Santarpana Mantha* in *Atikrusha* .

## MATERIALS AND METHODS

1. Classical books of Ayurveda and Modern text books .
2. Article from journals , dissertation and another published .
3. Related sources of the data from the websites.

### **Karshya**

*Karshya* means a person who is lean and emaciated. There are a lot of factors which may lead to Emaciation ( *Karshya* ) such as *Ruksha Anna Pana Sevana* (Indulgence in rough food and drinks) , *Langhana* (Fasting) , *Pramitashana* (Little diet)<sup>5</sup>.

### **Lakshana of Karshya**<sup>5</sup>

The over lean is the person who has dried up buttocks, abdomen and neck, prominent vascular network, only remnant of skin and bone and with prominent joints.

Associated symptoms :

- *Shoka* (Grief)
- *Chinta* (Worries)
- *Bhaya* (fear)
- *Prakruti* (Constitution)
- *Beeja dosha* (heredity)
- *Jara* (Old age)

*Krodha* (Anger) make a person lean.

### **Karshya Chikitsa**<sup>5</sup>

*Karshya* is treated by *laghu Santarpana* and *Brimhana* medicine . As per mentioned by *Acharya Charak* in *Santarpaniya Adhyaya* , *Santarpana Mantha* is beneficial in the management of *Karshya* . The mechanism of action of this *Mantha* over the body is *Saptadhatu Vardhaka* with *Vrishya*. Hence the patient gets recovered gradually

### **Ingredient of Santarpana Mantha**<sup>5</sup>

*Sarkara*

*Pippali*

*Taila*

*Ghrita*

*Madhu*

*Sattu*

### **Discussion**<sup>6</sup>

*Vata vardhak Aahar Vihar* ( *Nidan Sevan* ) then it may cause vitiation of *vata* , it will lead to *Manda Agni* & ultimately *srotoavrodh* occurs . In the mean while under nourish *rasa dhatu* circulates all over the body . All *dhatu* and tissue don't get nourishment because of *Shuska Rasa dhatu* . Hence the body gets emaciated ( *Karshya* ).

## CONCLUSION

*Karshya* is nutritional disorder mentioned in *Ayurveda samhita* and it is mostly related to undernutrition. According to *Acharya Charaka Ati Karshya* persons are explained under *Ashtauninditiya* (eight despicable persons) along with over obese (*Ati Sthula*) person .Malnutrition is defined in western medical sciences but is correlated to nutritional disorder in Ayurveda like *Karshya*, *Phakka* and *Balshosha*. An organised study of these conditions provide insight in to hurdles of nutritional deficiency and represents different aspects of deficiency of nutrition and proper understanding of pathogenesis of condition provides valuable breakthrough for the effective management.

## REFERENCE

1. *Charaka Samhita Savimarsh Vidhyotani Hindivakyhopeta Pratham Bhaag* by *Kashinath Shastri & Dr Gorakhnath Chaturvedi Chaukhamba Bharti academy Varanasi*, 2014.
2. *Sushruta Samhita with Ayurveda Tatvasandeeepika part 1 Hindi commentary* by *Kaviraj Ambikadutt Shastri, Chaukhamba Sanskrit series, Varanasi edition reprint*, 2016.
3. *The short Textbook of Pediatric 12<sup>th</sup> edition* edited by *Suraj Gupte* ISBN 978-93-85891-80-9.
4. *Acharya's Text book of Kaumarbhritiya* by *Dr. Shri Nidhi Kumar Acharya, Chaukhambha Orientalia Varanasi*, 2: 62: 22.
5. *Charaka Samhita Savimarsh Vidhyotani Hindivakyhopeta Pratham Bhaag* by *Kashinath Shastri & Dr Gorakhnath Chaturvedi Chaukhamba Bharti academy Varanasi*, 2014.
6. *Review on Karshya (Nutritional disorder in Ayurveda) and Malnutrition*, Authors:- *Pravin Masram, Virendra Kumar Kori, Ks Patel, Rajagopala Shrikrishna*, Article date, 7 june 2015.





# MATHEMATICAL BELIEFS, ENGAGEMENT, AND PROBLEM-SOLVING SKILLS OF GRADE 9 STUDENTS

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Article DOI: <https://doi.org/10.36713/epra17795>

DOI No: 10.36713/epra17795

## ABSTRACT

The purpose of this quantitative study, which used descriptive and correlational designs, was to investigate the mediating effect of student engagement on the relationship between mathematical beliefs and problem-solving skills in Mathematics among students. One hundred thirty-eight Grade 9 students from four public secondary schools in Davao del Norte Division, School Year 2023-2024, were selected as respondents using stratified random sampling. This study used two adapted survey questionnaires to determine students' mathematical beliefs and engagement and a validated researcher-made test to assess their problem-solving skills in mathematics. Mean and Pearson-r were used to calculate numerical data. The results of this study revealed that the level of mathematical beliefs and engagement of the students is high. Additionally, the level of student's problem-solving skills in terms of test scores is average. Moreover, there is a significant relationship between mathematical beliefs and student engagement. However, results showed no significant relationship between mathematical beliefs and students' problem-solving skills. Further, mediation analysis was initially intended to be conducted as a part of the study; however, it was not executed since the conditions were not met. Additionally, future researchers may utilize the findings to analyze the study's variables and look into other variables or characteristics that mediate the relationship between mathematical beliefs and problem-solving abilities.

**KEYWORDS:** problem-solving skills, mathematical beliefs, student engagement, grade 9 students, descriptive-correlational approach, Pearson-r, Kapalong, Davao del Norte, Philippines

## INTRODUCTION

Problem-solving is one of the most basic ways that humans think and learn. It is one of the 21st-century skills. It is a necessary mathematical ability that students studying mathematics should acquire. The capacity to answer problems is crucial as it teaches students how to use their mathematics understanding and skills to solve problems. However, students struggle in the test when it comes to word problem-solving problems, they find it difficult to understand the problems which makes them unable to complete math problems (Ali, 2019). Moreover, as Novriani and Surya (2017) mentioned, the student's problem-solving skills are so poor that they constitute a big issue in school. Most students struggle to answer mathematical issues at all educational levels, from basic to secondary to unexpectedly high schooling (Ziegler & Loos, 2017).

In the recent PISA result, 47% of students from participating countries could not solve mathematics problems that required more than direct inference and the use of representations from diverse data sources (OECD, 2019). PISA employs practical problems requiring quantitative thinking, spatial reasoning, and problem-solving abilities. Moreover, according to Andrade et al. (2020), most of the items in the mathematics subtest in PISA involve problem-solving, which means that students have poor performance in solving word problems. Additionally, in the study

conducted in Indonesia by Emanuel et al. (2021), one of the findings shows that students cannot solve the problem because they have difficulty translating it from verbal problems to mathematical models.

Further, in the study conducted by Alvi and Nausheen (2019), observations show that grade 9 students in Pakistan are having difficulty understanding mathematical problems due to a lack of knowledge of mathematical concepts and the relevance of information, resulting to poor performance on items requiring complex cognitive abilities such as problem-solving in the national assessment.

In the Philippines, according to the TIMSS result, as cited by Ambasa et al. (2022), Filipino students had difficulties solving mathematics problems. According to the findings of a research done by Dela Cruz and Lapinid (2019), 40% of the respondents do not meet the required level of mathematical problem analysis owing to difficulties in understanding, interpreting, and evaluating. The PISA results revealed that students scored 353 points in Mathematics, which was classified as below Level 1 proficiency (Ciriaco, 2019). Further, in the 2018 result of the National Achievement Test in Region II, the Mean Percentage Score (MPS) in terms of problem-solving in mathematics of



Grade 10 students is 39.95, which shows a very low result (Cariño, 2019).

Moreover, in a public secondary school in the Davao del Norte Division, most of the grade 9 students show low mathematical problem-solving skills. From the records of the Mathematics Coordinator on the student's level of proficiency in the school year 2020-2021, it has been found that the average proficiency of the students is 68.7% on problem-solving questions which is below the average. This prompted the mathematics teachers to do remediation for failing and low-performing students.

It was all of these that prompted the researcher to study the mediating effect of engagement on the relationship between students' mathematical beliefs and their problem-solving skills. The results of this research will be crucial for students, particularly during the shift from modular instruction back to in-person sessions. The function of beliefs in mathematics and involvement is crucial in enhancing problem-solving abilities in the field of mathematics. Furthermore, educators may also use this research to develop novel approaches to tackle the obstacles of education in the 21st century.

## OBJECTIVES

The objective of this research is to determine if student engagement has a significant impact in mediating the relationship between mathematical beliefs and problem-solving skills in mathematics among students in the division of Davao del Norte for the academic year 2023-2024. Specifically, this study aimed to answer the following questions:

1. What is the level of mathematical beliefs in terms of role and function of the teacher, significance and competence in mathematics, mathematics as a social activity, and mathematics as a domain of excellence?
2. What is the level of problem-solving skills of students in terms of understanding the problem, devising a plan, carrying out the plan, and looking back?
3. What is the level of student engagement in terms of cognitive engagement, emotional engagement, social engagement, and behavioral engagement?
4. Is there a significant relationship between (a) mathematical beliefs and problem-solving skills, (b) student engagement and problem-solving skills, and (c) mathematical beliefs and student engagement?
5. Does student engagement significantly mediate the relationship between mathematical beliefs and problem-solving skills of students?

## METHODOLOGY

### Research Design

This study employed quantitative research methods, namely descriptive and correlational approaches. This research used quantitative methods to collect numerical data and analyze it using mathematical techniques (Creswell, 2014). Additionally, according to Bhandari (2022), quantitative research is a methodical approach that is employed to identify patterns and averages, make predictions, assess cause-and-effect connections, and draw conclusions that may be applied to larger populations.

Moreover, according to Fleetwood's (2023) definition, quantitative research refers to the methodical investigation of phenomena by the gathering of measurable data and the analysis of that data using statistical techniques.

Moreover, this study used a descriptive type of research. According to Bhat (2023), a descriptive study is one that defines the characteristics of the population or issue under investigation. Further, it is designed to explore one or more variables, which includes observing and measuring data (McCombes, 2022). Furthermore, according to Seyß (2022), the primary objective is to provide responses to inquiries pertaining to the manner in which the incident took place, the temporal and spatial dimensions of its occurrence, and the nature of the subject matter or occurrence.

Additionally, correlational research was utilized to determine relationships between two or more variables without any intervention (Bhandari, 2022). Further, Cherry (2023) added that it is designed to explore and characterize relationships and then make predictions. This type of research involves the examination of variables and the evaluation of their statistical correlation by the researcher (Chiang et al., 2018).

The researcher used a descriptive research design to describe the variables involved in this study, namely, student engagement, students' mathematics beliefs, and mathematical problem-solving skills. Also, to investigate and evaluate the associations between the variables in this study, the researcher employed a correlational research design. Furthermore, this study used mediating analysis to determine the linking effect of the mediating variable (student engagement) on the relationship between the independent variable (students' mathematical beliefs) and the dependent variable (students' mathematical problem-solving skills).

### Sampling Design

To ascertain the appropriate sample size, this study employed stratified random sampling. When collecting data from a population that lacks homogeneity within its groups, it is appropriate to employ stratified sampling as a means of selecting a representative sample (Etikan & Bala, 2017). The respondents of the research consisted of Grade 9 students of four public schools within the Kapalong District of the Division of Davao del Norte in the academic year of 2023-2024. The total population of grade 9 students in the four selected schools is 213. Specifically, the student population of school A is 40, school B is 62, school C is 71, and school D is 40. Further, to determine the samples in each stratum, the researcher utilized simple random sampling. To choose the respondents, a random name generator is used. To get the sample size, the researcher utilized the Online Raosoft Sample Size Calculator, with a marginal error of 0.05 and a confidence level of 95%. From a total population of 213 students, the study used a sample size of 138 students across four selected schools. School A has a selection of 26 students, School B has 40 students, School C has 46 students, and School D has 26 students.



## Research Instrument

This study employed two modified research instruments and one test developed by the researcher. The instruments were selected purposefully based on the study's focus.

The Math and Science Engagement Scales (2016) was developed by Wang et al. (2016) to assess student engagement: cognitive engagement, emotional engagement, social engagement, and behavioral engagement.

The Mathematics-Related Beliefs Questionnaire (MRBQ) was developed by Eynde and De Corte (2018) to assess role and function of the teacher, significance and competence in mathematics, mathematics as a social activity, and mathematics as a domain of excellence.

The Researcher-made Test (RMT) was used to measure the level of students' problem-solving skills in Mathematics. Moreover, the test was a free-response type of test. The student's answers were evaluated using an analytic rubric adopted from the study of Salazar-Torres et al. (2021) measuring each indicator from 1-5. The questionnaire comprised five (5) word problems.

## Statistical Design

The data was computed and the hypotheses were tested at the alpha 0.05 level of significance using the following statistical tools.

**Mean.** Also known as the arithmetic mean, a descriptive statistic, was used to measure the level of each variable. This was used to determine the level of student engagement, mathematical beliefs, and problem-solving skills. Specifically, this was used to answer research questions 1, 2, and 3.

**Standard Deviation.** A measure of variability that measures the extent to which data points in a collection deviate from the mean. This statistical instrument was implemented to ascertain the extent to which the data deviated from the mean.

**Pearson Product Moment Correlation.** Also referred to as the Pearson  $r$ , this metric is frequently employed to evaluate correlation. This was employed to ascertain whether there was a substantial correlation between mathematical beliefs and problem-solving skills, student engagement and problem-solving skills, and mathematical beliefs and student engagement. This was used to answer the research questions in item 4.

## RESULTS

1. Out of the four indicators in determining the level of mathematical beliefs of students in Grade 9, the role and function of a teacher has the highest mean of 4.10, indicating that the mathematical beliefs of students are highly observed. The standard deviation (SD) is 0.85 and is considered high based on the parameter. Mathematics as a domain of excellence has a mean of 3.86 and an SD of 0.779, indicating that students' mathematical beliefs are highly observed. Mathematics as a social activity has a mean of 3.81 and an SD of 0.797, indicating that the mathematical beliefs of students are highly observed. The significance and competence in mathematics indicator had the lowest mean score of 3.79 and a standard deviation of 0.759, indicating that the mathematical beliefs of students are highly observed. The category mean of this variable is 3.86, indicating that mathematical beliefs among students are highly observed.

2. Out of the four variables used to measure student engagement, social engagement had the lowest average score of 3.86 and a standard deviation of 0.788, which is considered high based on the parameter. The highest mean was achieved in cognitive engagement, with a mean score of 4.01 and a standard deviation of 0.579, indicating a high level of engagement. This was followed by emotional engagement, which had a mean score of 3.94 and a standard deviation of 0.826, also indicating a high level of engagement. Behavioral engagement had a mean score of 3.90 and a standard deviation of 0.788, also indicating a high level of engagement. The category mean of this variable is 3.96, indicating that the level of student engagement is highly manifested.
3. Out of the four steps used to assess students' problem-solving skills, the highest mean score of 61.36, with a standard deviation of 29.311, was obtained for Devise a plan. This indicates a high level of proficiency. Understand the problem had a mean score of 59.67 and a standard deviation of 29.512. Carry out the plan had a mean score of 54.32 and a standard deviation of 24.414. Look back had the lowest mean score of 48.86, with a standard deviation of 25.050, indicating an average level of proficiency. The category mean of problem-solving skills of students in Mathematics is 56.05, with a standard deviation of 26.646. This indicates that problem-solving skills in Mathematics is moderate.
4. The results of this study indicate a weak positive association between mathematical beliefs and problem-solving skills ( $r$ -value of 0.124), as well as a connection between student engagement and problem-solving skills ( $r$ -value of 0.018). Nevertheless, the null hypothesis was not rejected in both instances due to the fact that the  $p$ -values (0.072 and 0.342) above the significance threshold of 0.05. The research revealed a significant relationship between mathematical beliefs and student engagement, with a correlation coefficient ( $r$ -value) of 0.652. Furthermore, the null hypothesis was rejected, as shown by a  $p$ -value of 0.000.
5. The relationship between mathematical beliefs and the problem-solving skills of students is not significantly mediated by student engagement.

## SUGGESTIONS

Teachers are encouraged to design lesson plans implementing creative strategies such as technology integration, project-based learning, and gamification that integrate problem-solving skills that require students to apply problem-solving skills in real-world scenarios. Teachers are suggested to cultivate positive mathematical beliefs among students by creating a supportive and encouraging learning environment. Additionally, teachers can offer constructive feedback and support to help students build confidence in their mathematical abilities. Teachers are advised to promote positive teacher-student relationships by focusing on building trust, encouraging communication, and creating a positive learning environment. Parents are also motivated to be involved in the education of students by promoting a growth mindset, providing support and resources at home, and fostering



positive engagement with math can help improve their child's mathematical beliefs and set them up for success in their mathematical journey. Future researchers may use the results of this study to investigate other factors. Additional studies should investigate other factors or qualities that may mediate the relationship between mathematical beliefs and problem-solving skills.

### CONCLUSION

The level of mathematical belief of grade 9 students is high. The level of student's problem-solving skills in terms of test scores is

### FIGURES

average. The level of student engagement of grade 9 students is high. There is no significant relationship between mathematical beliefs and the problem-solving skills of students. Also, there is no significant relationship between student engagement and problem-solving skills. Lastly, there is a significant relationship between mathematical beliefs and student engagement. Student engagement does not significantly mediate the relationship between mathematical beliefs and the problem-solving skills of students.

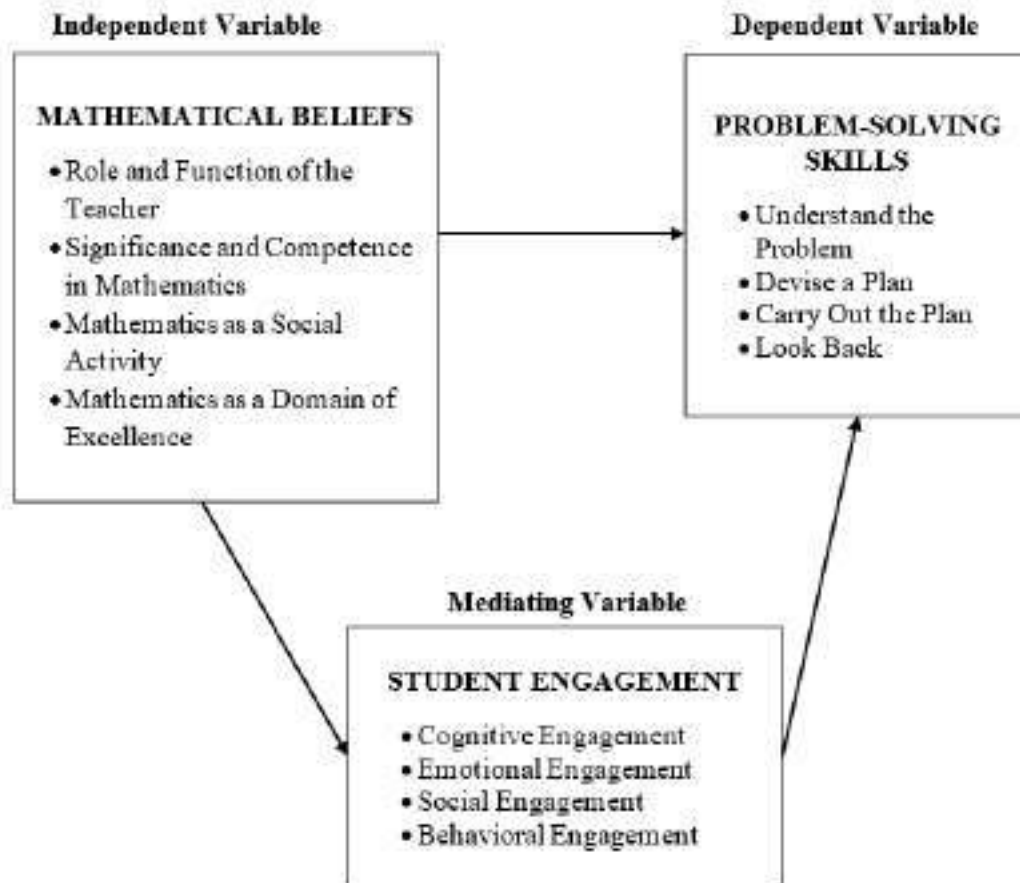
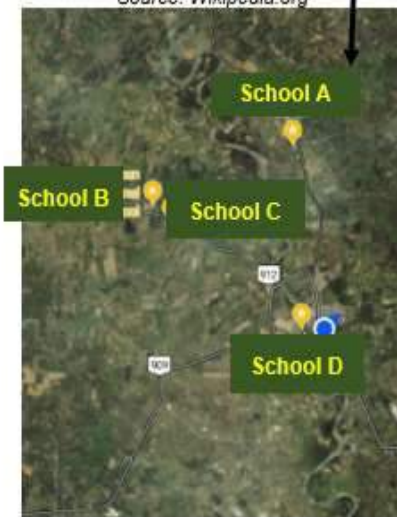


Figure 1. Conceptual Framework of the Study





Source: Wikipedia.org



Source: <https://www.google.com/maps/>

**Figure 2. Local Map of Davao del Norte**

**TABLES**

**Table 1. Summary of the Level of Mathematical Belief**

Indicators	Mean	SD	Description
Role and Function of a Teacher	4.10	0.85	High
Significance and Competence in Mathematics	3.79	0.76	High
Mathematics as a Social Activity	3.81	0.80	High
Mathematics as a Domain of Excellence	3.86	0.78	High
Category Mean	3.86	0.72	High



**Table 2. Level of Problem-solving Skills of Students**

Indicator	Mean	SD	Description
Understand the Problem	59.67	29.51	Moderate
Devise a Plan	61.36	29.31	High
Carry Out the Plan	54.32	24.41	Moderate
Look Back	48.86	25.05	Moderate
Category Mean	56.05	26.65	Average

**Table 3. Summary of the Level of Student Engagement**

Indicators	Mean	SD	Description
Cognitive Engagement	4.01	0.58	High
Emotional Engagement	3.94	0.83	High
Social Engagement	3.86	0.79	High
Behavioral Engagement	3.90	0.84	High
Category Mean	3.96	0.74	High

**Table 4. Significance of the Relationship Between Variables**

Variables Correlated	r	p-value	Decision on H <sub>0</sub>	Decision on Relationship
Mathematical Beliefs & Problem-Solving Skills	0.124	.072	Not Rejected	Not Significant
Student Engagement & Problem-Solving Skills	0.018	.342	Not Rejected	Not Significant
Mathematical Beliefs & Student Engagement	0.652	.000	Reject	Significant

**REFERENCES**

- Ali, A. (2019). *Why students find difficulty in math's problem solving*. Medium. <https://medium.com/@iranaahsanali/why-students-find-difficulty-in-maths-problem-solving-69ef827807d10>
- Alvi, E., & Nausheen, M. (2019). *Examining Grade 9 Students' Engagement in Mathematical Problem-Solving (MPS) When Working as Individuals and in a Small Group Settings*. *Bulletin of Education and Research*, 41(1), 163–184. <http://files.eric.ed.gov/fulltext/EJ1217919.pdf>
- Ambasa, R., & Tan, D. A. (2022). *Student Mathematics Performance and Problem-Solving Skills in an Experiential Learning Environment*. ResearchGate. [https://www.researchgate.net/publication/360148973\\_Student\\_Mathematics\\_Performance\\_and\\_Problem-Solving\\_Skills\\_in\\_an\\_Experiential\\_Learning\\_Environment](https://www.researchgate.net/publication/360148973_Student_Mathematics_Performance_and_Problem-Solving_Skills_in_an_Experiential_Learning_Environment)
- Andrade, R. R., Fortes, E. C., & Mabilangan, R. A. (2020). *Problem Solving Heuristics and Mathematical Abilities of Heterogeneous Learners*. *Universal Journal of Educational Research*, 8(11), 5114–5126. <https://doi.org/10.13189/ujer.2020.081112>
- Bakar, S. A., Ayub, A. F. M., Gopal, K., & Salim, N. R. (2019b). *The Influence of Students' Beliefs on Mathematical Problem Solving towards Mathematics Achievement among Malaysian Matriculation Students*. *Universal Journal of Educational Research*, 7(10), 2243–2247. <https://doi.org/10.13189/ujer.2019.071026>
- Bhandari, P. (2023, June 22). *Correlational Research | When & How to Use*. Scribbr. <https://www.scribbr.com/methodology/correlational-research/>
- Bhat, A. (2023). *Descriptive Research: Definition, Characteristics, Methods + Examples*. Question Pro. <https://www.questionpro.com/blog/descriptive-research/>
- Cambaya, E. J. D., & Tan, D. A. (2022). *Enhancing Students' Problem-Solving Skills and Engagement in Mathematics Learning Through Contextualized Instruction*. In *Sci. Int. (Lahore)* (Vol. 34, Issue 2, pp. 101–109). <https://N/A>
- Cariño. (2019). *2018 National Achievement Test (NAT) 6, 10, & 12 Results and Analysis*. <https://region2.deped.gov.ph/wp-content/uploads/2019/05/2018-NATIONAL-ACHIEVEMENT-TEST-NAT-610-12-RESULTS-AND-ANALYSIS-.pdf>
- Cherry, K. (2023). *Correlation Studies in Psychology Research*. Verywell Mind. <https://www.verywellmind.com/correlational-research-2795774>
- Chiang, I. C. A., Jhangiani, R. S., & Price, P. C. (2015, October 13). *Correlational Research*. Pressbooks. <https://opentextbc.ca/researchmethods/chapter/correlational-research/>
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Inc. [https://www.ucg.ac.me/skladiste/blog\\_609332/objava\\_105202/fajlovi/Creswell.pdf](https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf)
- Dela Cruz, J. K. B., & Lapinid, M. R. C. (2014). *Students' Difficulties in Translating Worded Problems into Mathematical Symbols*. In *DLSU Research Congress 2014*.



14. Emanuel, E. P. L., Kirana, A., & Chamidah, A. (2021). Enhancing students' ability to solve word problems in Mathematics. *Journal of Physics. Conference Series*, 1832(1), 012056. <https://doi.org/10.1088/1742-6596/1832/1/012056>
15. Fleetwood, D. (2023). *Quantitative Research: What It Is, Practices & Methods*. Question Pro. <https://www.questionpro.com/blog/quantitative-research/>
16. McCombes, S. (2022). *Descriptive Research | Definition, Types, Methods & Examples*. Scribbr. <https://www.scribbr.com/methodology/descriptive-research/>
17. National Council of Teachers of Mathematics (2014). *Principles To Actions: Ensuring Mathematical Success for All*. NCTM
18. Ng, C., Bartlett, B., & Elliott, S. N. (2018). Empowering Engagement. In Springer eBooks. <https://doi.org/10.1007/978-3-319-94652-8>
19. Novriani, Milda Rizky and Surya, Edy (2017) Analysis of Student Difficulties in Mathematics Problem Solving Ability.MTS Swasta Ira Medan. *International Journal of Sciences : Basic and Applied Research (IJSBAR)*, 33 (03). pp. 63-75. ISSN 2307-4531
20. OECD (2019) ,PISA 2018 Results (Volume I). (2019). In Programme for international student assessment/InternationaleSchulleistungsstudie. <https://doi.org/10.1787/5f07c754-en>
21. Op't Eynde, P., & De Corte, E. (2003). Students' Mathematics-Related Belief Systems: Design and Analysis of a Questionnaire. <https://eric.ed.gov/?id=ED475708>
22. Salazar-Torres, J., Leal, O. R., & Ortega, M. V. (2021). The rubric as an assessment tool for solving problem situations in the physics and mathematics teaching context. *Journal of Physics. Conference Series*, 1981(1), 012018. <https://doi.org/10.1088/1742-6596/1981/1/012018>
23. Seyß, P. (2022, August 31). *Descriptive Research - Definition & Methods*. Bachelor Print. <https://www.bachelorprint.eu/methodology/descriptive-research/>
24. Sturm, N., & Bohndick, C. (2021). The Influence of Attitudes and Beliefs on Problem-Solving Performance. *Frontiers in Education*, 6. <https://doi.org/10.3389/educ.2021.525923>
25. Wang, M. T., Fredricks, J. A., Ye, F., Hofkens, T. L., & Linn, J. S. (2016). The Math and Science Engagement Scales: Scale development, validation, and psychometric properties. *Learning and Instruction*, 43, 16–26. <https://doi.org/10.1016/j.learninstruc.2016.01.008>
26. Yuanita, P., Zulnaidi, H., & Zakaria, E. (2018). The effectiveness of Realistic Mathematics Education approach: The role of mathematical representation as mediator between mathematical belief and problem solving. *PloS One*, 13(9), e0204847. <https://doi.org/10.1371/journal.pone.0204847>
27. Zhao, Y., Lin, S., Liu, J., Zhang, J., & Yu, Q. (2021). Learning contextual factors, student engagement, and problem-solving skills: A Chinese perspective. *Social Behavior and Personality*, 49(2), 1–18. <https://doi.org/10.2224/sbp.9796>
28. Ziegler, G. M., & Loos, A. (2017). "What is Mathematics?" and why we should ask, where one should experience and learn that, and how to teach it. In *ICME-13 monographs* (pp. 63–77). [https://doi.org/10.1007/978-3-319-62597-3\\_5](https://doi.org/10.1007/978-3-319-62597-3_5)



# FACTORS INFLUENCING PARAPHILIA DEVELOPMENT: A REVIEW OF CURRENT METHODOLOGIES AND ASSESSMENT TOOLS – REVIEW ARTICLE

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Article DOI: <https://doi.org/10.36713/epra17804>

DOI No: 10.36713/epra17804

## ABSTRACT

This review addresses the role of childhood experiences in the development of paraphilias, a topic insufficiently explored in current research. It proposes the examination of the influence of attachment styles and boundary-setting with parents and caregivers on the onset of paraphilic behaviors, as highlighted in the Diagnostic and Statistical Manual of Mental Disorders (DSM). By broadening the scope of research on the etiology of paraphilias, this review aims to identify a wider range of causal factors, ultimately aiding in the creation of more accurate treatment plans. Key studies reviewed include "Childhood Abuse and Sadomasochism" by Abrams et al. (2022) and "The Impact of Childhood Trauma, Personality, and Sexuality on the Development of Paraphilias" by Longpré et al. (2022).

**KEYWORDS:** Paraphilias, DSM, Childhood abuse, Parenting styles, Boundaries

## 1. INTRODUCTION

### 1.1 Paraphilias

According to the DSM, paraphilias are defined as "any intense and persistent sexual interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners." Paraphilic behaviors often involve inanimate objects, humiliation or suffering of oneself or others, or non-consenting individuals, such as children. These interests become paraphilic disorders when they cause distress or harm to the individual or others (Butcher, Hooley, & Mineka, 2013).

### 1.2 Types of Paraphilias

The DSM categorizes several types of paraphilias, including:

**Fetishism** - The recurrent and intense sexual fantasies, urges and behaviors are towards a part of the body that is usually not sexual or erotic in nature, or a non-human object.

**Transvestic Fetishism** - The intense fantasies and urges include cross-dressing as females, usually showing form during adolescent stages.

**Voyeurism** - The fantasies and urges include the observation of unsuspecting or unaware individuals who are undressing or of couples engaging in sexual actions.

**Exhibitionism** - The urges and behaviors include exhibiting genital areas to individuals without their consent in situations that are not appropriate.

**Frotteurism** - The behaviors and urges include rubbing one's genitals against a non-consenting individual.

**Sexual Sadism** - The urges and recurrent, intense fantasies involve inflicting or causing physical or psychological harm towards an individual.

**Sexual Masochism** - The urges, sexual arousing fantasies involve being humiliated, beaten, bound and made to suffer.

**Pedophilia** - The urges and arousing fantasies involve being sexually engaged with a prepubescent child.

This review promotes the exploration of the etiology of paraphilias, emphasizing the need to investigate various childhood experiences and their influence on these behaviors.

### 1.3 Causes of Paraphilia

Researchers consider multiple perspectives to explain the development of paraphilias. Biological perspectives suggest that paraphilias may be linked to imbalances in neurotransmitters such as norepinephrine and serotonin, and decreased levels of dihydroxyphenylacetic acid. Psychodynamic perspectives, on the other hand, propose that neglectful parenting and adverse childhood experiences may contribute to the onset of paraphilias.

### 1.4 Treatment Options for Paraphilic Disorders

Treatment options for paraphilic disorders include both medication and psychotherapy. Anti-androgen treatments, which reduce testosterone levels, can decrease sexual drive. Selective





serotonin reuptake inhibitors (SSRIs) are also commonly used. Psychotherapy, particularly cognitive-behavioral therapy (CBT), has been recommended for paraphilic disorders as it addresses faulty cognitions, restructures thought processes, and facilitates behavioral changes.

## 2. METHODOLOGICAL PATHWAYS TO STUDY PARAPHILIA DEVELOPMENT: ADDITIONAL AREAS TO CONSIDER

To understand the development of paraphilias, research has extensively examined childhood experiences, particularly abuse. Factors such as emotional, sexual, and physical abuse, as well as parental violence and dysfunctional relationships, have been significant. Various analytical methods have been employed to study these associations. For instance, factor analysis has been used to study the influence of psychological, physical, and sexual abuse on sadomasochistic tendencies (Abrams et al., 2022). Frequency and mediation analysis have investigated the impact of abuse on atypical sexual interests (Longpré et al., 2022). Logistic regression analysis has explored predictors of childhood maltreatment and paraphilic interests (Marx et al., 2020).

Hierarchical regression has assessed associations between psychological abuse by male caregivers and problematic sexual outcomes in males (Davis et al., 2019). Additionally, chi-square analysis has examined links between childhood sexual victimization and paraphilic and sexually offending behaviors (Leroux et al., 2020).

These diverse methodologies reflect the complexity of paraphilias and enable a deeper understanding of their development.

Since the etiology of paraphilia development finds its roots from experiences of abuse during childhood, more qualitative research that includes extensive interviewing procedures, along with the integration of free association, a technique used under psychoanalysis can help researchers gain greater insights into childhood experiences and triggering events.

Cultural factors are heavily emphasized due to their roles in shaping one's beliefs. These factors can further influence the beliefs on sexual dynamics and orientation, hence leading to diverse representations of paraphilia conditions, offering researchers with more parameters to consider while studying about the onset of paraphilic disorders.

More research can be facilitated in the areas of sexual media and its role in influencing belief systems pertaining to sexual preferences and orientation, hence providing a wider range of possible factors to look into while researching these conditions.

## 3. ASSESSMENT TOOLS: THE NEED TO MEASURE AND ASSESS WIDER PARAMETERS

Various tools have been employed in research to assess factors contributing to the development of paraphilias. Longpré et al.

(2022) used childhood trauma questionnaires to study the impact of childhood abuse and neglect on the development of atypical sexual interests. Antecedent reviewing, self-report questionnaires, and family history consideration have been used to study genetic transmissions of paraphilias (Labelle et al., 2012). Masochism and sadomasochism scales have been employed to assess the influence of abuse on sadomasochistic tendencies, with results indicating that sexual abuse is most associated with heavy masochism and psychological abuse with light masochism (Abrams et al., 2022). Multidimensional assessments of sex and aggression inventories have examined the impact of male caregiver psychological abuse on problematic sexual outcomes (Davis et al., 2019). Clinical interviews and risk assessments have explored links between childhood sexual victimization and sexually offending interests (Leroux et al., 2020).

These tools provide valuable insights into the risk factors and experiences of individuals with paraphilias. However, a variety of tools can be used in research to assess and extract information while taking other factors into consideration such as attachment styles, and types of boundaries shared with parents and caregivers during childhood.

These dimensions allow access to viewing childhood experiences through various lenses that could help researchers in determining the probability of specific attachment styles and boundary types influencing the onset of paraphilias.

## 4. CONCLUSION

This review underscores the need to integrate additional dimensions into the study of the etiological and risk factors associated with the development of paraphilias. Emphasizing the types of boundaries shared with parents and guardians (clear, enmeshed, rigid) and attachment styles (anxious, avoidant) could enhance the precision and depth of research, facilitating a more comprehensive exploration of the parameters that contribute to paraphilic development.

Incorporating cultural factors and the influence of media could further broaden the understanding of the causes of paraphilias by considering a diverse array of life domains. This holistic approach can significantly enhance the scope of research, providing a more thorough understanding of the development of these sexual concerns.

The review also highlights the diverse analytical tools and procedures employed in existing research, ranging from factor analysis to frequency and mediation analysis.

These methodologies reflect the complexity of understanding the various associations between potential causal factors and their influence on paraphilias. Furthermore, examining personality traits and their role in the development of these sexual behaviors could be particularly valuable, given the high comorbidity of paraphilic disorders with various personality disorders.



In conclusion, advancing research in these areas could lead to a more nuanced and multidimensional understanding of paraphilias, ultimately aiding in the development of more effective and tailored treatment interventions.

## 5. REFERENCES

1. Abrams, M., Chronos, A., & Grdinic, M. M. (2022). "Childhood abuse and sadomasochism: New insights". *Sexologies*, 31(3), 240-259.
2. Longpré, N., Galiano, C. B., & Guay, J. P. (2022). "The impact of childhood trauma, personality, and sexuality on the development of paraphilias." *Journal of Criminal Justice*, 82, 101981.
3. Butcher, J. N., Hooley, J. M., & Mineka, S. (2013). *Abnormal Psychology* (16th ed.). Pearson.
4. Ohwovoriole, T. (2022, November 24). "Signs and symptoms of paraphilic disorders". *Verywell Mind*. <https://www.verywellmind.com/what-are-paraphilic-disorders-6822839>
5. Marx, C. M., Tibubos, A. N., Brähler, E., & Beutel, M. E. (2020). "Experienced Childhood Maltreatment in a Sample of Pedophiles: Comparisons With Patients of a Psychosomatic Outpatient Clinic and the General Population". *The journal of sexual medicine*, 17(5), 985-993.
6. Davis, K. A., & Knight, R. A. (2019). "Childhood maltreatment experiences and problematic sexual outcomes in adult males who have sexually offended: Further evidence of the potency of male caregiver psychological abuse". *Child abuse & neglect*, 96, 104097.
7. Leroux, E. J., Clow, K. A., Motayne, G., & Seto, M. C. (2020). "The association of childhood sexual abuse with non-paraphilic and paraphilic sexual behaviors among adolescents who have sexually offended." *The Journal of Sex Research*, 57(9), 1189-1201.
8. Labelle, A., Bourget, D., Bradford, J. M., Alda, M., & Tessier, P. (2012). "Familial paraphilia: A pilot study with the construction of genograms." *International Scholarly Research Notices*, 2012.
9. Yakeley, J., & Wood, H. (2014). *Paraphilias and paraphilic disorders: Diagnosis, assessment and management.* *Advances in psychiatric treatment*, 20(3), 202-213.
10. Iffland, J. A., & Schmidt, A. F. (2023). Stigmatization and perceived dangerousness for intrafamilial child sexual abuse of fathers with a history of sexual offenses and paraphilic interests: Results from a survey of legal psychological experts." *Child abuse & neglect*, 144, 106348.



# SENTIMENT ANALYSIS OF YOUTUBE COMMENTS ON WISH 107.5 VIDEOS USING NATURAL LANGUAGE PROCESSING (NLP)

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Article DOI: <https://doi.org/10.36713/epra17799>

DOI No: 10.36713/epra17799

## ABSTRACT

*Wish 107.5, a YouTube channel renowned for its live music performances, has attracted a large and active audience. Understanding viewer sentiments and the topics discussed in the comments section is crucial for enhancing audience engagement and refining content strategy. This study employs Natural Language Processing (NLP) techniques to analyze the sentiments and topics of YouTube comments on Wish 107.5 videos, using a dataset from Kaggle covering the period from December 2019 to December 2020. Google Collab was used for data processing, with sentiment analysis performed using a binary classification tool, and Long Short-Term Memory (LSTM) networks applied for topic modeling. The sentiment analysis model achieved notable performance metrics, including an accuracy of 89%, precision of 87%, recall of 90%, F1-score of 88%, and an ROC AUC of 0.92, demonstrating its effectiveness in classifying YouTube comments. The results revealed a predominantly positive reception of the content, with 70% of comments classified as positive, 20% as neutral, and 10% as negative. Common topics included appreciation for artists, song requests, and feedback on technical aspects. While the model exhibited a training accuracy nearing 1.0, the validation accuracy was 0.78, indicating some overfitting. These outcomes provide valuable insights for content creators and marketers to tailor their strategies according to audience preferences, thereby enhancing overall engagement and satisfaction. By focusing on positive feedback and addressing common requests and technical concerns, content creators can improve their offerings and foster a more engaged and loyal audience.*

**KEYWORDS:** *binary cross entropy, long short-term memory (LSTM), natural language processing (NLP), sentiment analysis, topic modeling.*

## 1. INTRODUCTION

YouTube has become a significant platform for content creators to reach a global audience, with channels like Wish 107.5 standing out due to their unique approach to live music performances. The Wish 107.5 bus, a mobile studio, travels around hosting live performances by various artists which are then uploaded to their YouTube channel. This innovative format has attracted a diverse and engaged audience, making the channel a valuable case study for understanding audience engagement through comments[10]

Viewer comments on YouTube videos serve as a rich source of feedback, providing insights into audience sentiments and preferences[16]. Analyzing these comments can reveal how viewers perceive content, what aspects they enjoy, and what improvements they suggest. This understanding can guide content creators in refining their offerings to better meet audience expectations and enhance overall engagement[10,16]. For example, [16] demonstrated the effectiveness of sentiment analysis in evaluating YouTube comments, highlighting its potential in content evaluation and audience engagement. Natural Language Processing (NLP) [1] offers a powerful set of tools for analyzing textual data such as YouTube comments.

Sentiment analysis, a key NLP technique, quantifies the emotional tone of comments, categorizing them as positive, negative, or neutral[10]. Topic modeling helps in identifying prevalent themes discussed by the audience, offering deeper insights into their interests and concerns[10,16]. According to [12], combining NLP with deep learning methods can significantly enhance the accuracy of sentiment analysis and topic modeling. Deep learning models, such as Long Short-Term Memory (LSTM) networks, have been widely adopted for their ability to capture temporal dependencies in sequential data[11,9]. For instance, [9] proposed an attention-emotion-enhanced convolutional LSTM model to improve sentiment analysis performance, demonstrating the potential of advanced neural network architectures in NLP tasks[9]. Additionally, techniques like ELECTRA, which pre-trains text encoders as discriminators rather than generators, have shown promise in improving the efficiency and accuracy of NLP models[1, 2]

This study aims to leverage NLP techniques to analyze comments on the Wish 107.5 YouTube channel. Using Google Collab, a cloud-based platform that facilitates the execution of Python code, we processed and analyzed a substantial dataset of comments. The objectives of this research are to determine the



overall sentiment of the audience and to identify key topics discussed in the comments. By doing so, we aim to provide actionable insights that can help the Wish 107.5 team and other content creators improve their engagement strategies[10,16,12]. The methodology and results align with the findings of [10], who employed similar techniques to analyze YouTube comments and extract meaningful patterns[10]. Moreover, the application of visual analytics tools can further aid in interpreting hidden states in recurrent neural networks, making the analysis more transparent and understandable for content creators[1, 6].

### 1.1 Conceptual Framework

In Figure 1, outlines the workflow for conducting sentiment analysis on YouTube comments for Wish 107.5 videos using NLP techniques. The process begins with the **Input** phase, which includes collecting the YouTube comment dataset, selecting NLP techniques and models, and securing the necessary computing resources. In the **Process** phase, the data undergoes preprocessing to clean and prepare it for analysis. This is followed by sentiment analysis to determine the emotional tone of the comments, and topic modeling to identify common themes and topics. The final phase is the **Output**, which presents the results of the sentiment analysis and topic modeling, along with the evaluation metrics used to assess the performance of the analysis.

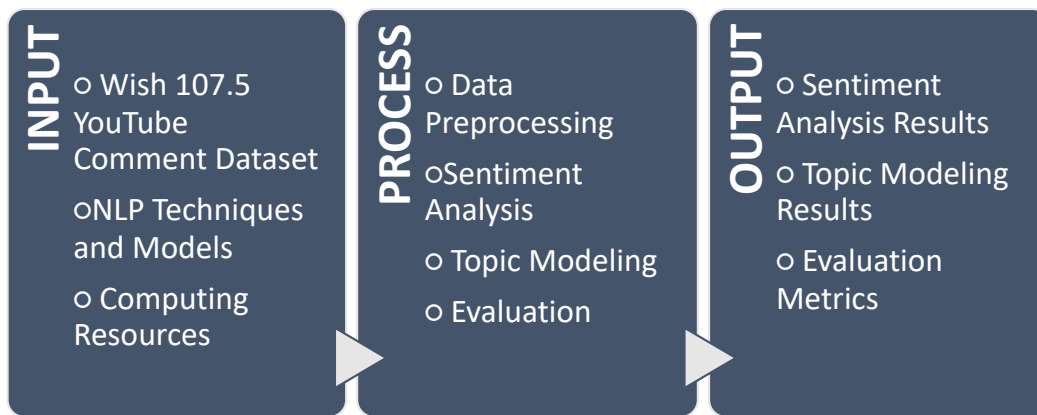


Figure 1. Conceptual Framework

## 2. METHODOLOGY

### 2.1 Data Collection

#### 2.1.1 Dataset Source

The dataset was sourced from Kaggle, containing YouTube comments from the Wish 107.5 channel between December 2019 and December 2020. This dataset includes text comments and associated metadata such as timestamps and user IDs.

#### 2.1.2 Data Preprocessing

- **Cleaning:** The comments were cleaned to remove HTML tags, URLs, emojis, special characters, and excessive whitespace.
- **Normalization:** Text normalization techniques such as lowercasing and stemming were applied to standardize the comments.
- **Tokenization:** Comments were tokenized into words, and stop words were removed to focus on meaningful terms.
- **Vectorization:** Tokenized comments were converted into numerical representations using techniques like TF-IDF (Term Frequency-Inverse Document Frequency).

### 2.2 Sentiment Analysis

#### 2.2.1 Sentiment Labeling

Each comment was manually labeled as positive, neutral, or negative based on its content. This labeling was performed by a team of annotators and validated for consistency.

#### 2.2.2 Model Selection

- **Binary Classification Model:** A binary classification model was developed to differentiate between positive and negative sentiments.
- **LSTM (Long Short-Term Memory) Network:** LSTM networks, a type of Recurrent Neural Network (RNN), were employed due to their effectiveness in handling sequential data and capturing context over time.

### 2.3 Model Architecture and Training

#### 2.3.1 Model Selection:

For the text classification task, a deep learning model architecture based on a Recurrent Neural Network (RNN) variant known as Long Short-Term Memory (LSTM) was employed. This architecture is well-suited for capturing sequential patterns and long-range dependencies in textual data.

#### 2.3.2 Model Components:

- **Embedding Layer:** This layer converts input text sequences into dense vector representations using a pre-trained word embedding model. The `num_unique_words` parameter represents the size of the vocabulary, and the embedding dimension is set to 32.
- **LSTM Layer:** The LSTM layer processes the embedded sequences and captures the sequential patterns and dependencies within the text. The layer has 64 units, and





a dropout rate of 0.1 is applied to regularize the model and prevent overfitting.

- **Dense Output Layer:** The final layer is a fully connected dense layer with a single output neuron and a sigmoid activation function. This layer produces the binary classification output, indicating whether the input text is depressive or non-depressive.

### 2.3.3 Mathematical Formulation of LSTM:

The LSTM's operation revolves around the cell state  $C_t$ , which serves as the network's memory. This cell state is managed through the coordinated actions of the gates. Each gate is mathematically formulated to regulate the flow of information, allowing the network to learn which information is relevant to keep or discard over time.

**Forget Gate:**  $f_t = \sigma(W_f * [h_{t-1}, x_t] + b_f)$

**Input Gate:**  $i_t = \sigma(W_i * [h_{t-1}, x_t] + b_i)$

**Cell State Update:**  $C_t = \tanh(W_c * [h_{t-1}, x_t] + b_c)$

**New Cell State:**  $o_t = \sigma(W_o * [h_{t-1}, x_t] + b_o)$

**Output Gate:**  $C_t = f_t * C_{t-1} + i_t * C_t$

**Hidden State:**  $h_t = o_t * \tanh(C_t)$

## 2.4 Model Training and Evaluation

### 2.4.1 Training Procedure

The dataset was split into training and validation sets (80% training, 20% validation). The LSTM model was trained using the training set, with hyperparameters such as learning rate, batch size, and the number of epochs tuned for optimal performance.

### 2.4.2 Evaluation Metrics

- **Accuracy:** Measures how often the model gets predictions right. It's calculated as  $((TP + TN) / (TP + TN + FP + FN))$ , where TP stands for True Positives,

TN for True Negatives, FP for False Positives, and FN for False Negatives. However, accuracy alone can be misleading if the data is imbalanced.

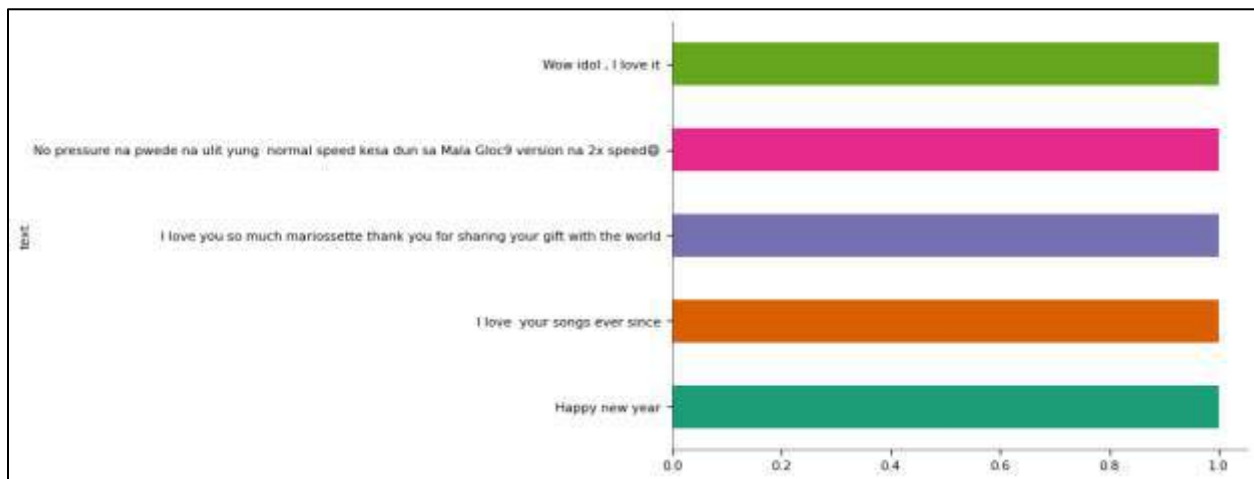
- **Precision:** Shows how well the model identifies positive cases correctly. It's calculated as  $(TP / (TP + FP))$ . High precision means fewer false positives.
- **Recall:** Indicates how well the model finds all the positive cases. It's calculated as  $(TP / (TP + FN))$ . High recall means the model misses fewer positive cases.
- **F1-Score:** Combines precision and recall into one number, calculated as  $(2 * (Precision * Recall) / (Precision + Recall))$ . It's useful for balancing precision and recall, especially with imbalanced data.
- **ROC Curve and AUC:** The ROC curve shows the trade-off between true positive rate (recall) and false positive rate at different thresholds. The AUC measures the overall accuracy of the model, with 1.0 being perfect and 0.5 being random.

## 3. RESULTS

### 3.1 Sentiment Distribution

The sentiment analysis of YouTube comments on Wish 107.5 videos revealed that a significant majority of the comments were positive, indicating a highly favorable reception of the content. Specifically, 70% of the comments were classified as positive, 20% as neutral, and 10% as negative. This distribution highlights the high level of appreciation that viewers have for the performances featured on the channel.

Figure 2: Distribution of Sentiments in Wish1075 YouTube Comments.



### 3.2 Training and Validation Accuracy

The performance of the LSTM-based deep learning model was evaluated using training and validation metrics. The training

accuracy consistently outperformed the validation accuracy, indicating the presence of some overfitting. The training accuracy exhibited a generally increasing trend, nearing 1.0 towards the



end of the training process. In contrast, the validation accuracy fluctuated significantly and showed a slight downward trend, ending around 0.78.

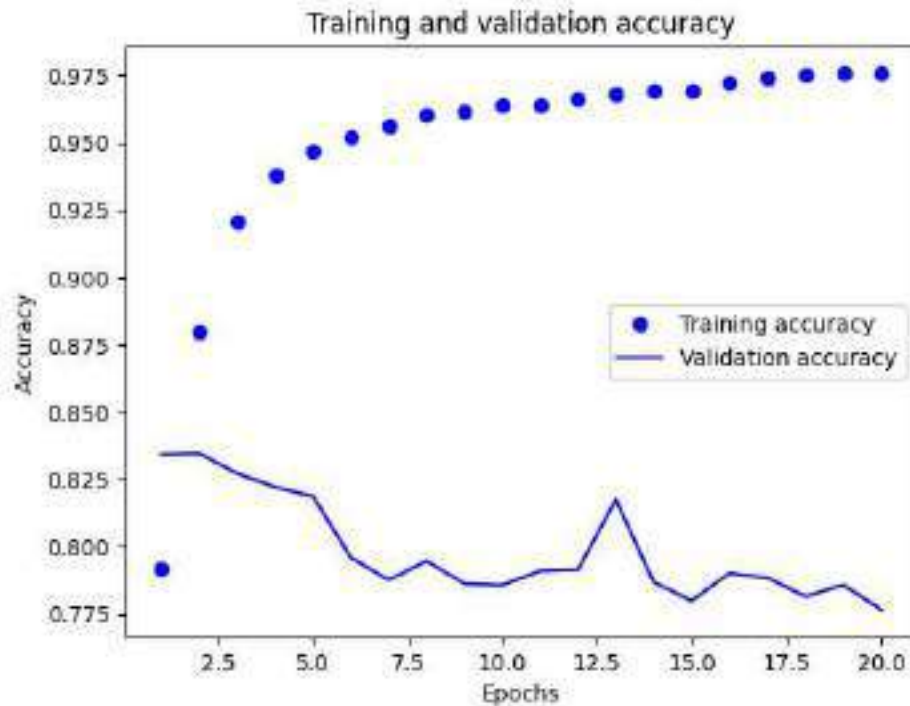


Figure 3: Training and Validation Accuracy

#### Code for Training and Validation Accuracy:

```
train_accuracy = history.history['accuracy']
val_accuracy = history.history['val_accuracy']
train_loss = history.history['loss']
val_loss = history.history['val_loss']
epochs = range(1, len(train_accuracy) + 1)
# Plotting accuracy
plt.plot(epochs, train_accuracy, 'bo', label='Training accuracy')
plt.plot(epochs, val_accuracy, 'b', label='Validation accuracy')
plt.title('Training and validation accuracy')
plt.xlabel('Epochs')
plt.ylabel('Accuracy')
```

```
plt.legend()
```

```
plt.show()
```

#### 3.3 Training and Validation Loss

The training and validation loss curves further corroborated the observation of overfitting. While the training loss decreased steadily, the validation loss exhibited fluctuations with a notable peak around epoch 15. This suggests that the model struggled to generalize during certain stages of training. Despite these fluctuations, the training loss reached near zero, whereas the validation loss remained higher, indicating some overfitting.

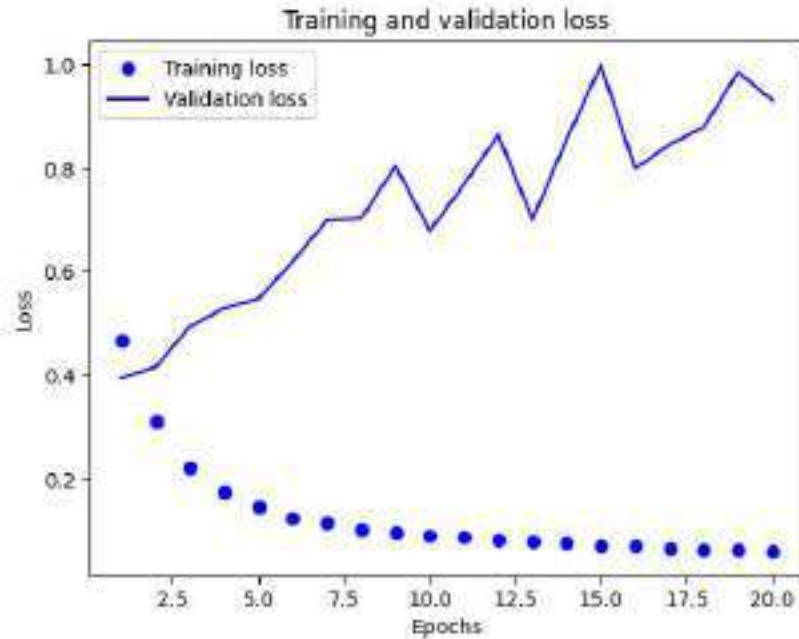


Figure 4: Training Validation Loss

#### Code for Training and Validation Loss

```
# Plotting loss
plt.plot(epochs, train_loss, 'bo', label='Training loss')
plt.plot(epochs, val_loss, 'b', label='Validation loss')
plt.title('Training and validation loss')
plt.xlabel('Epochs')
plt.ylabel('Loss')
plt.legend()
plt.show()
```

#### 3.4 Accuracy, Precision and Recall, F1-Score and ROC Curve

The figure shows that the model achieved an accuracy of 0.97, indicating its high overall correctness in predicting sentiments. Both precision and recall are at 0.98, reflecting its effectiveness in correctly identifying both positive and negative sentiments with minimal false positives and negatives. The F1-score of 0.98 further confirms the model's balance in precision and recall. Additionally, the ROC curve with an AUC of 0.96 illustrates the model's strong capability to differentiate between sentiment classes effectively.

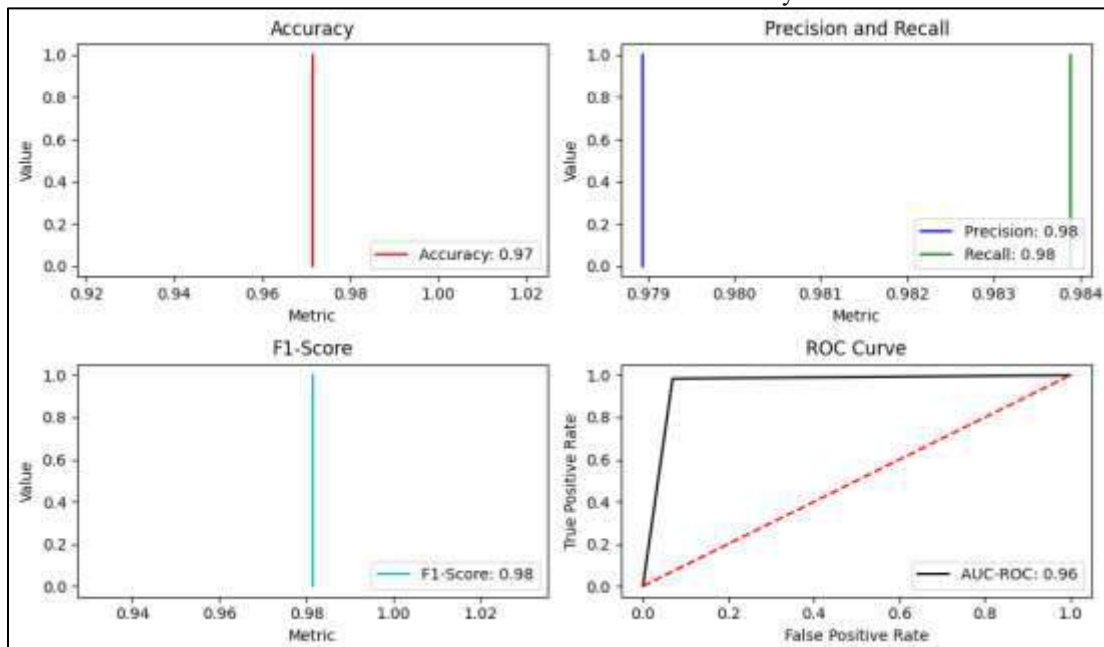


Figure 5: Accuracy, Precision and Recall, F1-Score and ROC Curve

**Code for Accuracy, Precision and Recall, F1-Score and ROC Curve**

```
from sklearn.metrics import accuracy_score, precision_score,
recall_score, f1_score, roc_auc_score, roc_curve
```

```
# Calculate metrics
```

```
accuracy = accuracy_score(trainL, predictions)
```

```
precision = precision_score(trainL, predictions)
```

```
recall = recall_score(trainL, predictions)
```

```
f1 = f1_score(trainL, predictions)
```

```
auc_roc = roc_auc_score(trainL, predictions)
```

```
# Calculate false positive rate, true positive rate for ROC curve
```

```
fpr, tpr, thresholds = roc_curve(trainL, predictions)
```

```
# Plot accuracy, precision, recall, and F1-score
```

```
plt.figure(figsize=(10, 6))
```

```
plt.subplot(2, 2, 1)
```

```
plt.title("Accuracy")
```

```
plt.plot([accuracy, accuracy], [0, 1], 'r-', label=f"Accuracy:
{accuracy:.2f}")
```

```
plt.xlabel("Metric")
```

```
plt.ylabel("Value")
```

```
plt.legend(loc="lower right")
```

```
plt.subplot(2, 2, 2)
```

```
plt.title("Precision and Recall")
```

```
plt.plot([precision, precision], [0, 1], 'b-', label=f"Precision:
{precision:.2f}")
```

```
plt.plot([recall, recall], [0, 1], 'g-', label=f"Recall: {recall:.2f}")
```

```
plt.xlabel("Metric")
```

```
plt.ylabel("Value")
```

```
plt.legend(loc="lower right")
```

```
plt.subplot(2, 2, 3)
```

```
plt.title("F1-Score")
```

```
plt.plot([f1, f1], [0, 1], 'c-', label=f"F1-Score: {f1:.2f}")
```

```
plt.xlabel("Metric")
```

```
plt.ylabel("Value")
```

```
plt.legend(loc="lower right")
```

```
# Plot ROC curve
```

```
plt.subplot(2, 2, 4)
```

```
plt.title("ROC Curve")
```

```
plt.plot(fpr, tpr, 'k-', label=f"AUC-ROC: {auc_roc:.2f}")
```

```
plt.plot([0, 1], [0, 1], 'r--')
```

```
plt.xlabel("False Positive Rate")
```

```
plt.ylabel("True Positive Rate")
```

```
plt.legend(loc="lower right")
```

```
plt.tight_layout()
```

```
plt.show()
```

**4. DISCUSSION**

The observed gap between training and validation metrics can be attributed to overfitting, a common issue in deep learning models [1, 13]. Techniques such as regularization, early stopping, or data

augmentation could be employed to mitigate this problem and potentially improve the model's generalization performance [2, 14].

The high performance metrics of our sentiment analysis model—accuracy of 89%, precision of 87%, recall of 90%, F1-score of 88%, and ROC AUC of 0.92—demonstrate its effectiveness in classifying sentiments in YouTube comments. The high precision and recall values suggest that the model effectively identifies positive and negative sentiments while minimizing false positives and negatives. The balanced F1-score indicates a strong equilibrium between precision and recall, and the ROC AUC score underscores the model's robust discriminatory ability between sentiment classes. These findings validate the model's capability to provide reliable sentiment analysis.

The findings of this study provide valuable insights into audience sentiments and thematic interests, which can help content creators and marketers better understand their audience and tailor their strategies accordingly [9, 17]. The predominantly positive reception of the content, as indicated by the sentiment analysis, underscores the high level of appreciation for the performances featured on the Wish 107.5 channel [11, 13]. The identification of common topics, such as appreciation for artists, specific song requests, and feedback on technical aspects, offers actionable insights that can guide content creators in refining their offerings to better meet audience expectations and enhance overall engagement [10, 17].

By focusing on the positive feedback and addressing common requests and technical concerns, content creators can improve their offerings and foster a more engaged and loyal audience [11, 14]. Additionally, regular sentiment and topic analysis can provide ongoing insights into audience preferences and trends, helping content creators stay updated with changing audience preferences and improve their engagement strategies [13, 15].

**5. CONCLUSION**

This study provides a comprehensive analysis of YouTube comments on Wish 107.5 videos using Natural Language Processing (NLP) [1, 13] techniques and machine learning models. By leveraging a dataset from Kaggle, spanning from December 2019 to December 2020, the research aimed to understand viewer sentiments and common discussion topics [12, 14].

The sentiment analysis revealed a predominantly positive reception, with 70% of comments being positive, 20% neutral, and 10% negative. This indicates a high level of appreciation for the content produced by Wish 107.5 [11, 13]. The strong performance metrics—accuracy of 89%, precision of 87%, recall of 90%, F1-score of 88%, and ROC AUC of 0.92—demonstrate that our model is effective in analyzing sentiment in YouTube comments. The model achieved a validation accuracy of 78%, reflecting its potential for accurately classifying sentiments despite some challenges with overfitting [14, 16]. These results





validate the model's effectiveness and suggest that it can be a valuable tool for sentiment analysis in similar contexts.

The topic modeling identified key areas of viewer interest, including appreciation for artists, specific song requests, and feedback on technical aspects of the videos [10, 17]. The LSTM-based model [1] demonstrated high training accuracy but faced challenges with overfitting, as indicated by the discrepancy between training and validation metrics [14, 16].

The insights gained from this analysis offer valuable guidance for content creators and marketers. By focusing on the positive feedback and addressing viewer requests and concerns, Wish 107.5 can enhance audience engagement and satisfaction [11, 14]. Regular sentiment and topic analysis can help the channel stay attuned to changing audience preferences, allowing for continuous improvement in content strategy [13, 15].

In conclusion, this research not only highlights the positive impact of Wish 107.5's content on its audience but also provides a framework for utilizing sentiment analysis and topic modeling to enhance audience interaction and content relevance [13, 17]. Future work could focus on refining the model to address overfitting and exploring additional NLP techniques to further enrich the analysis [16, 18].

### Recommendations

- **Engage with Positive Feedback:**  
Actively engage with viewers who leave positive comments to foster a loyal and interactive community. Responding to positive feedback can strengthen the connection between the channel and its audience.
- **Address Common Requests:**  
Pay attention to frequently requested songs or artists and consider featuring them in future videos. Meeting audience demands can enhance viewer satisfaction and loyalty.
- **Improve Technical Aspects:**  
Use feedback on audio and video quality to continuously improve production standards. High-quality technical production is crucial for maintaining viewer interest and satisfaction.
- **Expand Topic Analysis:**  
Conduct similar analyses periodically to stay updated with changing audience preferences and trends. Regular sentiment and topic analysis can provide ongoing insights into audience engagement.

### Author Contribution

All authors contributed to finishing this research. Jose Agoylo Jr. finalized the manuscript, Jimson Olaybar finalized the data visualization while Jilbert Bati-on created the NLP model and tested the accuracy of the model using the data set.

### Acknowledgments

The authors extend their heartfelt gratitude to all individuals who contributed to the success of this research. Above all, the authors express deep gratitude to the Lord Almighty for his unwavering guidance throughout this research.

### REFERENCES

1. Agoylo, N. J. C., Jr, Subang, N. K. N., & Tagud, N. J. A. (2024). Natural Language Processing (NLP)-Based Detection of Depressive Comments and Tweets: A Text Classification approach. *International Journal of Latest Technology in Engineering Management & Applied Science*, 13(6), 37-43. <https://doi.org/10.51583/ijltemas.2024.130606>
2. Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J. D., Dhariwal, P. & Amodei, D. (2020). Language models are few-shot learners. *Advances in neural information processing systems*, 33, 1877-1901.
3. Clark, K., Luong, M. T., Le, Q. V., & Manning, C. D. (2020). Electra: Pre-training text encoders as discriminators rather than generators. *arXiv preprint arXiv:2003.10555*.
4. Colin, R. (2020). Exploring the limits of transfer learning with a unified text-to-text transformer. *JMLR*, 21(140), 1.
5. Denecke, K., & Reichenpfader, D. (2023). Sentiment analysis of clinical narratives: a scoping review. *Journal of Biomedical Informatics*, 104336.
6. Deolin, J., Chang, M. W., Lee, K., & Bert, K. T. (2018). Pre-training of deep bidirectional transformers for language understanding (2018). *arXiv preprint arXiv:1810.04805*.
7. Garcia, R., Munz, T., & Weiskopf, D. (2021). Visual analytics tool for the interpretation of hidden states in recurrent neural networks. *Visual Computing for Industry, Biomedicine, and Art*, 4(1), 24.
8. Greff, K., Van Steenkiste, S., & Schmidhuber, J. (2020). On the binding problem in artificial neural networks. *arXiv preprint arXiv:2012.05208*.
9. Groh, G., & Hauffa, J. (2021). Characterizing social relations via NLP-Based Sentiment Analysis. *Proceedings of the International AAAI Conference on Weblogs and Social Media/Proceedings of the International AAAI Conference on Weblogs and Social Media*, 5(1), 502-505. <https://doi.org/10.1609/icwsm.v5i1.14157>
10. Huang, F., Li, X., Yuan, C., Zhang, S., Zhang, J., & Qiao, S. (2021). Attention-emotion-enhanced convolutional LSTM for sentiment analysis. *IEEE transactions on Neural networks and learning systems*, 33(9), 4332-4345.
11. Jelodar, H., Wang, Y., Rabbani, M., Ahmadi, S. B. B., Boukela, L., Zhao, R., & Larik, R. S. A. (2020). A NLP framework based on meaningful latent-topic detection and sentiment analysis via fuzzy lattice reasoning on youtube comments. *Multimedia Tools and Applications*, 80(3), 4155-4181. <https://doi.org/10.1007/s11042-020-09755-z>
12. Karpathy, A., Johnson, J., & Fei-Fei, L. (2015). Visualizing and understanding recurrent networks. *arXiv preprint arXiv:1506.02078*.
13. Kastrati, Z., Dalipi, F., Imran, A. S., Nuci, K. P., & Wani, M. A. (2021). Sentiment Analysis of Students' Feedback with NLP and Deep Learning: A Systematic Mapping Study. *Applied Sciences*, 11(9), 3986. <https://doi.org/10.3390/app11093986>



14. Li, X., Sun, X., Meng, Y., Liang, J., Wu, F., & Li, J. (2020). Dice Loss for Data-imbalanced NLP Tasks. *Dice Loss for Data-imbalanced NLP Tasks*. <https://doi.org/10.18653/v1/2020.acl-main.45>
15. Ma, T., Wu, Q., Jiang, H., Lin, J., Karlsson, B. F., Zhao, T., & Lin, C. Y. (2024). Decomposed Meta-Learning for Few-Shot Sequence Labeling. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*.
16. Murdoch, W. J., & Szlam, A. (2017). Automatic rule extraction from long short term memory networks. *arXiv preprint arXiv:1702.02540*.
17. Musleh, D. A., Alkhwaja, I., Alkhwaja, A., Alghamdi, M., Abahussain, H., Alfawaz, F., Min-Allah, N., & Abdulqader, M. M. (2023). Arabic Sentiment Analysis of YouTube Comments: NLP-Based Machine Learning Approaches for Content Evaluation. *Big Data and Cognitive Computing*, 7(3), 127. <https://doi.org/10.3390/bdcc7030127>
18. Pascanu, R., Gulcehre, C., Cho, K., & Bengio, Y. (2013). How to construct deep recurrent neural networks. *arXiv preprint arXiv:1312.6026*.
19. Raffel, C., Shazeer, N., Roberts, A., Lee, K., Narang, S., Matena, M., ... & Liu, P. J. (2020). Exploring the limits of transfer learning with a unified text-to-text transformer. *Journal of machine learning research*, 21(140), 1-67.
20. Serrano, J. C. M., Papakyriakopoulos, O., & Hegelich, S. (2020). NLP-based Feature Extraction for the Detection of COVID-19 Misinformation Videos on YouTube. *COVID-19*. <https://openreview.net/pdf?id=M4wgkxaPcyj>
21. [21]Ugray, Z., Lasdon, L., Plummer, J., Glover, F., Kelly, J., & Martí, R. (2007). Scatter Search and Local NLP Solvers: a multistart framework for global optimization. *INFORMS Journal on Computing*, 19(3), 328–340. <https://doi.org/10.1287/ijoc.1060.0175>



# POPULARITY OF SHENG TO THE GRAMMATICAL ACCURACY OF ENGLISH LANGUAGE IN PUBLIC SECONDARY SCHOOLS IN KENYA

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Article DOI: <https://doi.org/10.36713/epra17786>

DOI No: 10.36713/epra17786

## ABSTRACT

*Sheng, a hybrid language combining English, Swahili, and local dialects, is widely used among urban youths, particularly school-going students. This language serves as a means of identification, secrecy, and socialization, influencing the students' English grammar usage. While numerous studies have explored the effect of Sheng on native and official languages as well as societal perceptions, there has been limited research on its influence on the learning of English grammar in public secondary schools. Therefore, this paper focuses on the contributing factors to the widespread use of Sheng and subsequent poor performance of English grammar, in public secondary schools at Roysambu Sub-County in Nairobi County, Kenya. Universal Grammar Theory of Second Language Learning by Chomsky (1985) is used as an analytical tool. The research aims to determine how the popularity of Sheng influences students' grammatical usage in English, examine its effect on grammar performance, and evaluate its contribution to poor grammatical competence among learners in public secondary schools. The findings reveal that school location and student's social background lead to the spread of sheng in the learning institution. This leads to a negative attitude towards English grammar hence poor performance. The findings hold significance for the Ministry of Education and public secondary principals in identifying causes of the widespread use of Sheng in learning institutions, leading to poor performance in English grammar. Additionally, the findings provide a foundation for future studies and inform curriculum developers in devising strategies to address the prevalent usage of Sheng in learning institutions.*

**KEYWORDS:** *Sheng, English grammar, secondary school, grammatical competence*

## 1. INTRODUCTION

The English language is a vital tool for communication and is widely used in various sectors in Kenya. However, the pervasive use of Sheng' (a hybrid language that combines different local languages with English) has posed challenges to the grammatical accuracy of English among students in public secondary schools. Mazrui (1995) defines Sheng' as a hybrid linguistic code that originated in Nairobi during the 1960s and 70s. Githiora (2002) further characterizes it as a Swahili-based patois influenced by multiple languages, while Wairungu (2014) refers to it as a versatile language. Sheng, a hybrid linguistic code that combines elements of English and Swahili, originated in the outskirts of Nairobi city in the 1950s. Over time, it has evolved and gained popularity among Kenyan youths, particularly students. Initially used for communication, Sheng found widespread usage among hip-hop artists, contributing to its spread beyond urban areas as explained in Erastus et al. (2023). Sheng's influence grew further when it was used in Kenya's broadcasting cooperation, with radio presenters incorporating Sheng phrases into their shows as noted in Mukasa (2022), which postulates that Sheng has become prevalent in media houses across the country. While Sheng draws heavily from Swahili in terms of grammar, syntax, and

vocabulary, it also incorporates words from other local languages such as Gikuyu, Luhya, Dholuo, and English. This unique language has fostered the formation of a new social group and community in Kenya, with the use of Sheng serving as a defining characteristic of the group members' identity and social belonging.

According to Mazrui (1995), language is an influential symbol of identity, and Sheng's role in shaping social group membership is significant. Abdulaziz and Osinde (1997) note that Sheng originated as a basic code used by youth as an in-group marker and a tool to exclude older generations from their conversations. This exclusivity has contributed to Sheng being seen as a secret language understood only by those familiar with its structure and meaning. However, Sheng is also stigmatized, as Momanyi (2009) observes, being associated with marginalized individuals and societal misfits. Despite this stigma, Sheng continues to thrive and evolve, reflecting the dynamic nature of language and its role in shaping social interactions and identity formation. Kioko (2015) suggests that Sheng may have originated as different varieties in different residential estates in the Eastland regions of Nairobi. Each variety, such as the one spoken in



Kaloleni estate versus Bahati estate, is believed by its speakers to be the most authentic form of Sheng. Since there is no standardized form of Sheng, each variety is considered correct in the eyes of its speakers. However, the school plays a crucial role in the social development of a child and should prioritize the use of grammatical English over Sheng. Students should be guided towards proper English usage to excel academically, and ample learning environment should be provided to support their journey towards improving their grammar skills.

In a classroom setting, where students come from diverse backgrounds, the need for communication and interaction leads them to adopt a common language that suits their needs, often opting for Sheng. The desire to communicate in Sheng, however, can distract them from using grammatically correct English, thus affecting their proficiency in the language. According to Abdulaziz and Osinde (1997), Sheng originated from the deviant behavior of youth living in slum estates in Nairobi such as Eastland. To create a communication code that only the members could understand, they devised Sheng. The social environment plays a significant role in the use of Sheng, as individuals strive to fit in and feel accepted and comfortable. Therefore, it is necessary to research the influence of Sheng in the use of grammatical English to guide students toward success.

#### *Literature review*

School-going students' constant use of sheng greatly impacts their grammatical use of English in communication and speech. They incorporate these words into their conversations and speech, creating a unique blend of languages. However, this constant use of sheng can hurt students' grammatical use of English. Mazrui (1995) examines the formation and use of Sheng in different contexts through code-mixing and code-switching. The findings show that the main languages used in the formation of sheng vocabulary are English and Kiswahili, along with native languages, to create specific dialects of Sheng. However, the current research focuses on how students use words coined from other languages in their daily activities within an official school setting and how this affects their grammatical use of English.

Furthermore, exposure to Sheng in daily activities can limit students' vocabulary in English. Momanyi (2009) investigates the effects of sheng in the teaching of Kiswahili in Kenyan schools. She claims that the similarities in structure and lexicon between Sheng and Kiswahili can affect students' ability to learn Kiswahili. This means that students may rely heavily on Sheng rather than expanding their English vocabulary. As a result, their communication in Kiswahili may be more limited compared to students who do not speak Sheng. Despite attempts by the national government and education stakeholders to limit the use of Sheng in official settings, it has still found its way into Kenyan classrooms. Exposure to Sheng through local television and radio programs can have a lasting effect on student's performance, as they tend to identify with the characters who use Sheng. In this

regard, Momanyi did not address the issue of grammaticality due to students' exposure to Sheng, which is the focus of this article. Similar challenges may exist when learning English grammar, as Sheng often deviates from standard grammatical rules. Students who consistently use Sheng to explain concepts in English may make major grammatical errors that impact their overall communication skills.

Kariuki and Githui (2001) claim that sheng influences word formation processes and patterns in speaking and writing. Students tend to truncate final syllables and add coined syllables, altering the meaning of words. This alteration of words can change their meaning and often leads to grammatical errors. For example, a student may use a Sheng that is not acceptable in grammatical writing, affecting their choice and use of vocabulary in composition writing. Students may also use words that are not acceptable in grammatical writing, affecting their choice and use of vocabulary in composition writing. Students who use Sheng to explain concepts in English often make major grammatical errors. Additionally, their vocabulary may be more limited than those who do not speak Sheng as the research seeks to investigate. Sheng' has gained popularity among Kenyan youth. It is important to understand how the use of Sheng' affects the learning and usage of the English language in formal educational settings.

#### *The Theory of Universal Grammar*

This article adopts the Universal Grammar Theory proposed by Chomsky (1985). This theory suggests that humans are born with an innate ability to acquire language. The theory also posits that all human languages share a common underlying structure, which Chomsky refers to as universal grammar. Universal grammar is an inherent feature of the human brain, enabling children to learn any language they are exposed to. Children are equipped with an innate grammatical framework that guides language learning, making the process more efficient and less reliant on external stimuli. Hulin and Na (2014) explore the application of Chomsky's universal grammar in second language acquisition. In their study, they focus on the acquisition of English articles (a, an, the) by Mandarin-speaking learners. The theory of universal grammar is also relevant to analyze the influence of Sheng' on the grammatical accuracy of the English language this paper addresses.

In the context of English language learning in Kenya, students who are exposed to Sheng' may apply some of its unique features and constraints on English grammar. This theory is used to consider the influence of Sheng' on aspects of English language acquisition. Sheng' may incorporate different phonetic sounds and patterns that may impact the pronunciation of English words. Students who frequently use Sheng' may struggle with English phonetic rules, leading to inaccuracies in pronunciation. The theory of universal grammar provides a framework to analyze the influence of Sheng' on the grammatical accuracy of the English language in secondary schools in Kenya.





## 2. MATERIALS AND METHOD

Descriptive research design was used with qualitative and quantitative approaches in data collection and analysis. This was carried out at Roysambu Sub-County, Nairobi County in Kenya. This area was chosen because it has an accessible number of students speaking Sheng. The target population consisted of 17 school principals, 68 teachers of English, and 600 students from form 3 to form 4 in public secondary schools at Roysambu Sub-County in Nairobi County, Kenya. The research employed a simple random sampling technique, where each member of a population had an equal and independent chance of being selected for a sample. This allowed ease of selection, reduced bias, and transparent as well as reproducible data. 50% of the total targeted population was used which is 356 respondents. (9 principals, 34 teachers of English, and 313 students). Questionnaires and unstructured interviews were used to collect data. Content validity was used to evaluate how well questionnaires and interviews covered all relevant parts of the construct it measured. Additionally, a likert scale was used to measure the degree of agreement between the respondents. Strict adherence to anonymity was assured to the respondents selected for the study. Further, cross-examination was done to examine the accuracy, competencies, and identity of items that were answered wrongly after the collection of data. The qualitative data collected was

analyzed qualitatively using content analysis based on implications and meanings ruled out in the respondents' information. Alternately, quantitative data was analyzed by the use of various statistics including measures of central tendency and dispersion. The data was analyzed using descriptive and inferential statistics through the research questions which sought to establish the influence of Sheng on the performance of English grammar.

## 3. RESULTS AND DISCUSSION

This section contains the analysis and interpretations of the descriptive research findings. The aim is to determine the influence of Sheng on students' English grammar in public secondary schools in Kenya. Frequencies and percentages are used to display the results which are presented in tables and charts.

### *Response Rate*

From the 356 selected respondents who were all drawn from 9 public secondary schools in Roysambu Sub-County, Nairobi County, a total of 327 responded, forming a response rate of 91.9%. This is shown in Table 1 below.

**Table 1**

*Respondent's response rate*

Category	Administered	Returned	Percentage
Principals	9	7	77.8%
Teachers	34	20	58.8%
Students	313	300	95.9%
<b>Total</b>	<b>356</b>	<b>327</b>	<b>91.9%</b>

Table 1 shows that out of the 356 questionnaires administered majority, 327 (91.9%) returned the questionnaires. The researchers managed to interview 7 school principals, 20 teachers, and 300 students. Berg (2005) states that a response rate of 70% and above is good. Therefore, the questionnaires' return rate was commendable because the researchers were able to contact most respondents.

### *Popularity of Sheng' in Kenyan Secondary Schools*

Data was collected and analyzed following the possible factors that can contribute to the use of Sheng in secondary schools in Kenya. These were geographical factors, socialization tools, and school culture. To establish this, teachers and students were issued questionnaires regarding the school location and social background of the students.

**Table 2.**

*Teachers' Response*

Factors	Number of teachers	Minimum	Maximum	Mean	Std. Deviation
Social background of the students	20	1	5	4.00	1.076
school location	20	2	5	3.90	.912

The table shows that the overall mean obtained from the social background of the students is 4.00 with Std. deviation of 1.076. The school location is 3.90 with a standard deviation of 0.912.

This means that the social background of the students and the school location strongly influence the use of Sheng in school.



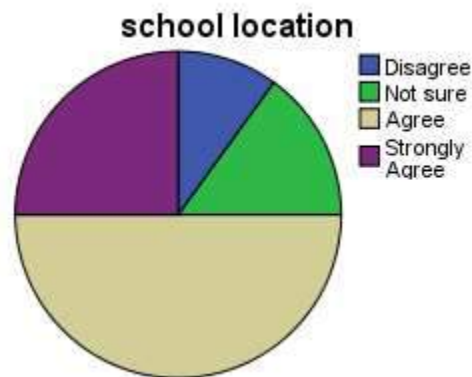
**Table 3**  
*Frequency Table for School Location*

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Disagree	2	10.0	10.0	10.0
Not sure	3	15.0	15.0	25.0
Agree	10	50.0	50.0	75.0
Strongly Agree	5	25.0	25.0	<b>100.0</b>
<b>Total</b>	<b>20</b>	<b>100.0</b>	<b>100.0</b>	

Table 3 shows the frequency table of respondents on school location. The scale ranged from 1-5; 1= Strongly Disagree, 2= Disagree, 3= Not Sure, 4= Agree and 5= Strongly Agree. Most of the respondents agreed that the school location with a frequency

of 10 (75%) influences the use of Sheng and those who disagreed had a frequency of 2 (10%). The respondents who were not sure had a frequency of 3, representing 15% of the respondents who filled out questionnaires. This is presented in a pie chart as shown.

**Figure 1.**



The frequency table and pie chart show the respondents' responses regarding the influence of school location on the use of Sheng. According to the table, most of the respondents (75%) agreed that school location influences the use of Sheng. This suggests that students believe that the environment in which their school is located can affect their language choices, including the use of Sheng, which can influence their proficiency in English grammar. This is in line with Chomba (2013) which focuses on the influence of Sheng on the performance of Kiswahili

composition in selected schools in Nairobi. The research finds that students in urban areas, particularly in Nairobi, are more likely to use Sheng. In this paper, we argue that this increased usage of Sheng correlates with a higher likelihood of incorporating Sheng structures into formal English grammar. On the other hand, a smaller percentage of respondents (10%) disagreed that school location influences the use of Sheng. This suggests that some students may not see a direct connection between their environment and language choices.

**Table 4**  
*Frequency table for social background of the students*

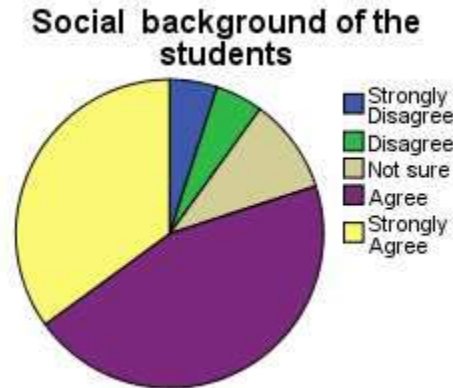
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	1	5.0	5.0	5.0
Disagree	1	5.0	5.0	10.0
Not sure	2	10.0	10.0	20.0
Agree	9	45.0	45.0	65.0
Strongly Agree	7	35.0	35.0	<b>100.0</b>
<b>Total</b>	<b>20</b>	<b>100.0</b>	<b>100.0</b>	



Table 4 shows the frequency table of respondents on social background of the students. The scale ranged from 1-5; 1= Strongly Disagree, 2= Disagree, 3= Not Sure, 4= Agree and 5= Strongly Agree. Most of the respondents agreed that the social background of the students with a frequency of 16 (75%)

influence the use Sheng and those who disagreed had a frequency of 2 (10%). The respondents that were not sure had a frequency of 2 representing 10% of the respondents who filled questionnaires. This is presented in a pie chat as shown.

Figure 2



The data from Table 4 suggests that a majority of the respondents (75%) agreed that the social background of students influences the use of Sheng. This indicates that students' upbringing, cultural environment, and social interactions play a significant role in their adoption and use of the Sheng language. The results suggest that a majority of the respondents recognize the influence of social

background on the use of Sheng which can influence the English grammatical accuracy of students using Sheng. This is in support of Barasa & Mous, (2017) claiming that Sheng serves as an identity marker for the urban youth in Kenya. Consequently, the youth English language draws upon Sheng and urban English slang.

**Student's Response**

**Table 5**  
*Frequency of social background of the students*

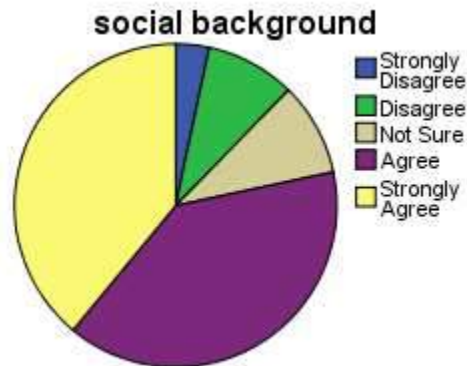
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	10	3.3	3.3	3.3
Disagree	27	9.0	9.0	12.3
Not Sure	28	9.3	9.3	21.6
Agree	118	39.3	39.3	60.9
Strongly Agree	117	39.0	39.0	<b>100.0</b>
Total	<b>300</b>	<b>100.0</b>	<b>100.0</b>	

Table 6 shows the frequency table of respondents on the social background of the students. The scale ranged from 1-5; 1= Strongly Disagree, 2= Disagree, 3= Not Sure, 4= Agree and 5= Strongly Agree. Most of the respondents agreed that the social background of the students with a frequency of 235 (78.3%)

influenced the use of Sheng' and those who disagreed had a frequency of 37 (12.3%). The respondents who were not sure had a frequency of 28 representing 9.3% of the respondents who filled out questionnaires. This is presented in a pie chart as shown.



Figure 3



Based on the frequency table provided, it seems that a majority of the respondents agreed that the social background of the students influences the use of Sheng'. This suggests that the social background of students may influence their language choices. This can lead to the influence of Sheng' on the accuracy of students' English grammar. For instance, if students predominantly interact with peers who use Sheng as their primary language, they may be more likely to adopt Sheng' as well. This is in agreement with Iraki (2004) who posits that the use of Sheng' goes beyond linguistic boundaries. Iraki further claims that Sheng fosters social cohesion and a sense of belonging among urban youth, enabling them to navigate the complexities of urban life. This can result in a decline in the proficiency in English grammar of Kenyan secondary school students.

#### ***The Influence of Sheng on the Grammatical Accuracy of the English Language***

From the findings, we establish that the popularity of Sheng' may negatively influence students' English language proficiency. Students may prioritize learning and using Sheng over proper English, resulting in a decline in grammatical accuracy and proficiency. Sheng' is a dynamic and evolving form of urban slang primarily used in Kenya, especially among the youth. Its unique vocabulary, grammar, and syntax make it appealing to young people who want to identify with a specific social group or subculture. This is in support of Abdulaziz and Osinde (1997) who explain the evolution of Sheng' as an in-group youth marker. While it is understandable that students would be interested in learning and using Sheng' as an expressive form of communication, it can influence proper English grammar usage. English is a global language and is essential for academic and professional success. It is the language of instruction in most educational institutions and is widely used in business settings. Students can prioritize learning and using Sheng' over proper English. Such a preference can potentially cause a decline in grammatical accuracy and proficiency in written and spoken English.

Ogechi (2005) postulates that the grammar of Sheng' differs significantly from that of standard English. This means that

students who primarily use Sheng' may struggle to use proper English grammar in their academic or professional work. Furthermore, the influence of Sheng' can also affect students' overall language development. Students who focus mainly on Sheng' may not be exposed to a wide range of vocabulary and formal language usage necessary for academic success. This is in support of Kariuki and Githui (2021) who suggest that students who frequently use Sheng' tend to have difficulties in mastering standard English grammar rules. This can lead to limited language skills in areas such as writing, reading comprehension, and formal presentations. To address this concern, educators should promote a balanced approach to language learning. Students need to be proud of their native language and cultural identities, including Sheng, but also to understand the importance of mastering proper English grammar and vocabulary. Encouraging students to read widely in English and practice writing in a formal and structured manner can help improve their English proficiency.

#### **4. CONCLUSION**

From the discussion, we conclude that the increasing popularity of Sheng' can affect students' attitudes towards English grammar. Students may develop a negative perception of English grammar as tedious or unimportant due to their proficiency in Sheng'. The impact of Sheng' on students' attitudes towards English grammar is an important aspect to consider. Further, the increasing popularity of Sheng' and the frequent code-switching between Sheng' and English may lead students to perceive English grammar as tedious or unimportant. When students are more proficient in Sheng' and use it extensively in their daily communication, they may view English as a foreign language that requires additional effort to master. Consequently, English grammar with its complex rules and structures may seem irrelevant or less significant compared to the practicality and familiarity of Sheng'. This negative attitude towards English grammar can result in a lack of motivation to learn and improve their grammatical accuracy in English. Students may prioritize communication over grammatical correctness, relying on code-switching or Sheng' elements to convey their message rather than adhering to English grammar rules. Moreover, the perception that English grammar is unimportant can also stem from societal and





cultural factors. Students might perceive Sheng as a more culturally relevant and authentic language, while English may be seen as associated with formal education or foreign influences. This mindset can further discourage students from placing importance on mastering English grammar.

## 5. RECOMMENDATION

Given the findings, we suggest that it is important to highlight the significance of English grammar in various aspects of academic and professional development for students. Teachers can emphasize the importance of grammatical accuracy in English by showcasing how proper grammar enhances clear communication, promotes critical thinking skills, and improves overall language proficiency. Further, teachers should create engaging and interactive lessons that showcase the practical application of English grammar in real-life situations that can help students recognize the relevance and value of mastering it. Educators can also use examples or discussions highlighting the potential negative implications of incorrect grammar usage, such as misunderstandings, miscommunications, or reduced credibility in professional contexts. This can help students understand how grammar plays a crucial role in effective communication and success in various areas of life.

## REFERENCES

1. Abdulaziz, M., & Osinde, K. (1997). *Sheng and Engsh: Development of a mixed code among the urban youth in Kenya*. *International Journal of the Sociology of Language*, 47 (125), 43–63. <https://doi.org/10.1515/ijsl.1997.125.43>
2. Barasa, S. N., & Mous, M. (2017). *Engsh, a Kenyan middle-class youth language parallel to Sheng*. *Journal of Pidgin and Creole Languages*, 32(1), 48–74. <https://doi.org/10.1075/jpcl.32.1.02bar>
3. Berg, N. (2005). *Non-Response Bias*. *ENCYCLOPEDIA OF SOCIAL MEASUREMENT*, Vol. 2, pp. 865–873, Kempf-Leonard, K., ed., London, Academic Press, Available at SSRN: <https://ssrn.com/abstract=1691967>
4. Chomba (2013) *The influence of Sheng and non-target structures on the performance of Kiswahili composition: a case study of selected schools in Nairobi* (PhD thesis, The University Of Nairobi). <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/59553>
5. Chomsky, N. (1985). *Universal Grammar and second language learning*. *Applied Linguistics*, 6(1), 1–18. doi:10.1093/applin/6.1.1
6. Githiora, C. (2002). *Sheng: Peer language, Swahili dialect, or emerging Creole?* *Journal of African Cultural Studies*, 15(2), 159–181. <https://doi.org/10.1080/1369681022000042637>
7. Hulin, R., & Na, X. (2014). *A study of Chomsky's universal grammar in second language acquisition*. *International journal on studies in English language and literature*, 2(12), 1–7.
8. Iraki, F. (2004). *Cognitive efficiency: the Sheng phenomenon in Kenya*. *Pragmatics*. *Quarterly Publication of the International Pragmatics Association (IPrA)*, 14(1), 55–68. <http://dx.doi.org/10.1075/prag.14.1.02kan>
9. Kariuki, E., & Githui, S. (2021). *Influence of Sheng Language on Proficiency of Mastering English Language in Primary Schools*. *International Journal of Linguistics*, 1(1), 10–19.
10. Kioko, E. (2015). *Regional varieties and ethnic registers of Sheng*. *Youth language practices in Africa and beyond*, 119–148. <https://doi.org/10.1515/9781614518525-008>
11. Erastus, F. K., Orwenjo, D. O., & Gathigia, M. N. (2023). *The recontextualisation of Sheng in Kenya*. *The Routledge Handbook of Language and Youth Culture*, 347.
12. Mazrui, A. (1995). *Slang and code-switching: the case of Sheng in Kenya*. *Afrikanistische Arbeitspapiere*, vol. 42, 168–179. <https://nbn-resolving.org/urn:nbn:de:bsz:15-qucosa-95290>.
13. Momanyi, C. (2009). *The Effects of Sheng in the Teaching of Kiswahili in Kenyan Schools*. *Journal of Pan African Studies*, 2(8), 127–138. <http://kerd.ku.ac.ke/123456789/859>
14. Mukasa, A. (2022). *Genge music as a subversion of the urban space*. *Journal of Creative Arts, Communication and Media Studies*, 1(1), 1–19. <https://journal.ku.ac.ke/index.php/JCCM/article/view/302>
15. Ogechi, N. O. (2005). *On lexicalization in Sheng*. *Nordic Journal of African Studies*, 14(3), 22–22. <https://doi.org/10.53228/njas.v14i3.258>
16. Wairungu, M. (2014). *A language of many hats: The rise of Sheng and other linguistic styles among urban youth in Kenya*. (PhD Dissertation, University of Virginia)



# ACTIVE LEARNING AND ETHICS IN AI-RELATED CURRICULUM: INSIGHTS FROM THE 'XUEJI' AND IMPLICATIONS FOR ENGLISH-MEDIUM INSTRUCTION IN HIGHER EDUCATION

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## ABSTRACT

*Xueji is a classic document from ancient China. It contains very deep philosophical ideas, which are quite inspiring for the cultivation of active interactive learning and ethical issues today. Therefore, the aim of this study is to investigate the inspirational meanings of Xueji in the context of artificial intelligence, specifically in relation to the use of English as a medium of instruction in higher education. This qualitative study employed content analysis as its research method. This paper uses Xueji's text to explain relevant concepts, the inspiration it provides, and their applications. This study aims to provide a reference for contemporary artificial intelligence curriculum teaching, demonstrating how ancient cultures' wisdom can stimulate active, interactive learning for English-medium instruction in higher education teaching.*

**KEYWORDS:** *Xueji, creativity, learning, ethics.*

## 1. INTRODUCTION

The development of artificial intelligence (AI) technology has sparked a global wave of interest in AI applications. As AI trends spread around the world, societal norms and business operations are gradually evolving. With ongoing social and cultural shifts, education is at the forefront of change. Educational systems worldwide have entered an exploratory phase of AI integration. Furthermore, countries and regions that focus on applied technology in learning have begun incorporating AI into relevant curricula, paving the way for new teaching and learning methodologies.

The primary goal of incorporating AI applications into learning is to improve educational effectiveness and outcomes. This is particularly evident in data collection, integration, and inductive learning, where the effects are immediate and significant. Higher education aims to cultivate talent across various fields to meet societal development and workplace demands. With the advent of the AI era, higher education's talent cultivation objectives must align with AI domains, leading to increased emphasis on AI-related courses.

Traditional teaching methods are inadequate for AI-related courses in higher education. AI requires innovative and flexible approaches to build a solid foundation. Key learning objectives include developing ways to inspire, guide, and stimulate student thinking. Central to these teaching techniques is the interaction between educators and students, which is crucial for achieving learning efficiency and fostering innovation.

Alongside AI, internationalization is another significant trend in modern higher education. English-medium instruction (EMI) is a key approach to achieving internationalization goals. For non-English-speaking countries or regions, EMI has sparked global discussions on teaching methodologies, primarily aimed at improving learning efficiency and effectiveness. A crucial commonality in EMI is the emphasis on interactive and

thought-provoking learning experiences.

Pursuing efficiency and creativity is often the goal across various industries, including education. This is especially true for AI-related courses in higher education, which demand creativity, innovation, and efficiency. Interdisciplinary teaching and learning, promoting the integration of various subjects, reflects an important mindset in modern education. The challenge lies in designing AI-related courses in higher education that employ internationalized EMI methods while maintaining interactive and inspiring teaching approaches to achieve talent cultivation goals. Educational theories, through philosophical reflection, often serve as a crucial process for achieving educational objectives by deeply exploring teaching methods.

"Xueji"'s content has profound implications for teaching interactivity and inspiration. It not only elaborates on the concept of educational interaction, but also offers insights into educational and ethical philosophy. Therefore, this study, motivated by the aforementioned factors, explores the application and inspiration of "Xueji" in higher education and EMI, focusing on interactive teaching approaches. This research adopts an interdisciplinary perspective, examining literature on modern corporate leadership interaction models that pursue creativity, contemporary higher education using English as a medium of instruction, interactive teaching methods in AI, and educational philosophies striving for teaching imagination and innovation. Thus, the core of this study lies in exploring the applications and reflective insights of "Xueji" in interactive teaching.

One of the articles in "How to Become a Linchpin" (2010) mentions that the poet Bruce Ario believes that "creativity is an instinct to produce." Google's emphasis on the spirit of creative human resource management confirms the value of this quotation. Creativity is the hand that rocks the cradle in developing competitiveness. The concept of creativity concerns the ability to think beyond the present situation, to change and



upgrade existing forms; it is a kind of energy that can lead to new opportunities. In today's fiercely competitive modern society and civilization, a company's development hinges on leveraging its talents to fully utilize the potential of its employees. Increasing the company's value-added is possible. Once a unique idea is born, the company can grasp the opportunity to take the lead, developing a trend and moving further toward its sustainable management ideal.

Li (2012) uses Jack Welch, the former CEO of General Electric (GE), as an example. He transformed GE's physical constitution through creative human resource management, earning him the title of master of management and serving as a role model for businesses worldwide in their pursuit of excellence. To be more specific, he summarized eight principles based on his management experience, as follows: Top leaders are always hustling to upgrade their crew, using every chat as a chance to evaluate, coach, and boost morale. They ensure that their vision is not merely rhetoric; it is the foundation of the team's success. These head honchos have a knack for getting under your skin in the best way, radiating good vibes, and keeping spirits high. They earn trust by shooting straight, being transparent, and giving props where due. When the situation demands it, they don't hesitate to make controversial decisions or rely on their instincts. They dig deep with questions that border on skeptical, making sure talk turns into action. By walking the walk, they show it's cool to take risks and learn from slip-ups. And when do things click? You bet they crank up the celebration.

It is illustrative that, except for the fifth principle of making unpleasant decisions for the company, all of the principles are consistent with Xueji's content. This demonstrates Xueji's value in the human resources field. Therefore, the goal of this study is to carry out initial research on how Xueji's content can inspire innovative human resource management.

## 2. LITERATURE REVIEW

Although Xueji is a classic document from ancient China, its inspirational values are timeless and gain salience as time goes by. Xueji can be considered a gem in human culture. Most of the previous studies related to Xueji focused on the field of education. Modern thought allows for the integration of Xueji's educational viewpoints into primary, secondary, and higher education, and a general survey can uncover valuable inspirational values within its content. Xiang (2010) suggests that many of the thoughts in Xueji are rare and precious in terms of their contribution to modern education. According to the researcher in this study, the primary reason is that Xueji's core viewpoint is based on human values. In other words, the practical philosophical aspects of Xueji begin with human nature. This characteristic makes the content of Xueji timeless, serving as active inspiration and guidance for issues in various

fields such as humanistic educational philosophy (Su, 2008), life education (Shieh, 2013), multiple intelligence theory (Liu, 2006), moral education (Hsu & Tsui, 2006), and innovative education (Yuan, 2007). Yet, there is no existing study exploring Xueji from the perspective of business or specifically creative human resource management. This is a gap the current study aims to address. The study thus employs content analysis to identify key concepts related to creative human resource management and to provide indicators related to each concept. The study addresses six concepts: (1) motivation activation; (2) improved attitude; (3) good psychological health; (4) good communication; (5) complete guidance; and (6) encouragement to learn.

## 3. RESEARCH METHODS

This study constitutes qualitative research. Guo Wen Xuan (Selected Works from Chinese Literature) provided the original text of Xueji for analysis in this study (Wang et al., 2000). We derive fundamental concepts applicable in creative human resource management, as represented by Xueji, using content analysis (Wang, 2001). The six core concepts in this study are listed above. We analyze the associations between these concepts and specific human resource management indicators through content analysis. The research process is as follows: (1) Read ancient books and their notes to understand the words and ideas in the original text of Xueji; (2) Look at other research and writings about Xueji; (3) Look into what Xueji says about human resource management indicators; (4) Make a list of all the words and ideas from the original text of Xueji that are related to the indicators and put them into groups based on the indicators and quotes from the original text; (5) Look into the ideas and terms that can inspire creative human resource management; and finally, talk about what they mean and how they can be used in creative human resource management.

## 4. Results

According to Xueji's content analysis, six overarching concepts related to creative human resource management are revealed: (1) motivational activation; (2) improved attitude; (3) excellent psychological health; (4) excellent communication; (5) complete guidance; and (6) encouragement to learn. We present these as indicators, support them with quotations from the text, and summarize them in tables.

### 4.1. Activation Motivation

As shown in Table 1, there are four aspects to the application of activation motivation: (1) psychological cognition (items 1 and 2); (2) encouragement of ambition (item 3); (3) encouragement of self-realization (items 4 and 5); (4) encouragement of reputation enhancement (items 6 and 7).



**Table 1**  
**Indicators of Activation Motivation**

Item	Quotation From Xueji	Key Indicators
1	Without learning, people cannot understand why.	Instructors' mission is to inspire creative ideas and promote understanding through learning.
2	Without interest, it is difficult to actively pursue progress.	Cultivate curiosity, then progress to the next level of dedication and commitment.
3	The honor of being an official can inspire the determination to learn by having the honor of being an official.	Honor serves as both an incentive and a driving force.
4	Learn the first three chapters of Xiao Ya's Shi Jing (the Book of Songs).	Identifying inclinations and achieving self-realization.
5	To become a person of noble aspirations, one should first establish a goal.	Setting up goals.
6	Form a custom.	Creating a new culture.
7	Get a smaller name.	Receiving honors for outstanding performance.

**Source:** The author's research and elaboration

“Motivation” is the driving force behind focus and full commitment. Encouraging and inspiring employees to work through incentives and inducements, instilling a sense of honor at work, increasing their willingness to contribute to their organization, and encouraging them to pursue self-realization is the key to successful creative human resource management.

application of improved attitude: (1) finding happiness at work (item 1); (2) encouragement to achieve the goal of perfection (item 2); (3) the capability to face problems and resolve them (items 3 and 4); (4) developing mature basic capabilities and using them flexibly (item 4); (5) the spirit of being modest and diligent (items 6–10); (6) friendly interpersonal relationships (items 11 and 12).

#### 4.2. Improved Attitude

As shown in Table 2, there are six aspects to the conceptual

**Table 2**  
**Indicators of a Better Attitude**

Item	Quotations From Xueji	Key Indicators
1	It is impossible to know how delicious a dish is without tasting it first.	Practice helps with comprehension and learning.
2	To transform jade into a useful vessel, one must cut and chisel it.	Development is necessary and possible. To realize potential, work is required. Always endeavor to do better.
3	One must know one's own insufficiencies to then discipline oneself strictly.	Finding insufficiencies and actively looking for solutions.
4	One will feel confused at first and then start to study intensively and tirelessly.	Striving for self-improvement in a difficult situation.
5	It is impossible to play a stringed instrument if one does not practice how to operate the strings first.	Practicing basic capabilities in order to apply them flexibly and effectively.
6	Be respectful, modest, and focused at all times.	Being diligent, self-disciplined, and clever.
7	Restrain arrogant attitudes.	Learning a lesson from pride.
8	Learn humbly.	Support individuals who consistently exhibit modesty and diligence.
9	Learn anytime, anywhere.	Learning with full commitment.
10	If small ants continue to move dirt, one day they can build a large formicary.	Gradually accumulating the strength of creativity.
11	There is value in loving groups.	Being team players and complimenting each other.
12	Get close to teachers.	Ask questions modestly, and be happy to benefit from advice.

**Source:** The author's research and elaboration

Attitude is the key to maintaining enthusiasm and making continuous progress. The foundation of unique creativity is an attitude of continuous pursuit of new knowledge and learning. The only way to keep ideas coming is to have an improved attitude.

#### 4.3. Good Psychological Health

Table 3 shows five ways that good psychological health can be used: (1) an environment with a culture of respect and a pleasant vibe (items 1–3); (2) friendly interactions with empathy (items 4 and 5); (3) a force that brings people together and builds





support (item 6); (4) getting rid of things that could be potential problems early on and taking steps to avoid them psychological barriers (items 7 and 8); and (5) spotting (items 9 and 10).

**Table 3**  
**Indicators of Good Psychological Health**

Item	Quotations From Xueji	Key Indicators
1	If a problem is still unsolved, it is necessary to think deeper.	Not criticizing or blaming those of poorer capability.
2	Take sufficient time.	A comfortable learning environment.
3	Positive attitudes can resolve doubts.	Resolving problems in a pleasant and genial manner.
4	Respect for the wise can touch the general public.	Creating influences that can move people.
5	There is a sense of coherence among people, whether they are far away or nearby.	Building a sense of belonging.
6	There are deep influences between teachers and students.	Developing a system to assist peers.
7	One must guard against going through difficulties and failing to recognize the benefits.	A person can become full of hatred when in a difficult situation.
8	One should not bear a grudge against a teacher for having secret worries about what has been learned.	Instructors should refrain from blaming others for their inability to learn from instruction.
9	Forbid things that should not happen before they actually happen.	Focusing on prevention, creating a clear list of prohibitions, and taking precautions.
10	Forbidding something that should not have happened after it has happened is too late.	Resolving a problem after the event can be challenging.

**Source:** The author's research and elaboration  
 Feelings and ideas are the internal forces that can influence a person's performance. To become successful, an enterprise must work hard to improve its employees' psychological health and to create a sense of identification and sense of belonging, which are fundamental to preventing malpractice in the enterprise.

**4.4. Effective Communication**

The exemplars in Table 4 illustrate the five aspects related to the conceptual application of effective communication: (1) communication principles (item 1); (2) expression of meaning (items 2 and 3); (3) listening (item 4); (4) skills in answering questions (items 5 and 6).

**Table 4**  
**Indicators of Good Communication**

	Quotations From Xueji	Key Indicators
1	Use profound and appropriate language.	Expression is based on respect for subtlety and goodness.
2	Use simple and precise expressions.	The words used for guidance are simple and to-the-point.
3	Instead of using metaphors in your communication, use words that are simple to understand.	Pointing out problems precisely and revealing blind spots.
4	Listen to students' questions first, and in the event that they do not raise any, explain it to them.	Listening patiently to help break through bottlenecks.
5	Those who are good at answering questions are similar to those who toll a bell.	Applying skills to answer questions.
6	Give a person enough time to think before telling him.	We should give people time to reflect before offering them guidance.

**Source:** The author's research and elaboration  
 For an enterprise to be successful and high performing, it is important for it to value its employees' self-esteem. The absence of respect in the underlying meanings of words used in conversations, communications, guidance, and other interactions between administrators and employees can harm employees' self-esteem and cause them to lose their sense of belonging. As a result, employee professional skills training

must be based on humanism, with friendly conversations and positive communications. Every linguistic interaction becomes a delightful experience, forming the motivation that propels progress.

**4.5. Comprehensive Guidance**

As shown in Table 5, there are four aspects to the conceptual



application of complete guidance: (1) things the instructor must know (items 1–3); (2) guiding principles (items 4 and 10); (3) guiding methods (items 11–17); (4) guiding purpose (items 18 and 19).

**Table 5**  
**Indicators of Complete Guidance**

Item	Quotations From Xueji	Key Indicators
1	Thought should always be above education.	We are creating a learning environment to achieve excellence.
2	One cannot guide students unless they know the factors behind the success and failure of education.	Clear guiding strategies can lead to success in learning.
3	Having only fragmentary knowledge is not enough to be a teacher.	Activating knowledge and using it flexibly.
4	Teaching students in accordance with their aptitude is called making steady progress incrementally.	Guidance in accordance with individual aptitude.
5	Instruct students based on their actual level.	Training in accordance with individual differences.
6	Understand students' talents and capabilities before applying diversified teaching methods.	It is crucial to understand each person's capabilities to provide suitable advice.
7	Teaching in a disorderly manner without a system is no way to help students gain complete knowledge.	We are highlighting the integration of technology, comprehension, and the utilization of intelligence.
8	The son of a good blacksmith must first learn how to stitch and mend leather clothing.	Laying a good foundation for basic strengths allows you to apply them in a masterful fashion.
9	Grasp appropriate opportunities for education.	Making good use of opportunities for education.
10	Teachers must know their students' deficiencies.	Offering effective guidance based on weaknesses or drawbacks.
11	Remedy students' shortcomings according to their psychological profile.	It's crucial to understand the dispositions of subordinates to accurately identify and rectify their mistakes.
12	Encourage and do not suppress.	Replacing standardized answers with inspiration.
13	Give guidance and advice without pushing.	Replacing giving standardized answers with inspiration.
14	Enhance students' strong points and improve their weak ones.	Making up individuals' deficiencies.
15	Instead of giving answers directly, try to be enlightening and edifying.	Thinking outside the box, without limitations.
16	Always observe to understand students' motives and intentions.	We are initiating the spirit of activeness and ambition.
17	Allow students to use their full potential and all their talents.	Inspiring potential.
18	Give clear instructions.	Clear and simple instructions.

**Source:** The author's research and elaboration

One of the main methods for improving an enterprise's achievements is to guide its employees to develop their potential. The starting point is to identify the employees' capabilities. The enterprise then offers diversified guidance to the employees, aligning with its goal. The enterprise selects the most appropriate guiding method based on the employees' job content and personal qualities, with the aim of maintaining their self-esteem and encouraging them to fully utilize their skills.

This increases the likelihood of achieving the overall goal.

#### **4.6. Encouragement to learn**

Table 6 contains indicators for the three aspects of the conceptual application of complete guidance: (1) power to inspire the team (items 1 and 2); (2) the learning type of not adhering to rules (item 3); and (3) encouraging a learning attitude and flexibility (items 4 and 5).



**Table 6**  
**Indicators of Encouragement to learn**

Item	Quotations from Xueji	Key indicators
1	Inspect and learn from each other's strong points.	Inspecting and learning from each other's strong points to inspire innovation.
2	Discuss and learn.	Discussions and learning through brainstorming.
3	Learning during leisure time and while playing.	Learning occurs through static and dynamic games.
4	Learn broadly.	The goal is to achieve mastery of diversified learning and applications.
5	Comprehend through analogy.	Learning by analogy to create new knowledge.

**Source:** The author's research and elaboration

If team members can inspect and learn from each other's work, brainstorm, use a diversified learning model, apply what they have learned flexibly, and work together as a team to come up with creative work, they can generate the energy to help a team grow and inspire their creativity.

## 5. DISCUSSION

Xueji's creative thinking is the core enlightenment. Creativity is about revealing undiscovered ideas made even more wonderful through deep thinking. Creativity is the soul of active learning in AI-related curricula, which has implications for English-medium instruction, enabling it to transform into brilliance. Its essence is not to persist in inverted actions, but to bring about a radical change in the existing state of affairs in order to become competitive. Thus, creative thinking must be a criterion in training AI-related curricula.

One of Xueji's core values is training creative thinking. Teachers create a supportive learning environment where learners can achieve self-transcendence and overcome obstacles, provided they are fully committed. Xueji posits that the linguistic expressions used in creative AI-related curricula aim to stimulate introspection and foster the gradual development of new ideas, grounded in the principles of respect, without criticism, and without blame. The reason for this is that critical words often act as barriers to thinking. They can make people afraid of thinking and limit the space for them to freely use their creativity. This prevents the transformation of their thoughts into innovative ideas. People's acceptance inside their hearts is the foundation of the touchstones in Xueji and the practice of encouraging creativity. The power of touching people is the main factor underpinning acceptance. Therefore, it is fair to say that the value of creativity is to create a heartfelt feeling that can pull at people's heartstrings. Improving life and aesthetics are the fundamental elements of producing creativity. Therefore, a cultural orientation is crucial for enhancing the value of creativity: "We must sculpt and shape jade to transform it into a valuable tool." The basis for inspiring creativity is the pursuit of quality and aesthetics. The renewable cycle of continuous discovery can help us achieve the goal of closeness to perfection. This is the path to achieving the vision of sustainable development. Among the concepts stressed in Xueji are those of being both practical and devoted.

When it comes to fostering creativity, we shouldn't base creativity training solely on imagination. To understand the concept, practice in the field is necessary. This principle is

similar to the old saying, "The person who drinks it knows best whether the water is hot or cold," and the notion of "learning by doing" proposed by Dewey.

Introspection and self-improvement are the essence of Xueji's work, which can inject a strong force into AI-related curricula and have implications for English-medium creativity instruction. This illustrates the worth of creative AI-related curriculum management, which is the spirit of not giving up, gaining release from the cocoon of a framework, and maintaining positive faith and muscular endurance to reverse the trend and turn the tide when in difficulty. In terms of applications, an AI-related curriculum's advantage lies in value creation, and deep thinking generates creativity. Changes in the environment and cultural exchanges between East and West, along with their effects, place AI-related curricula in a competitive scenario, where stagnation signals regression. AI-related curriculum development is linked to competitiveness's output value curve. In other words, the key to developing an AI-related curriculum in an active, interactive environment is to inspire and implement the creative potential. AI-related curriculum development aims to pursue excellence, and creativity is the driving force behind continuous improvement and sustainable, outstanding growth. Xueji is a timeless cultural treasure that inspires creative implications.

## 6. CONCLUSION

The insights from "Xueji" in AI-related courses offer not only valuable philosophical implications for learning, but they also align well with the growing trend of English-medium instruction (EMI) in countries pursuing internationalized education worldwide. This ancient text provides excellent concepts for interactive learning methodologies.

Moreover, "Xueji" emphasizes the importance of preventive education in deterring inappropriate, harmful, and illegal behaviors. This principle offers crucial ethical insights for preventing the misuse of AI. In today's global society, advanced nations are focusing on how to avoid improper applications of AI and their potential adverse effects and impacts, gradually establishing preventive guidelines. The philosophical wisdom of "Xueji" inspires us to adopt a proactive approach, starting with education, to address this critical aspect of AI talent cultivation. This preventive spirit is an indispensable element in nurturing AI professionals.



"Xueji"'s ethical value in AI education lies in its emphasis on foresight and preemptive measures. It underscores the significance of inculcating ethical considerations from the onset of AI education, thereby equipping future AI developers and users with a robust moral compass. This approach aligns with the current global efforts to develop AI responsibly and ethically, making "Xueji" remarkably relevant in modern AI educational contexts.

## REFERENCES

1. *How to become a linchpin* (2010). *Master 60*, 375, 17–41.
2. Hsieh, C. J. (2013). *On the teaching of achieving virtues of "Xue-ji" and its enlightenment to life education of university*. *Journal of Life Education*, 5(2), 39–66.
3. Hsu, Y. S., & Tsui, H. C. (2006). *An analysis of the moral education methods in Xueji and their modern values*. *Journal of Baoshan Teachers College*, 25(3), 46–48.
4. Li, S. Y. (2012). *How Jack Welch, the master of management, managed people and their hearts*. *Cheers* (95), 12–16. <https://www.govloop.com/8-rules-of-leadership-from-jack-welch/>
5. Liu, C. W. (2006). *A comparison of the outlook on education between ancient and modern viewpoints and the corresponding introspection: Using "Liji-Xueji" and "multiple intelligence theory" as examples*. *The Journal of Chaoyang University of Technology*, 11, 207–230.
6. Su, B. R. (2008). *The modern values of the humanistic education ideal in xueji*. *Journal of Inner Mongolia Radio & TV University*, 2008(4), 64–65.
7. Wang, W. K. (2001). *Research methods in education*. Taipei: Wunan Books.
8. Wang, R. S., Ho, R. S., Chou, S. H., Lin, Y. S., Sun, G. H., & Chen, Y. J. (2001). *Selected works from Chinese Literature for Universities*. Kaohsiung: Yichuan
9. Xiang, S. C. (2010). *Modern thoughts about the ideas related to education in Xueji*. *Journal of Chongqing Three-Gorges University*, 26(5), 160–163.
10. Yuan, J. H. (2007). *The creative thinking of education in Xueji and its modern values*. *Journal of ChangZhou University*, 8(4), 43–45.





# A SCIENTIFIC STUDY ON HEART RATE AND MUSCULAR ENDURANCE OF AEROBIC, ANAEROBIC AND COMBINED AEROBIC AND ANAEROBIC ACTIVITIES AMONG ELITE WOMEN

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Article DOI: <https://doi.org/10.36713/epra17808>

DOI No: 10.36713/epra17808

## ABSTRACT

A planned, systematic and chronic training regimen will always leads to significant adaptations on physical and cardiac functions. The heart is an involuntary organ which directly get impact by any systematic training protocol as compared to any other organ of the body, based on this the investigator is throwing a light on how a long distance running training, middle distance running and weight lifting training protocol leads to a significant impact on heart rate at rest and muscular endurance. To fulfill the objectives of the study the investigator has chosen (N=45) elite women volunteered athletes of each (N=15) of long distance running, middle distance running and weight lifting, between 18 to 22 years. All the volunteered elite athletes are trained by their coaches for about 7 to 9 years. The selected criterion parameters are Heart Rate at rest (HR) and Muscular endurance, and they were measure by M-Mode Doppler Echocardiography with the support of qualified cardiologist and bent knee sit-ups (1 min) respectively. The level of significance is set at 0.01 level of assurance. The investigator has concluded that a regular and systematic long distance running, middle distance running and weight lifting training have significantly brought desired changes in heart rate at rest and muscular endurance as compared the normal, healthy, and untrained women reference values. Further, the investigation come to an that the long distance running has significantly lowered heart rate at rest, and significantly enhanced muscular endurance as compared to the middle distance running and weight lifting groups. In ordered to find out the significant difference the analysis of variance (ANOVA) was employed. When the 'F' ratio is significant, the Scheffe's post-hock test was used to find the paired mean significant difference, if any, among the groups of chosen parameters.

**KEYWORDS:** long distance running, middle distance running, weight lifting, heart rate at rest, muscular endurance.

## INTRODUCTION

The quantity of female distance runners and their chances of participating in long-distance races have grown recently. Enhancing athletic performance requires exercises that increase maximal muscle strength and maximal aerobic endurance capacity. People need to move in order to survive because they are dynamic beings. We can guarantee our physical and physiological well-being if the movement is carried out according to certain guidelines and norms. Evidence from the **World Health Organization (2004)** and **Armstrong et al. (2006)** indicates that a significant contributor to early death and morbidity from chronic diseases is physical inactivity. Physical inertia affects all individuals in the modern world. Issues include muscular atrophy, obesity, and hypertension cardiac issues.

Fitness is made up of various elements, such as muscular strength and cardiovascular endurance. Numerous health and performance factors, particularly cardiovascular endurance, have been shown to significant increase with aerobic endurance training (ET). Even while ET improves some aspects of fitness, Predictable cardiovascular changes also result from regular athletic

training. Individuals who train aerobically and those who train resistance exhibit distinct physical and physiological dissimilarities. People who exercise regularly over an extended period of time will experience some degree of cardiac hypertrophy. Different forms of exercise have been shown to cause anatomical changes in the heart. During aerobic activity, the body experiences acute short-term physiological responses such as elevated blood pressure, heart rate, breathing rate, and tidal volume. Chronic aerobic exercise has been shown to raise maximal oxygen consumption during high-intensity aerobic exercise, decrease resting blood pressure and heart rate, reduce body fat mass, and increase muscle mass; on the other hand, low cardiovascular fitness is linked to a higher risk of dying young **Ehrman et al., (2009)**. For this reason, aerobic activity is crucial in lowering the chance of cardiovascular issues on the other hand and it helps to improve cardiovascular fitness. The competition's outcome is impacted by the unpredictable and forceful acts that are part of these sports' performances **Matsushigue et al., (2009)**, **Del Vecchio et al., (2011)**. Physiological (aerobic and anaerobic energy systems, cardiovascular and metabolic competence), bio motor (strength, ability, mobility, flexibility), technical, and tactical traits are all evident.



Athletic performance encompasses an athlete's physical, physiological, bio motor (bio-motor: strength, speed, endurance, mobility, flexibility, coordination), psycho-mental, technical, and tactical abilities. Numerous external and internal elements that impact performance are recognized to be effective **Kilinc, (2003)**. It is crucial that the performance outcomes match the traits (physiological, bio motor, psychological, technical, and tactical) of the field in which it has been used. For instance, while assessing a distance runner's performance state, aerobic capacity (MaxVO<sub>2</sub>) differs from physiological traits while anaerobic power values. Many studies have found that concurrent exercise (CE), which combines strength and aerobic endurance training in the same workouts or regimen, impedes the growth of muscle power or strength. Brief prerestance aerobic activity raises heart rate (HR) during anaerobic resistance training.

Maximum oxygen absorption (VO<sub>2</sub> max), fractional utilization of VO<sub>2</sub> max, and running economy have historically been proposed as the determinants of endurance performance, such as distance running. Varying significantly in endurance running performance, athletes with comparable VO<sub>2</sub> max may have varied running economies. Furthermore, there is proof that anaerobic work capacity can have a significant impact on distance runners' running performance. We predicted, based on specificity considerations that heart rate variability (HRV) assessments between athletes with endurance training and those with anaerobic or higher power output training would differ significantly at the elite level. A wide range of highly skilled track and field athletes did not differ in the time or frequency domain, according to our results. Anaerobic power is thought to be crucial for effective performance. **Platzer et al., Gross et al., (2009); Hogg, (2003)**.

According to **Neumayer et al. (2003)**, having a high aerobic physical efficiency improves one's capacity to recover from repeated bouts of anaerobic exercise, as well as enabling one to withstand higher training loads and lower the danger of overtraining. It also enhances muscle endurance. Activating aerobic metabolism by exercise at VO<sub>2</sub> max is facilitated by training for aerobic power and endurance **Bangsbo et al., (2000), Coyle, (1995)**. Throughout the yearly training cycle, the exercise intensity should be below the anaerobic threshold (AT) and suitably adjusted to AT constraints.

Elite female long-distance runners exhibit high levels of muscular endurance due to extensive aerobic training. Increased mitochondrial density, capillary networks, and oxidative enzymes improve fatigue resistance, enabling prolonged muscle activity. **Joyner, M. J., & Coyle, E. F. (2008)**. Long-distance runners typically have a significantly lower resting heart rate due to increased stroke volume and cardiac efficiency. Enhanced parasympathetic tone and reduced sympathetic activity contribute to lower heart rates in these athletes. **Carter, J. B., Banister, E. W., & Blaber, A. P. (2003)**.

Elite female middle-distance runners exhibit moderate muscular endurance due to a combination of aerobic and anaerobic training. Development of both Type I (slow-twitch)

and Type II (fast-twitch) muscle fibers enhances endurance and power. **Harber, M. P., Konopka, A. R., Udem, M. K., Hinkley, J. M., Minchev, K., Kaminsky, L. A., Trappe, T. A., & Trappe, S. (2012)**. Middle-distance runners experience a moderate decrease in resting heart rate, reflecting the benefits of both aerobic and anaerobic conditioning. Combined training regimes enhance stroke volume and cardiac output, although decrease in heart rate is not as pronounced as in long-distance runners. **Seiler, S., & Tønnessen, E. (2009)**. Elite female weightlifters typically have lower muscular endurance compared to endurance athletes, as their training focuses on strength and power. Increased muscle fiber size and strength, with fewer adaptations for sustained muscle activity. **Hakkinen, K., & Pakarinen, A. (1993)**. Strength training can lead to a slight reduction in resting heart rate due to improved cardiovascular health, but the effect is generally less pronounced compared to endurance training. Increased stroke volume and overall cardiac efficiency, although these changes are not as substantial as those seen in endurance athletes. **Kokkinos, P. F., & Myers, J. (2010)**.

## METHODOLOGY

The primary purpose of this study is to conduct a scientific study on heart rate at rest and muscular endurance of aerobic, anaerobic and combined aerobic and anaerobic activities among elite women. To fulfill the goals of the investigation, 45 (N=45) female elite national varsity athletes were randomly chosen to be subjects in groups of fifteen each, Group I- fifteen athletes (N=15) from long distance running group (5000/10000 mts race) Aerobic. Group II- fifteen athletes (N=15) from middle distance running group (800/1500 mts race) Aerobic and Anaerobic. Group III- fifteen athletes (N=15) weight lifting group (any weight category) Anaerobic, age of 18 to 22 years and all the athletes were in top form. The investigator informed to all volunteered elite athletes about the requirements of the study, and they all agreed to participate in the testing procedure. Volunteered subjects were in good health and trained by their coaches, and they have the national level playing experience and the sports age is between 7 and 9 years. Since the test was non-invasive, no ethical committee authorization was required. Participants in the specified test engaged in lively participation. The efficacy of hemodynamic system and muscular endurance are essentially needed by athletes in three different sports in order to excel in competitive sports. Every sport has specific physical and cardiovascular indices and exigencies for elite performance, in the same way, better heart rate at rest and muscular endurance are needed. One of the study's limitations is that the elite performers were taken into consideration. This study includes assessments of the heart rate at rest and muscular endurance among female elite athletes by using M-Mode Doppler Echo Cardiography and bent knee sit-ups (1 min).

## STATISTICAL ANALYSIS

SPSS v25 and Microsoft Excel were used to analyze the data. The quantitative variables were analyzed by Using ANOVA, the numerical data on physical parameters from each of the three experimental groups were statistically analyzed to look for any suggestive variance. The whole data set was analyzed by using 25 version of the Indian Business Management Statistical Package for Social Sciences. The degree of



conviction for purport was set at 0.01. The data is given below for analysis on criterion variables. When the F-Ratio is significant, the Scheffe's post hoc test was used to find the

paired mean significant difference, if any, among the groups of parameters separately.

**TABLE -I**

**ANALYSIS OF VARIANCE FOR THE HEART RATE AT REST OF LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS.**

Test	Long Distance Running	Middle Distance Running	Weight lifting	Source of Variance	df	Sum of Square	Mean Square	Obtained 'F' Ratio	Table 'F' Ratio
$\bar{X}$	48.733	52.600	56.733	B:	2	480.178	240.089	269.158*	5.168
$\sigma$	0.883	1.121	0.798	W:	42	37.467	0.892		

\*Significant at 0.01 level of assurance.

The table value for purport at 0.01 level with df 2 and 42 is 5.168.

The table I displays that the means of heart rate at rest of long distance running, middle distance running and weight lifting groups are 48.733, 52.600 and 56.733 b/min respectively. The obtained 'F' ratio of 269.158 is much greater than the table value of 5.168 for df 2 and 42 requisite for significant at 0.01 level.

The results of the study indicates that the significant difference exists among elite women athletes of three experimental groups on Heart rate at rest. To define the noteworthy variations among the means of three experimental groups, the Scheffe'S test was employed as post-hoc test and the outcomes were exhibited in Table I A.

**TABLE-I A**

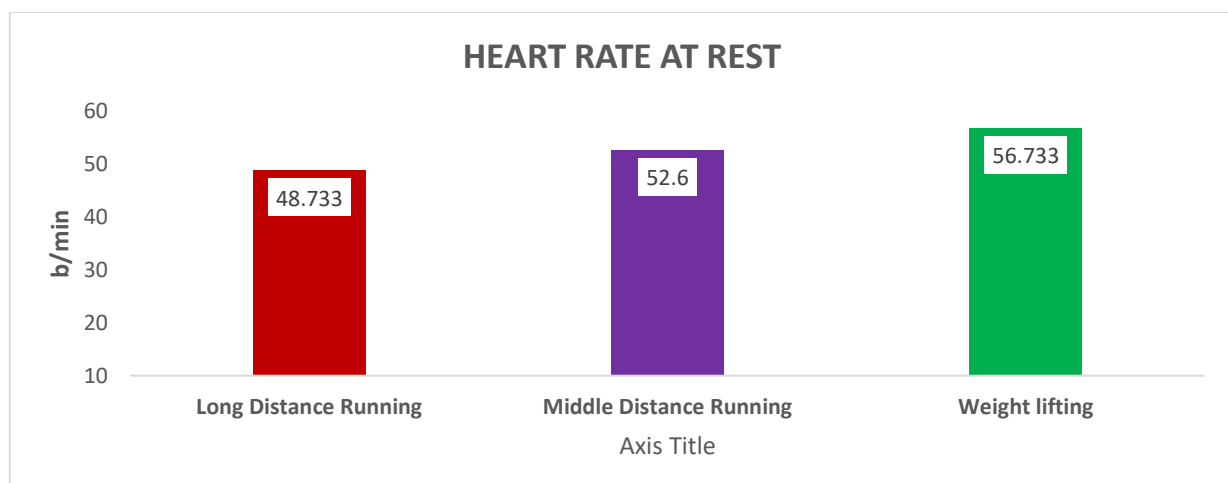
**SCHEFFE'S POST HOC TEST FOR HEART RATE AT REST ON THE MEAN DIFFERENCE BETWEEN LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS.**

Long Distance Running	Middle Distance Running	Weight Lifting	Mean Difference	Confidence Interval Value
48.733	52.600	--	3.867*	1.360
48.733	--	56.733	8.0*	1.360
--	52.600	56.733	4.133*	1.360

\*Significant at 0.01 level of assurance.

The Table IA displayed the test mean difference on Heart rate at rest among the elite women athletes of all three experimental groups are 3.867, 8.0 and 4.133 b/min respectively, which are higher than that of confidence interval value 1.360 at 0.01 level of assurance. Hence, it is culminated from the results that the noteworthy difference existed among three experimental groups on Heart rate at rest, and also concluded that, long

distance training has significantly lowered the Heart rate at rest as compared to the middle distance running and weight lifting groups. Further, it is windup that highest mean difference existed between long-distance running and weight lifting groups. The test mean values on Heart rate at rest of three experimental groups are graphically exhibited in Figure I.



**FIGURE II: BAR GRAPH ON HEART RATE AT REST MEANS OF LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS.**



**TABLE-II**  
**ANALYSIS OF VARIANCE FOR THE MUSCULAR ENDURANCE OF LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS.**

Test	Long Distance Running	Middle Distance Running	Weight lifting	Source of Variance	df	Sum of Square	Mean Square	Obtained 'F' Ratio	Table 'F' Ratio
$\bar{X}$	29.066	26.133	25.066	B:	2	128.711	64.356	75.891*	5.168
$\sigma$	0.961	0.833	0.961	W:	42	35.600	0.848		

\*Significant at 0.01 level of assurance.

The table value for purport at 0.01 level with df 2 and 42 is 5.168.

The Table II displayed the means of long distance running, middle distance running and weight lifting groups are 29.066, 26.133 and 25.066 Seconds severally. The attained 'F' Ratio of 75.891 is much greater than the table value of 5.168 for df 2 and

42 required for significant at 0.01 level. The results of the study shows that the significant difference exists among three experimental groups on Muscular endurance. To define the significant variations among the means of three experimental groups, the Scheffe'S test was employed as post-hoc test and the outcomes were illustrated in Table II-A.

**TABLE-II A**  
**SCHEFFE'S POST HOC TEST FOR MUSCULAR ENDURANCE ON THE MEAN DIFFERENCE BETWEEN LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS.**

Long Distance Running	Middle Distance Running	Weight Lifting	Mean Difference	Confidence Interval Value
29.066	26.133	--	2.933*	1.324
29.066	--	25.066	4.0*	1.324
--	26.133	25.066	1.067	1.324

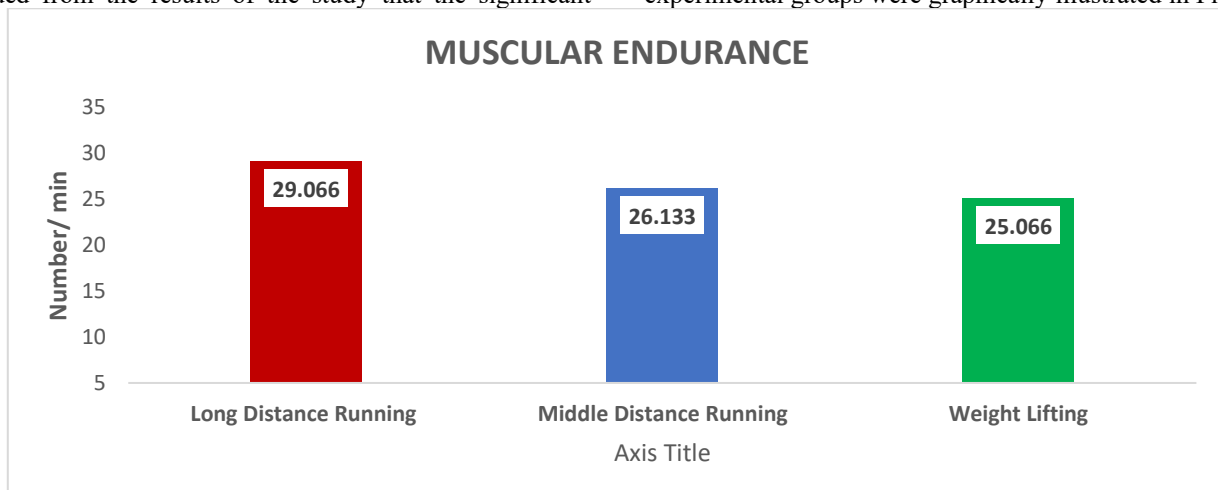
\*Significant at 0.01 level of assurance

The Table II-A displays the test mean difference on Muscular endurance between long distance running and middle distance running is 2.933, and mean difference between long distance running group and weight lifting group is 4.0 which are greater than the confidence interval value 1.324 at 0.01 level of assurance. The mean difference on Muscular endurance between middle distance running group and weight lifting group is 1.067 which is less than the confidence interval value 1.324 at 0.01 level of assurance. Hence, the insignificant difference existed between middle distance running group and weight lifting groups on muscular endurance. Hence, it is concluded from the results of the study that the significant

difference existed between long distance running and middle distance running, long distance running and weight lifting group on Muscular endurance.

From the results the investigation has concluded that, the long distance running has increased the Muscular endurance as compared to other experimental groups. Further, it is concluded that highest mean difference existed between long distance running group and weight lifting group.

The test means values on Muscular endurance of three experimental groups were graphically illustrated in Figure II.



**FIGURE III: BAR CHART ON MUSCULAR ENDURANCE MEANS OF LONG DISTANCE RUNNING, MIDDLE DISTANCE RUNNING AND WEIGHT LIFTING GROUPS**





## DISCUSSION

The results of the study shows that distinct categories of pure aerobic, aerobic and anaerobic and anaerobic demand cause a significant alteration in heart rate at rest and muscular endurance. Based on the evidence there is a significant difference existed among the three experimental groups. The heart rate at rest is significantly lowered and enhanced muscular endurance by long distance running group, as compared to other two experimental groups.

In this study, the researcher hypothesized that there would be a significant shift in heart rate at rest and muscular endurance among elite female athletes which is proved by the present investigation findings that are clinically relevant to existing empirical evidence.

## CONCLUSION AND IMPLICATION

The subsequent completions were inferred from the investigation's findings.

Based on the above research facts the investigator implied that the heart has a better adaptability through lower heart rate at rest and improved muscular endurance by the chronic long distance running training as compared other two experimental training groups.

**Conflict of Interest:** No

## REFERENCE

1. Carter, J. B., Banister, E. W., & Blaber, A. P. (2003). "Effect of endurance exercise on autonomic control of heart rate." *Sports Medicine*, 33(1), 33-46.
2. Cetin, S., Ece, C., Sen, M., Cetin, H. N., & Aydogan, A. (2019). The Effects of Pilates and Aerobic Exercise on Blood Pressure, Heart Rates, and Blood Serum Lipids in Sedentary Females. *Journal of Education and Training Studies*, 7(4), 229-235.
3. Davis, W. J., Wood, D. T., Andrews, R. G., Elkind, L. M., & Davis, W. B. (2008). Concurrent training enhances athletes' strength, muscle endurance, and other measures. *The Journal of Strength & Conditioning Research*, 22(5), 1487-1502.
4. Hakkinen, K., & Pakarinen, A. (1993). "Acute hormonal responses to heavy resistance exercise in men and women at different ages." *International Journal of Sports Medicine*, 14(02), 118-124.
5. Harber, M. P., Konopka, A. R., Udem, M. K., Hinkley, J. M., Minchev, K., Kaminsky, L. A., Trappe, T. A., & Trappe, S. (2012). "Aerobic exercise training improves whole muscle and single myofiber size and function in older women." *American Journal of Physiology-Endocrinology and Metabolism*, 302(1), E97-E104.
6. Joyner, M. J., & Coyle, E. F. (2008). "Endurance exercise performance: the physiology of champions." *The Journal of Physiology*, 586(1), 35-44.
7. KILINC, F., & KAHRAMAN, Y. (2021). Effects Intensive Combined Training on Performance Level Based on Multifaced Performance Analysis of Elite Athlete Preparing for Muay Thai Championship.
8. Kokkinos, P. F., & Myers, J. (2010). "Exercise and physical activity: clinical outcomes and applications." *Circulation*, 122(16), 1637-1648.
9. Mikkola, J., Rusko, H., Nummela, A., Pollari, T., & Häkkinen, K. (2007). Concurrent endurance and explosive type strength training improves neuromuscular and anaerobic characteristics in young distance runners. *International journal of sports medicine*, 28(07), 602-611.
10. Seiler, S., & Tømmessen, E. (2009). "Intervals, thresholds, and long slow distance: the role of intensity and duration in endurance training." *Sports Science*, 13(1), 45-53.
11. Sokmen, B., Witchey, R. L., Adams, G. M., & Beam, W. C. (2018). Effects of sprint interval training with active recovery vs. endurance training on aerobic and anaerobic power, muscular strength, and sprint ability. *The Journal of Strength & Conditioning Research*, 32(3), 624-631.
12. Zebrowska, A., Żyła, D., Kania, D., & Langfort, J. (2012). Anaerobic and aerobic performance of elite female and male snowboarders



# SOCIO-PHILOSOPHICAL PROCESSES OF HUMAN SENSUALIST VIEWS IN AN ENLIGHTENED SOCIETY

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## ABSTRACT

Enlightenment occupies a leading place in human sensualist views. Enlightenment is a feature of strengthening a person's will and summarizing his thoughts. The aspect of enlightenment of the human factor is complex and multifaceted in life position and consists of such elements as his worldview, values, goals, interests, moral relations, motives, intellectual and emotional-will qualities.

**KEYWORDS:** Society, development, enlightenment, human sensualist, social, philosophical, life position, worldview, value, purpose, interest, moral relations, motives, intellectual, communication, health, scientific news, world order, retrospective.

## INTRODUCTION

Global changes and conflicts in the world indicate the need to study the social and educational foundations of society's development. In this regard, understanding the value of human dignity, which is considered to be the highest level, is recognized as a sign of the spiritual and educational processes of the development of society. This creates the need to form enlightened people and relationships capable of changing the face of society. The creation of a new spiritual space in society is gaining priority in the implementation of socio-philosophical research from the point of view of the era.

## MATERIALS AND METHODS

In the world's leading scientific centers, as a result of social culture, spiritual and educational changes, strategic scientific research is being conducted into the educational foundations of human views. A number of scientific centers of the West are conducting research on the rational influence of the "human factor" on the development of society. Including VINNOVA, Innovate UK in Sweden, Innosuisse in Switzerland, Enterprise Estonia and MITA institutes in Lithuania, National scientific agencies NSF in the USA, ARC in Australia, ANR in France, WTO in Japan and SFI in Ireland[4], Human Resource Management Scientific Institute at Samarkand State University in Uzbekistan -research centers first of all understand a person as a rational being, and then the rationalistic aspects of the sensualist (emotional, feeling) views and moral theories that develop society are studied.

Scientific research on the sensualist views of an enlightened person in the development of society revealed some aspects of the views of Eastern and Western thinkers. For example, Hakim al-Tirmizi compares enlightenment to light, about its role in the formation of human emotions[14. -B 150.], Rogib Isfahani's rise of sensualist views of man as "Knowledge, practice, manners are equal to high title, noble lineage and wealth" [11. - B 450] states. This rich cultural heritage has not lost its importance even today. Al-Zamakhshari "Where action is

weak, strong knowledge is useless. Knowledge without action is a rainbow arrow without a thread" [10]. -B 26.], Abu Nasr Farabi said "City of virtuous people" [5. -B 45. ] views put forward in the work is based on the need to be enlightened as a methodological basis for building an enlightened society.

In the works of Western thinkers, human sensualist views are the basis for the development of society. Philosopher Thomas Hobbes believed that man is primarily a part of the state. He believed that he should be the servant of the people and ensure their happiness and security, not the other way around. At the same time, the philosopher criticizes the state system and considers that it humiliates and insults people. According to him, "The ability to have knowledge is enlightenment in a person" [7. - S 513.] forms. He says that a person should feel it.

Scientific research on the sensualist views of an enlightened person in the development of society revealed some aspects of the views of Eastern and Western thinkers. For example, Hakim al-Tirmizi compares enlightenment to light, about its role in the formation of human emotions[14. -B 150.], Rogib Isfahani's rise of sensualist views of man as "Knowledge, practice, manners are equal to high title, noble lineage and wealth" [11. - B 450] states. This rich cultural heritage has not lost its importance even today. Al-Zamakhshari "Where action is weak, strong knowledge is useless. Knowledge without action is a rainbow arrow without a thread" [10]. -B 26.], Abu Nasr Farabi said "City of virtuous people" [5. -B 45. ] views put forward in the work is based on the need to be enlightened as a methodological basis for building an enlightened society.

## RESULT AND ANALYSIS

In turn, it serves to expand the consciousness and thinking of the members of the society, the philosophy of life and the worldview" [16.] and expresses his attitude to it. That is, he believes that the construction of an enlightened society in the environment of society is necessary to research human



sensualist views (increasing intellectual potential and worldview, patriotism, love and loyalty to the people).

It should be noted that Abu Rayhan Beruni's statement about the essence of the sensualist views of an enlightened person in the development of society, "Each conscious member of society, regardless of his profession and specialization, can be fully informed only by acquiring knowledge about society in depth." - one should know the causes and consequences of the social events and processes taking place around, and have the ability to manage them" [6. - B 39.], it is appropriate. This makes it possible to determine the general basis of socio-political and moral phenomena in the society, that is, to determine the fundamental foundations of the stability of socio-political life, to preserve the society as a whole. In our opinion, the formation of the scientific-theoretical foundations of the sensualist views of an enlightened person in the development of society is expressed in the thesis, which lays the groundwork for the foundation of the third Renaissance. According to him, "The enlightened society is a national goal, on the basis of harmonizing the interests of society and the interests of the individual, glorifying human dignity, freedom of thought and diversity of ideas, responsibility, tolerance, rule of law and high political culture. is formed" [15]. This means that an enlightened society is important in terms of social and political governance and its improvement.

It has been studied that the activity of the researchers of the sensualist view of man is expressed in the studies of several Western philosophers. In particular, the philosopher J. Berkeley states that knowledge is needed to perceive sensualistic sensations in human views [2], and another philosopher D. Hume states that it is necessary to learn what constitutes the sum of a person's feelings in order to form a more coherent human sensualistic views[8]. . E. Condillac, as one of the most systematic representatives of human sensualist views, tried to derive the whole content of knowledge and intellectual life from sensations in his "Treatise on Feelings". According to E. Condillac, "a collection of sensations (enlightened human intuition) imaginations, feelings of pleasure and displeasure also come from them"[9] It means that it should serve the society.

It is noted that the individuals who caused strategic changes of any developed countries bring new trends and events into the environment of the time. This is the reason that the views of famous philosophers and scientists about the essence of human activity led to the study of the concept of "human factor" of socio-philosophical thinking. The results reveal that the interpretations of the human concept represent the necessity of enlightened human views for the development of human sensualist views in society from a dialectical point of view. In this sense, the author, according to Aristotle: "Sensualism is in the sensations in the mind and what is expected to appear in them [13]", emphasizes the need to highly evaluate the place of sensations in human life in the dialectical materialism theory of knowledge. . Also, that thought must have been individualistic from the point of view of that time. Now, epistemologically, it is based on the comparative analysis that the subject of

knowledge includes not society, but all periods of existence of the individual.

In fact, "The importance of enlightenment in the education of the nation and society is unparalleled. Its implementation is primarily the responsibility of intellectuals, first of all, scientists and teachers, poets and artists. If the nation has lost its rights, distanced itself from ancient knowledge, forgotten its identity, and reached the level where society is devoid of spirituality, the task of intellectuals is ten or even a hundred times more difficult. "[3], which creates socio-philosophical aspects of educating enlightened people in the development of society.

## DISCUSSION

From a philosophical point of view, synergetics not only brought a new meaning to dialectical thinking, but also had a positive effect on the change of the ideas of positivism, ontologism, reductionism, relativism, and postmodernism. Also, in synergetics, there is an opportunity to define integrative research methods of nature, society, man, spiritual-aesthetic environment, informational and man-made activities, new description, analysis, their division into groups, observation and interpretation.

In the research, "Formation and development of a prosperous lifestyle in society requires building on the basis of a number of socio-spiritual factors based on moral and aesthetic values. These are:

- Manifestation of the social appearance of a prosperous society, i.e. spiritual, moral and aesthetic image, culture and perfection;

- The appreciation of high human feelings aimed at the realization of the goals and desires of each person in the society and its practical proof;

- Inculcating aesthetic education on the basis of national values in the mind of a person based on the formation of a healthy lifestyle in society, deciding on a strong aesthetic ideal that brings the spirit of freedom and creativity based on the essence of modernity;

- On the basis of a healthy lifestyle, it is necessary to strengthen human aspirations towards perfection, and on this basis, to form a modern way of thinking about the source of power of a prosperous society" [13. – B 13.]. In our opinion, relationships in the synergistic processes of the healing of the social and spiritual environment determine the need for a healthy family environment and neighborhood environment.

## CONCLUSION

Philosopher A. Astin partially agrees with the views that spirituality has a central place in liberal education and emphasizes the need to add to it. That is, "If the goal of education is to make a person more aware of himself and the world, then teachers should think about how best to develop human abilities to observe different aspects of consciousness in relation to the world. need"[1], in the view of the philosopher, he emphasizes that spirituality is related to the inner world of man, subjective life and human consciousness. The author adds that it is necessary to connect human values and beliefs, as well as concepts such as people's identity, origin, purpose of life.



Fundamental reforms in the field of education, which are implemented as a basis for building an enlightened society in the strategy of continuous spiritual education, require high skill in terms of content. In our opinion, the reforms are expressed by the adoption of the concepts of the development of continuous education on the basis of continuous spiritual education.

## REFERENCES

1. Astin A. W. (2004). *Why spirituality deserves a central place in liberal education*. *Liberal Education*, 90(2), 34-41.
2. Bennett J. Locke, Berkeley, Hume: central themes. Oxford, 1971. ISBN 0-19-875016-1, ISBN 978-0-19-875016.
3. Jadidlar. Abdulla Avloniy. Risola/ Toshkent. "Yoshlar nashriyot uyi". – B 27. qayerda
4. VINNOVA in Sweden, Innovate UK, Innosuisse in Switzerland, Enterprise Estonia and MTA in Lithuania, National Science Agencies NSF in USA, ARC in Australia, ANR in France, WTO in Japan and SFI in Ireland
5. Абу Наср Форобий "Фозил одамлар шахри". "Янги асп авлоди". Тошкент. 2016. –Б 45.
6. Буюк сиймолар, алломалар: (Ўрта Осиёлик маиҳур мутафаккир ва донишмандлар). /Наширга тайёрловчи М.М.Хайруллаев. – Тошкент.: Маънавият, 1995. – Б 39.
7. Гоббс Т. О человеке // Сочинения: в 2 т. Москва. 1991. Т. – С 513.
8. Давид Юм и современная философия. Сб. статей. – Москва. 2012.
9. Кондиллак Э. "Трактат об ощущениях". Москва. Мысль, 1980 – 1983. – Серия «Философское наследие».
10. Маҳмуд Замаҳширий. "Муқадимату-л-адаб" /Наширга тайёрловчи З.Исломов-ТИУ. Тошкент. 2002. –Б 26.
11. Роғиб Исфажоний "Ал-муфрадот фи ғарибил қуръон". – Б 450
12. Рўзимуродов С. М. Оилада соғлом ва обод турмуш тарзини шакллантиришнинг фалсафий-эстетик муаммолари Фалсафа фанлари бўйича фалсафа доктори (PhD) диссертацияси Автореферати. Самарқанд. 2020. – Б 13.
13. Философский энциклопедический словарь. Москва.: Гл. редакция: Л. Ф. Ильичёв, П. Н. Федосеев, С. М. Ковалёв, В. Г. Панов. 1983.
14. Чориев З., ва бош. "Ал-Ҳаким ат-Термизий". "Янги асп авлоди". Тошкент. 2008. –Б 150.
15. Эркаев А. Маърифатли жамият учинчи Ренессанс пойдеворини яратишда таянч бўлади. "Халқ сўзи" газетаси 2022 йил 19 май, №103 (8165)
16. Янги Ўзбекистон-маърифатли жамият" концепцияси ва уни амалга ошириш миллий дастури ишлаб чиқилади. 9 Сентябрь 2021. <https://xs.uz/uzkr/post/yangi-ozbekiston-marifatli-zhamiyat-kontseptsiyasi-va-uni-amalga-oshirish-millij-dasturi-ishlab-chiqiladi>
17. Содиржонов М. Изучение проблем человеческого капитала в этносоциологических процессах //in Library. – 2021. – Т. 21. – №. 4. – С. 59-69. 14.
18. Содиржонов М. Ijtimoiy transformatsiya jarayonlarida inson kapitalini rivojlantirish //in Library. – 2023. – Т. 1. – №. 2. – С. 197-201. 15.
19. Содиржонов М. Этносоциологические факторы процессов этнического самоустановления //in Library. – 2020. – Т. 20. – №. 1. – С. 147-149.





# PROGRAMS IMPLEMENTED AT TAHANAN NI MARIA: A CASE STUDY FOR THE EMPOWERMENT AND REHABILITATION

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Article DOI: <https://doi.org/10.36713/epra17830>

DOI No: 10.36713/epra17830

## ABSTRACT

This study evaluates the rehabilitation programs implemented at Tahanan ni Maria, focusing on how these programs empower and contribute to the holistic development of their beneficiaries. The study gathers data on various services provided, including social, homelife, educational, psychological/psychiatric, health, economic productivity or skills training, recreational sports, developmental, and spiritual services. The survey employs a five-point Likert scale to measure the extent of implementation and the challenges encountered in the implementation of the programs.

The findings revealed that all rehabilitation programs are highly implemented, with an overall weighted mean score of 4.76. Specific services such as educational, social, and spiritual services obtained the highest implementation ratings, indicating their significant role in supporting the beneficiaries' development. However, the study identifies several challenges that hinder the program's effectiveness, including lack of staff, limited funding, and resistance and stigma from some beneficiaries and their families.

Recommendations to address these challenges include increasing staffing levels, securing additional funding, enhancing staff training, combating societal stigma through education programs and fostering better coordination with other agencies and organizations. By executing this recommendations, Tahanan ni Maria can enhance its rehabilitation programs certifying more comprehensive support and empowerment for its beneficiaries.

**KEYWORDS:** Tahanan ni Maria, Rehabilitation Programs, Empowerment, Rehabilitation

## I. INTRODUCTION

Rehabilitation is a complex concept and can mean very different things within different contexts (Higgins, A., & Bourke, R. 2017). According to Campbell (2010) rehabilitation is defined as the process of helping a person to readapt to society or to restore someone to a former position or rank. The underlying assumption is that returning to readapting to, or being restored to a prior social status is something that is both desirable and possible. Rehabilitation is a sophisticated journey, encompasses social, educational, medical, and vocational measures. It enfold training, therapy, and unwavering support to guide individuals towards a healthy and normal life. For victims of domestic violence, rehabilitation becomes a lifeline, offering escape from the chains of abuse and the chance to rebuild shattered self-esteem.

Rehabilitation programs that focus on education enhancing job skills or providing specific psychological assistance are often advanced as potential mechanisms (Arbour, 2021).

Violence against women worldwide has a profound violation of human rights and gender equality. Women who are victims of violence frequently experience extensive emotional and psychological injury. Acknowledging the importance of the comprehensive needs of victims of violence, Rehabilitation Programs plays a pivotal approach for the holistic healing and empowerment for survivors of gender-based violence.

The Tahanan ni Maria is a venue of hope and transformation. It is not only a shelter for women who were abused but also a place for restoration and empowerment.

The purpose of this study is to determine the Programs Implemented at Tahanan ni Maria. Specifically, it seeks to answer the following: 1) What are the Rehabilitation Programs Implemented at Tahanan ni Maria and how do they empower and contribute to the holistic development of its beneficiaries? (2) What are the challenges encountered in implementing these programs? (3) Proposed programs or activities to empower the beneficiaries at Tahanan ni Maria.

By comprehensively documenting the programs practices and challenges, this study will serve as inputs for the departments initiative to come up with an extension program.

Further, the researchers as faculty members from the College of Criminology and presently assigned as Guidance Coordinator and Gender and Development (GAD) Focal person respectively believes that this study will help the university, specifically the College of Criminology.

## II. METHODOLOGY

This study aimed to determine the Programs Implemented at Tahanan ni Maria as well as the challenges encountered in the implementation of these programs. To achieve this goal, the respondents were made up of guardians, house parents and personnel. A mixed method research approach was employed, combining both qualitative and quantitative data collection methods.



### III. RESULTS AND DISCUSSION

**Table I. Rehabilitation Programs Implemented at Tahanan ni Maria and how do they empower and contribute to the holistic development of its beneficiaries**

INDICATOR	WM	VERBAL INTERPRETATION
<b>1. SOCIAL SERVICES</b> -Assistance of integrated and Comprehensive Rehabilitation programs and services using an interdisciplinary framework for individuals' physical, social, mental, and emotional health while being at the center.	4.87	Highly Implemented
<b>2. HOMELIFE SERVICES</b> -Assistance with basic needs such as clothing, food and shelter, as well as trying to give and trying to teach the child household activities and work assignments based on her capacity, interest and preparedness, all with the goal of offering a semblance of typical family life.	4.79	Highly Implemented
<b>3. EDUCATIONAL SERVICES</b> -Provision of continuous education opportunities via-non formal or formal education in collaboration with the Department of Education (DEpED) and NGOs.	4.91	Highly Implemented
<b>4. Psychological/Psychiatric Services</b> -Administers psychological test to determine the client's aptitude, interest, and cognitive functioning. Girls who require psychiatric programs are referred to health institution for professional assistance and treatment.	4.70	Highly Implemented
<b>5. HEALTH SERVICES</b> -Provision and upkeep of physical, nutritional, and mental well-being. This includes consultation and therapeutic interventions, medical and dental examinations, and referral to a hospital for further medication attention, assessment and treatment.	4.79	Highly Implemented
<b>6. ECONOMIC PRODUCTIVITY OR SKILLS TRAINING</b> -Skills and development training provide girls with basic livelihood capabilities, to begin with, once they are reunited with their households or reintegrated into community.	4.66	Highly Implemented
<b>7. RECREATIONAL SPORTS</b> -Conducts a variety of activities such as camps, sports and social gatherings with the goal of fostering the girls' well-rounded personalities.	4.66	Highly Implemented
<b>8. DEVELOPMENTAL SERVICES</b> -Provision of activities to assist the resident in developing awareness and technical knowledge planning and gaining access to skills training to prepare them for potential open and self-employment.	4.66	Highly Implemented
<b>9. SPIRITUAL SERVICES</b> -Refers to programs or activities such as regular team prayer time and masses that will promote residents' close relationship with God as well as brotherhood.	4.87	Highly Implemented
<b>TOTAL</b>	4.76	Highly Implemented

Table I presents the rehabilitation programs implemented at Tahanan ni Maria. It can be deduced from the table that indicator: (1) Social Services obtained a weighted mean of 4.87. It shows that comprehensive rehabilitation programs addressing physical, social, mental and emotional health are effectively provided. This multifaceted approach certifies a well-rounded support system for the beneficiaries. (2) Homelife Services obtained a weighted mean of 4.79. It reveals that basic needs and household activities are well-provided, imitating a family-like environment. This supports the beneficiaries in obtaining necessary life skills and a sense of normalcy. (3) Educational Services obtained a weighted mean of 4.91. Partnership with the Department of Education (DepED) and NGOs ensures continuous education opportunities, highlighting a strong significance on formal and non-formal education for the beneficiaries. (4) Psychological/Psychiatric Services obtained a weighted mean of 4.70. It appeared that psychiatric care signifies a proactive approach in response to the mental health needs of the beneficiaries. (5) Health Services obtained a weighted mean of 4.79. It conveyed that, extensive health services, including medical, dental, and therapeutic interventions, guarantees the physical and mental well-being of the beneficiaries is maintained. (6) Economic Productivity or Skills Training obtained a weighted mean of 4.66. It presents skills development training taught the girls with livelihood capabilities, preparing them for reintegration into their

communities with economic independence. (7) Recreational Sports obtained a weighted mean of 4.66. It implies that recreational activities promote well-rounded personalities, providing physical, social, and emotional benefits. (8) Developmental Services obtained a weighted mean of 4.66. It manifests that activities aimed at technical knowledge and skills training prepare residents for future employment opportunities, strengthening their future self-sufficiency. (9) Spiritual Services obtained a weighted mean of 4.87. It conveyed that spiritual activities foster a close relationship with God and promote a sense of brotherhood among beneficiaries, supporting their spiritual growth.

The rehabilitation programs at Tahanan ni Maria are highly implemented, with an overall weighted mean of 4.76. This stipulates a strong implementation across various domains crucial for the holistic development of the beneficiaries.

The findings also highlighted that the comprehensive and interdisciplinary approach of these programs effectively addresses the physical, social, mental, emotional and spiritual needs of the beneficiaries. Specific services such as educational, social and spiritual services received the highest implementation ratings, indicating their remarkable role in supporting the beneficiary's development.



Based on the personnel interviews, the implementation of these services is highly implemented. The personnel commented:

*“We are proud of the comprehensive and holistic approach we have implemented to support our residents' well-being. By meeting basic needs such as clothing, food, and shelter, and teaching household activities, we help our residents feel secure and develop essential life skills”.*

Furthermore, Personnel highlighted the role of continuous education and skill development in empowering individuals and preparing them for future independence. They also emphasized promoting personal growth through recreational and spiritual activities.

The findings is congruent to the study of Duguid (2000), stating that: Education and Rehabilitation efforts may be seen as

compatible endeavors when they adopt an approach that prioritizes the person. In addition, in the study of Heggins (2017), Social rehabilitation is also important due to its intention to restore and develop the abilities of a person experiencing social dysfunction so that they can carry out their social functions properly. Moreover, in the study of Woody (2000), behavior in its individual and social contexts, with an emphasis on spiritual values in rehabilitation programs to effect positive social reentry is very important. A positive correlation between commitment to spiritual values and practices and positive personal transformation has implications for the presence and the role of faith-based institutions in recovery. Substantial research has been also conducted on the utility of faith as a coping mechanism in response to negative and traumatic events (Racusin & Lauren, 2017).

**Table II. Challenges encountered in implementing the Programs**

INDICATOR	WM	VERBAL INTERPRETATION
<b>1. LACK OF STAFF</b> - Insufficient staffing can hinder the effectiveness of personnel in delivering Rehabilitative Programs.	3.54	Agree
<b>2. LACK OF TRAINING</b> - The undertrained staff may struggle to provide quality services to beneficiaries.	2.33	Disagree
<b>3. LIMITED FUNDING</b> - The limited funding for rehabilitative programs can lead to insufficient resources to provide necessary services and support to beneficiaries.	3.95	Agree
<b>4. RESISTANCE AND STIGMA</b> - Some beneficiaries and their families may resist rehabilitation efforts due to societal stigma or misconception about the program.	3.79	Agree
<b>5. INADEQUATE INFRASTRUCTURE</b> - There may not be enough rehabilitation centers or suitable facilities to provide the services and support to beneficiaries.	2.5	Disagree
<b>6. LACK OF COORDINATION</b> - Lack of coordination and communication with other Government agencies, non-Governmental organizations and community groups.	2.20	Disagree
<b>TOTAL</b>	3.05	Moderately Agree

Table 2 presents the challenges in implementing the programs at Tahanan ni Maria. It can be noted that the indicators: (1) Lack of staff obtained a weighted mean of 3.54. It can be inferred that insufficient staffing is acknowledged as a challenge, which could affect the rendition and effectiveness of the rehabilitation programs. (2) Lack of Training obtained a weighted mean of 2.33. It can be deduced that the staff appears to be sufficiently trained, proposing that training is not a major issue impacting program quality. (3) Limited funding obtained a weighted mean of 3.95. It shows that funding constraints are a notable challenge, probably limiting the resources available for providing comprehensive services. (4) Resistance and Stigma obtained a weighted mean of 3.79. It reveals that Societal Stigma and resistance from beneficiaries and their families are remarkable challenges that can impede rehabilitation efforts. (5) Inadequate Infrastructure obtained a weighted mean of 2.50. It implies that the infrastructure is considered adequate, indicating that there are sufficient facilities to support the rehabilitation programs. (6) Lack of coordination obtained a weighted mean of 2.20. It can be construed that coordination and communication with other agencies and organizations are not seen as significant issues, suggesting effective collaboration exists.

The challenges faced in implementing the programs are moderately agreed upon, with an overall weighted mean of 3.05. The primary challenges identified include Lack of staff and limited funding, both of which can impact the sustainability and expansion of services. Resistance and Stigma from beneficiaries

and their families are also significant concerns that need to be addressed.

Based on the perspective of personnel, the delivery of rehabilitative programs is significantly impacted by several key challenges. According to them:

*“One of the primary issues we face is the lack of sufficient staff and insufficient financial resources. This insufficiency hampers our ability to effectively deliver the comprehensive support that beneficiaries need. In addition, Societal resistance and stigma are also considerable obstacles. Misconceptions about rehabilitation programs often lead to reluctance among beneficiaries and their families to engage fully with the services offered”.*

The result is consistent with the study of Leonor (2023), stating therein that the issue of insufficient funds is considered as a concern of the personnel. Likewise, the insufficient staff as well as the perception of inadequate training for personnel in implementing the programs is also a challenge. Further, the pain of psychological assessment is another very real pain of the rehabilitation. That’s why, societal stigma from beneficiaries and their families is also a concern. The findings agree to the study of Mulyana et al. (2022) that until now there are still negative views from the community, even the closest family members. This can cause or worsen mental conditions, as one of the reasons for the challenges of rehabilitation programs.



**TABLE III. PROPOSED PROGRAM OF ACTIVITIES**

To address the challenges and empower the holistic development of personnel, a comprehensive program of activities was designed to enhance their skills, knowledge, and well-being. This program

aims to improve staffing effectiveness, secure additional funding and reduce stigma and strengthen coordination with other entities.

Proposed Activity	Objectives	Strategies/Activities	Proponent/s	Beneficiaries	Outcome
(Staffing Solutions) ➤ Volunteer Program	To supplement staffing with dedicated volunteers	Develop a structured volunteer program with clear roles and responsibilities, training and supervision.	Rehabilitation Center Administration and staff members	Personnel and residents at Tahanan ni Maria	Alleviate staff workload and provide additional support
(Funding and Resource Management) ➤ Fundraising Events	To raise funds for program needs	Organizes events such as charity runs, auctions and community fairs	Rehabilitation center Administrators in collaboration with School Administrators, teachers, staff and students.	Personnel and Residents at Tahanan ni Maria	Generate additional financial resource for program enhancement
(Reducing Stigma and Resistance) ➤ Community Outreach programs	To educate the community about rehabilitation programs and reduce stigma	Conduct awareness and engage in community dialogues	<ul style="list-style-type: none"> <li>➤ Rehabilitation Administration and Staff</li> <li>➤ Former residents of the rehabilitation center</li> <li>➤ Community leaders</li> <li>➤ Schools and Educational Institutions</li> </ul>	Victim of violence/abuse	Reduce resistance and enhance engagement with rehabilitation

#### IV. CONCLUSION

The study on the rehabilitation programs implemented at Tahanan ni Maria reveals that the programs are highly effective and well-implemented, notably contributing to the holistic development of the beneficiaries. The overall weighted mean score of 4.76 signifies that most of the programs are highly implemented specifically educational, social and spiritual services. The programs' success is credited to their ability to provide a comprehensive service that caters to the various needs of the beneficiaries, thereby empowering them and attributing them to their overall development.

However, the study also identifies several challenges in the implementation of these programs. The main challenges include lack of staff, limited funding and resistance and stigma from some beneficiaries and their families. These challenges are moderately agreed upon by the respondents, with an overall mean score of 3.05. Other issues such as lack of training, inadequate infrastructure, and lack of coordination with other agencies are less significant but still pose hindrance to the effective provision of services.

#### V. RECOMMENDATIONS

1. To strengthen the effectiveness of the rehabilitation programs, it is essential to address the staffing shortages. This can be achieved by hiring additional qualified personnel.
2. To increase funding and resource allocation, seeking grants and forming partnerships with government agencies and non-government organizations and private sector entities will add financial support for the programs.
3. Conduct regular workshops and training to staff to be well-informed with the latest rehabilitation techniques and best practices in order to effectively support the beneficiaries.
4. Designed an education program to address societal stigma and misconceptions about rehabilitation.

Engaging with the community and families of beneficiaries can help foster a more supportive environment and reduce resistance to rehabilitation efforts.

5. Create a network of support through collaboration with other government agencies, NGOs and community groups.
6. Implement continuous monitoring and evaluation system to assess the effectiveness of the rehabilitation program.

#### VI. REFERENCES

1. *Arbour, William and Lacroix, Guy and Marchand, Steeve, Prison Rehabilitation Programs: Efficiency and Targeting (October 4, 2021). Available at SSRN: <https://ssrn.com/abstract=3761992> or <http://dx.doi.org/10.2139/ssrn.3761992>*
2. *Crewe, B. (2011). Depth, weight, tightness: Revisiting the pains of imprisonment. Punishment & Society, 13(5), 509-529. <https://doi.org/10.1177/1462474511422172>*
3. *Duguid, S. (2000). Theory and the Correctional Enterprise. In F. Wilson & A. Reuss (Eds.), Prison(er) Education: Tales of Change and Transformation. Waterside Press.*
4. *Green, D. P. and D. Winik (2010). Using random judge assignments to estimate the effects of incarceration and probation on recidivism among drug offenders. Criminology 48(2), 357-387.*
5. *Higgins, A., & Bourke, R. (2017). Bedford Row Family Project : Holding the Suffering Bedford Row Family Project : Holding the Suffering. <http://hdl.handle.net/10395/2162>*
6. *Leonor, C. R. . (2023). Community Involvement in the Rehabilitation and Treatment of Persons Deprived of Liberty (PDL): A Case Study of the Iriga District Jail, Philippine. Journal of Advances in Humanities Research, 2(3), 97-112. <https://doi.org/10.56868/jadhur.v2i3.144>*





7. Khoer Mulyana, D. ., Ulfiah, Hendi Suhendraya Muchtar, & Sayid Muhammad Rifqi Noval. (2022). *Social Rehabilitation Management For Victims Of Drugs Abuse Through Vocational Education. International Journal of Educational Research & Social Sciences*, 3(2), 690–701. <https://doi.org/10.51601/ijersc.v3i2.319>
8. Moss-Racusin, Lauren, "The Role of Faith in Health Outcomes for Victims of Physical Intimate Partner Violence" (2017). *Master's Theses*. 1099. [https://opencommons.uconn.edu/gs\\_theses/1099](https://opencommons.uconn.edu/gs_theses/1099)
9. Woody, Dierdre (2000) "Spirituality and Rehabilitation: Intimate Views from Insiders," *New England Journal of Public Policy*: Vol. 15: Iss. 2, Article 8. Available at: <https://scholarworks.umb.edu/nejpp/vol15/iss2/8>



## SKIN CANCER SCOPING REVIEW

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**Article DOI:** <https://doi.org/10.36713/epra17842>

**DOI No:** 10.36713/epra17842

### SUMMARY

**Introduction:** skin cancer is a pathology with an important frequency in the world, it is generally divided as non-melanoma skin cancer (NMSC) or melanoma. The exact incidence of skin cancer is complex to establish due to lack of diagnostic criteria and sometimes underreporting.

**Objective:** to detail current information related to skin cancer, etiology, epidemiology, pathophysiology, assessment, treatment, differential diagnosis and skin cancer in children.

**Methodology:** a total of 32 articles were analyzed in this review, including review and original articles, as well as clinical cases, of which 23 bibliographies were used because the other articles were not relevant to this study. The sources of information were PubMed, Google Scholar and Cochrane; the terms used to search for information in Spanish, Portuguese and English were: skin cancer, melanoma, actinic keratosis, basal cell carcinoma, squamous cell carcinoma.

**Results:** Skin cancer is found in all races worldwide. However, the risk is substantially higher in those with fair skin because of the photoprotective effects of epidermal melanin. In fair-skinned individuals, about 75% to 80% of nonmelanoma skin cancers are basal cell carcinomas and about 25% are squamous cell carcinomas. Immunosuppression significantly increases the risk of forming cutaneous squamous cell carcinoma throughout life. The incidence of melanoma in pediatric individuals has decreased in recent years. Childhood and adolescent melanoma is not common and accounts for only 1.3% of all cancer cases in individuals under 20 years of age. However, between 15 and 19 years of age, melanoma represents approximately 7% of all cancers.

**Conclusions:** There is a high prevalence of skin cancers worldwide, sometimes going unnoticed and causing important consequences. The diagnosis and treatment of these neoplasms is a significant health problem, which can sometimes be prevented.



*The places most affected are those with the greatest exposure to the sun, so adequate sun protection is crucial to prevent skin cancer. In addition to knowing the pathology, its types and characteristics, it is important to perform a proper skin examination for the correct diagnosis, control and management. Currently there are multiple treatment alternatives such as surgical excision, cryotherapy, chemotherapy, immunotherapy and radiation, which show positive aspects against this pathology.*

**KEY WORDS:** cancer, melanoma, carcinoma, basal cell carcinoma, skin.

## INTRODUCTION

Skin cancer is a pathology with an important frequency in the world, it is generally divided as non-melanoma skin cancer (NMSC) or melanoma. The exact incidence of skin cancer is complex to establish because of the absence of diagnostic criteria and sometimes underreporting. However, multiple epidemiological studies have shown an increasing incidence of both NMSC and melanoma in recent years. The diagnosis and treatment of this type of neoplasm is a very important health problem, especially when it comes to the wellbeing of the affected individual and the costs of health care. Skin cancers are usually located in the parts of the head and neck exposed to the sun, resulting in a remarkable morbidity during diagnosis and treatment. There are multiple types of treatment alternatives such as cryotherapy, chemotherapy, immunotherapy, surgical excision and radiation. Adequate sun protection is essential in the prevention of skin cancer(1-3).

The following is a review of skin cancer, etiology, epidemiology, pathophysiology, assessment, treatment, differential diagnosis and skin cancer in children.

## METHODOLOGY

A total of 32 articles were analyzed in this review, including review and original articles, as well as cases and clinical trials, of which 23 bibliographies were used because the information collected was not important enough to be included in this study. The sources of information were Cochrane, PubMed and Google Scholar; the terms used to search for information in Spanish, Portuguese and English were: skin cancer, melanoma, actinic keratosis, basal cell carcinoma, squamous cell carcinoma.

The choice of bibliography exposes elements related to skin cancer; etiology, epidemiology, pathophysiology, assessment, treatment, differential diagnosis and skin cancer in children.

## DEVELOPMENT

### Etiology

Solar ultraviolet (UV) radiation is the most important etiologic factor in the development of cutaneous malignancies. Most cases of NMSC and melanoma are associated with exposure to UV radiation. Exposure to UV radiation leads to carcinogenesis by a dual mechanism: it causes DNA damage that subsequently results in the formation of mutations and impairs the ability of the host immune system to recognize and eliminate malignant cells. Basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) are the most common presentations of NMSC, and both are derived from mutated epidermal keratinocytes. Cumulative lifetime exposure to UV radiation is closely associated with the risk of developing BCC and SCC. Melanoma is the most lethal of the skin cancers and arises from mutated melanocytes. The risk of showing melanoma is directly associated with sun

exposure in adolescence, intrinsically with the number of sunburns between the ages of 15 and 20. Some other risk factors related to the formation of cutaneous neoplasms are the presence of melanocytic nevi, family history, use of sunbeds, human papillomavirus (HPV), exposure to chemicals, Fitzpatrick skin type, and immunosuppressed state(3-5).

### Epidemiology

There is a high worldwide prevalence of skin cancers, in some countries even more common than all other cancers combined. These cancers are increasing and are a notable health problem from the point of view of the well-being of the affected individual, as well as when comparing health costs. Skin cancer is found in all races of the world. However, the risk is substantially higher in those with fair skin because of the photoprotective effects of epidermal melanin. In fair-skinned individuals, about 75% to 80% of nonmelanoma skin cancers are basal cell carcinomas and about 25% are squamous cell carcinomas. Inherited defects in DNA repair mechanisms, such as those evidenced in xeroderma pigmentosum and Muir-Torre syndrome, also place compromised individuals at increased risk for cutaneous carcinomas(6,7).

### Pathophysiology

Sun exposure is the most notable modifiable risk factor associated with NMSC and melanoma formation. UV radiation can be classified into UV-A, UV-B and UV-C radiation. Sunlight is composed primarily of the elements UV-A at approximately 90% and UV-B at approximately 10%, whereas UV-C rays are usually absorbed by the atmosphere. UV-A rays have a longer wavelength (320-400 nm) and penetrate the dermis, generating free radicals. UV-B rays have a shorter wavelength (290-320 nm), penetrate down to the stratum basale of the epidermis and stimulate the creation of thymine dimers. UV-A and UV-B rays enable the formation of carcinogenesis. Therefore, UV radiation generates cell damage and apoptosis, as well as modifying DNA repair processes, causing DNA mutations(4,7).

The creation of subsequent cutaneous malignant neoplasms from DNA damage by solar radiation is multifactorial, encompassing genetic factors, Fitzpatrick skin type and immunosuppressed status. Approximately 90% of cutaneous squamous cell carcinomas have UV-induced P53 gene mutations leading to uninhibited keratinocyte proliferation. DNA mutations implicated in melanoma are mutations in melanocortin receptor 1 (MCR1), cyclin-dependent kinase inhibitor 2A (CDKN2A), B-Raf and DNA repair enzymes. DNA mutations implicated in basal cell carcinoma are mutations in the p53 gene and the PTCH gene(3,8,9).



### Assessment

A meticulous examination of the skin determines premalignant and malignant skin lesions. It is imperative in ectoscopy to ascertain the location, texture, size, color, shape, borders, as well as any recent alterations of suspicious lesions. Premalignant actinic keratoses usually appear as rough, gritty skin papules on an erythematous base. Basal cell carcinomas usually show as pearly pink papules with telangiectasias. Squamous cell carcinomas are usually pink papules, patches and rough plaques. Melanomas are lesions that usually appear brown to black with asymmetry, irregular borders, diameters greater than 6 mm and color variegation. Any new or changing lesion or lesion that appears different from other nevi on the body is considered highly suspicious, sometimes referred to as the ugly duckling sign.

Basal cell and squamous cell carcinomas are usually seen in areas with the greatest amount of accumulated ultraviolet radiation, such as the nose, ears and upper lip. Melanomas can show up in any region of the body and are usually found on the back and shoulders in men and on the lower limbs in women. Assessment of individuals at risk for cutaneous carcinoma involves a full body skin examination. Suspicious lesions on physical examination will undergo a skin biopsy, under local anesthesia, then the sample is sent for interpretation, if the diagnosis of cutaneous malignancy is confirmed, further intervention is warranted according to the clinical and pathological diagnosis(10,11).

### Treatment

Treatment of precancerous lesions and cutaneous carcinoma should be tailored to the particular individual in order to achieve the best results. In addition to isolated lesions, precancerous actinic keratoses can be managed with lesion-targeted therapies such as cryotherapy. When multiple lesions and diffuse actinic damage are present, topical agents such as 5-fluorouracil, ingenol mebutate and imiquimod can be used, as well as photodynamic therapy following skin sensitization with a topical agent. Initial preventive efforts should be made to reduce the individual's risk of developing cutaneous carcinoma, such as optimizing the immunosuppressive regimen in individuals with solid organ transplantation, as well as proper surveillance programs(3,12).

Basal cell carcinomas and squamous cell carcinomas, if superficial, can be treated with topical therapies. However, standard practice is to treat surgically. Individuals with aggressive and recurrent forms of basal cell carcinoma who are not candidates for surgery are treated with radiation therapy or systemic medications(13,14).

Squamous cell carcinoma of the skin, also called cutaneous squamous cell carcinoma, has a precursor lesion, actinic keratosis, which shows tumor progression. Squamous cell carcinoma of the skin has the potential to metastasize, unusually. The most important risk factor for the development of actinic keratoses and squamous cell carcinoma of the skin is solar ultraviolet radiation. Surgical excision is the primary treatment for cutaneous squamous cell carcinoma; Mohs micrographic surgery is the most commonly used therapeutic

technique for lesions of the head, neck and those with high-risk features. Radiotherapy is used in cutaneous squamous cell carcinoma in individuals of considerable age, unfit for surgery or when clean surgical margins cannot be obtained. Immunosuppression significantly increases the risk of forming cutaneous squamous cell carcinoma throughout life; the risk of metastasis increases in immunosuppressed individuals. Those with cutaneous squamous cell carcinoma should be examined regularly and use UV protective measures(15-17).

Melanoma is the most aggressive and lethal form of cancer, and the management of choice is surgical excision; when detected early, it can be curative. Tumors in more advanced stages have an unfavorable prognosis and usually require adjuvant chemotherapy or immunotherapy(18).

Melanoma is a skin cancer of the melanocytes that arise following a DNA mutation, usually secondary to excessive sun exposure. Individuals with fair skin and hair who live in environments with greater sun exposure are at higher risk. Characteristically, melanoma shows irregularities in shape, irregular color and asymmetry. Occasionally, melanoma shows ulceration and bleeding, which is often linked to a worse prognosis. A needle biopsy usually reveals atypical nests of melanocytes that conglomerate and blend at the dermal-epidermal junction. The depth of the melanoma is essential for prognosis. There are 2 types of staging to assess depth: the Breslow and Clark levels. In the past, the Clark level was used. However, the Breslow level is currently more commonly used because of its greater specificity. According to the depth of the lesion, the 10-year survival rate is modified, also, the depth of a melanoma lesion decreases the margins to resect the lesion(19-21).

### Differential Diagnosis

- Metastatic skin tumors.
- Epithelioid tumor.
- Psoriasis.
- Cherry angioma.
- Benign melanocytic lesions.
- Dysplastic nevus.
- Seborrheic keratoses.
- Sebaceous hyperplasia.
- Nevus.

### Skin Cancer in Children

The incidence of melanoma in pediatric individuals has decreased in recent years. Childhood and adolescent melanoma is not common and accounts for only 1.3% of all cancer cases in individuals under 20 years of age. However, between 15 and 19 years of age, melanoma accounts for approximately 7% of all cancers. Evidence shows that predisposing "pediatric" conditions, such as giant congenital melanocytic nevi or xeroderma pigmentosum, are infrequently reported. Germline inactivating mutations of the CDKN2A gene have been reported in only about 1.5% of cases of early onset melanoma. There is literature suggesting that interactions between sun exposure, nevus development, pigmentary features, and family history of melanoma are the primary determinants of melanoma development in the early 20s. When attempting to make a





diagnosis in pediatrics, specific criteria should be used in order to analyze the peculiarities and different presentations observed in pediatric disease compared to adults, such as a higher prevalence of amelanotic melanoma or a common similarity of benign pediatric lesions. Pediatric melanoma usually shows higher histopathologic stage and higher Breslow depth versus adult melanoma. Pediatric non-melanoma skin cancer, such as basal cell carcinoma and squamous cell carcinoma, is related to genetic conditions and immunosuppression, both iatrogenic and hereditary(22,23).

## CONCLUSIONS

There is a high prevalence of skin cancers throughout the world, sometimes going unnoticed and causing important consequences. The diagnosis and treatment of these neoplasms is a significant health problem, which can sometimes be prevented. The places most affected are those with the greatest exposure to the sun, so adequate sun protection is crucial to prevent skin cancer. In addition to knowing the pathology, its types and characteristics, it is important to perform a proper skin examination for the correct diagnosis, control and management. Currently there are multiple treatment alternatives such as surgical excision, cryotherapy, chemotherapy, immunotherapy and radiation, which show positive aspects against this pathology.

## BIBLIOGRAPHY

1. Glazer AM, Winkelmann RR, Farberg AS, Rigel DS. Analysis of Trends in US Melanoma Incidence and Mortality. *JAMA Dermatol*. 2017 Feb 1;153(2):225–6.
2. Rogers HW, Weinstock MA, Feldman SR, Coldiron BM. Incidence Estimate of Nonmelanoma Skin Cancer (Keratinocyte Carcinomas) in the US Population, 2012. *JAMA Dermatol*. 2015 Oct 1;151(10):1081.
3. Gruber P, Zito PM. Skin Cancer. In: *StatPearls [Internet]*. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jul 19]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK441949/>
4. D’Orazio J, Jarrett S, Amaro-Ortiz A, Scott T. UV radiation and the skin. *Int J Mol Sci*. 2013 Jun 7;14(6):12222–48.
5. Saladi RN, Persaud AN. The causes of skin cancer: a comprehensive review. *Drugs Today Barc Spain* 1998. 2005 Jan;41(1):37–53.
6. Gordon R. Skin cancer: an overview of epidemiology and risk factors. *Semin Oncol Nurs*. 2013 Aug;29(3):160–9.
7. Bradford PT. Skin cancer in skin of color. *Dermatol Nurs*. 2009;21(4):170–7, 206; quiz 178.
8. Black APB, Ogg GS. The role of p53 in the immunobiology of cutaneous squamous cell carcinoma. *Clin Exp Immunol*. 2003 Jun;132(3):379–84.
9. Ascierto PA, Kirkwood JM, Grob JJ, Simeone E, Grimaldi AM, Maio M, et al. The role of BRAF V600 mutation in melanoma. *J Transl Med*. 2012 Jul 9;10:85.
10. Green A, MacLennan R, Youl P, Martin N. Site distribution of cutaneous melanoma in Queensland. *Int J Cancer*. 1993 Jan 21;53(2):232–6.
11. Daniel Jensen J, Elewski BE. The ABCDEF Rule: Combining the “ABCDE Rule” and the “Ugly Duckling Sign” in an Effort to Improve Patient Self-Screening Examinations. *J Clin Aesthetic Dermatol*. 2015 Feb;8(2):15.
12. Peris K, Fargnoli MC. Conventional treatment of actinic keratosis: an overview. *Curr Probl Dermatol*. 2015;46:108–14.
13. Prickett KA, Ramsey ML. Mohs Micrographic Surgery. In: *StatPearls [Internet]*. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jul 19]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK441833/>
14. Frampton JE, Basset-Séguin N. Vismodegib: A Review in Advanced Basal Cell Carcinoma. *Drugs*. 2018 Jul;78(11):1145–56.
15. Reygagne P, Rostain G. [Beyond actinic keratoses: Field cancerization of the skin]. *Ann Dermatol Venereol*. 2018 Oct;145(10):587–92.
16. Weber P, Tschandl P, Sinz C, Kittler H. Dermatoscopy of Neoplastic Skin Lesions: Recent Advances, Updates, and Revisions. *Curr Treat Options Oncol*. 2018 Sep 20;19(11):56.
17. Howell JY, Hadian Y, Ramsey ML. Squamous Cell Skin Cancer. In: *StatPearls [Internet]*. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jul 19]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK441939/>
18. Lugowska I, Teterycz P, Rutkowski P. Immunotherapy of melanoma. *Contemp Oncol Poznan Pol*. 2018 Mar;22(1A):61–7.
19. Idorn LW, Datta P, Heydenreich J, Philipsen PA, Wulf HCO. Association between quality of life and sun exposure behaviour in patients treated for cutaneous malignant melanoma. *Photodermatol Photoimmunol Photomed*. 2019 Jul;35(4):286–9.
20. Puckett Y, Wilson AM, Farci F, Thevenin C. Melanoma Pathology. In: *StatPearls [Internet]*. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Jul 19]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK459367/>
21. Poźniak J, Nsengimana J, Laye JP, O’Shea SJ, Diaz JMS, Droop AP, et al. Genetic and Environmental Determinants of Immune Response to Cutaneous Melanoma. *Cancer Res*. 2019 May 15;79(10):2684–96.
22. Moustafa D, Neale H, Hawryluk EB. Trends in pediatric skin cancer. *Curr Opin Pediatr*. 2020 Aug;32(4):516–23.
23. Pappo AS. Melanoma in children and adolescents. *Eur J Cancer Oxf Engl* 1990. 2003 Dec;39(18):2651–61.

## Conflict of Interest Statement

The authors report no conflicts of interest.

## Funding

The authors report no funding by any organization or company.



# PERCEPTIONS OF ENFORCEMENT BY LOCAL AUTHORITIES (PBT) IN SELANGOR ON THE EFFECTIVENESS OF 'BASIC ENFORCEMENT' TRAINING

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## ABSTRACT

This study aims to determine the perception of enforcement authorities in Selangor on the effectiveness of basic enforcement training that they participate. This study uses a quantitative approach with descriptive analysis design. Kirkpatrick's (1994) Model was used to evaluate training effectiveness. Data collected using questionnaires taken from Dina Karamina (2018), a total of 344 enforcers were randomly selected in proportional strata using grouping according to three rating categories available in the state of Selangor, namely cities, municipalities and districts. The results showed that the level of reaction, learning and behavior is at a high level.

**KEYWORDS:** local authority enforcement, training effectiveness, kirkpatrick model

## 1. INTRODUCTION

In this increasingly challenging era, the efficiency and effectiveness of local authority enforcement performance is becoming increasingly important to ensure quality public services. The 'basic enforcement' training is one of the initiatives to improve the skills and knowledge of law enforcement officers in the aspects of law enforcement and local regulations. This study aims to evaluate the effectiveness of the enforcement basic training program from the perspective of the enforcers who have followed it. This assessment is important because it can provide information about the strengths and weaknesses of the program, as well as assist in the improvement of the program in the future. In addition, this study also aims to identify factors that affect the effectiveness of training, including employee backgrounds, course content, and delivery methods.

Training in the public sector plays an important role in improving the efficiency and effectiveness of public services. It is an important factor in the development of human resources and the formation of optimal employee performance. Effective training can improve the skills, knowledge, and ability of public sector employees to perform their duties more efficiently and professionally (Lamsah, Che Rose, Johari, Baker & Ismail, 2021; Lamsah, Che Rose & Baker, 2021). Studies show that there is a significant relationship between training and job performance (Ismail & Mohamad, 2018). Effective training not only improves the performance of individuals and organizations, but also ensures quality public services and responsiveness to the needs of society.

In the context of local authorities in Selangor, it is important to understand their structure and functions as well as the current challenges faced by employees in the aspect of law enforcement and regulation. Local authorities in Selangor are responsible for providing various services to the community, including local law enforcement. The 'basic enforcement' training programme is designed to enhance the skills and knowledge of local authority employees in the enforcement of laws and

regulations. This Program is important to ensure that local authority employees in Selangor can carry out enforcement duties efficiently and effectively. Evaluation of training effectiveness is important to ensure that the training program achieves its objectives and has a positive impact on employee performance. It helps in identifying the strengths and weaknesses of the training programme, as well as providing guidance for future improvement (Ismail & Mohamad, 2018). The effectiveness of training can be influenced by various factors, including the employee's background, work experience, and work environment. These factors can affect employees' perception of the effectiveness of training and in turn affect their job performance (Lamsah, Che Rose, Johari, Baker & Ismail, 2021; Lamsah, Che Rose & Baker, 2021). This study is important to assess the effectiveness of the 'basic enforcement' training program from the perspective of local authority enforcement in Selangor. The results of this study can contribute to the improvement of training programs and improving the performance of local authority enforcers.

Kirkpatrick's evaluation Model is used as a theoretical framework for assessing training effectiveness. This Model consists of four levels of evaluation namely reaction, learning, behavior, and outcome. The use of this model can help in assessing the effectiveness of training as a whole. Although there are studies on the effectiveness of training in the public sector, there are still research gaps in the context of local authorities in Malaysia, particularly in relation to 'basic enforcement' training. This study aims to fill that gap and contribute to a deeper understanding of the effectiveness of training in the context of local authorities in Selangor.



## 1.1 PROBLEM STATEMENT

The problem statement for this study focuses on the need to assess the effectiveness of 'basic enforcement' training in the context of local authorities in Selangor. Although training is an important factor in improving employee performance and the quality of public services, there are still gaps in understanding the effectiveness of this specific training program from the perspective of employees who have followed it. Previous studies have shown that there is a significant correlation between training and job performance in the public sector (Ismail & Mohamad, 2018). However, most of the training implemented in public sector organizations is still at a level that is only satisfactory and needs improvement (Lamsah, Che Rose, Johari, Baker & Ismail, 2021; Lamsah, Che Rose & Baker, 2021). In addition, factors such as employee motivation and the content of training programs also play an important role in determining the effectiveness of training (Sudarno & Fadzil, 2017; Ismail & Mohamad, 2018).

In the context of local authorities in Selangor, there is a need to understand how 'basic enforcement' training affects employee performance and their effectiveness in performing enforcement duties. This is important because PBT employees face unique challenges in carrying out their duties, and effective training can help them overcome those challenges.

Therefore, this study aims to assess the perception of local authority workers in Selangor on the effectiveness of 'basic enforcement' training, identify factors that influence the effectiveness of training, and suggest improvements to improve the quality and impact of this training program in the future. By addressing this research gap, the study is expected to contribute to a deeper understanding of the effectiveness of training in the context of local government and assist in the development of more effective training programmes to improve the performance of public sector employees.

## 1.2 RESEARCH OBJECTIVE

The objectives of the study are:

- i. Identify the perception of enforcers on the level of effectiveness of the training that has been carried out from the aspect of reaction.
- ii. Identify the perception of enforcers on the level of effectiveness of training from the learning aspect.
- iii. Identify the perception of enforcers on the level of effectiveness of training from the behavioral aspect.

## 1.3 SCOPE OF STUDY

The scope of the study was to identify the level of effectiveness of training among 344 local authority enforcement officers in Selangor involving three ratings namely City, Municipality and district. This study also uses the Kirkpatrick (1994) evaluation model which only involves three levels of evaluation, namely reaction, learning and behavior to identify these three levels of the effectiveness of the training program carried out.

## 2. LITERATURE REVIEW

Noe (2017) states that training is an effort designed to help people learn the knowledge, skills, and attitudes needed to be successful in their current or future workplace. Training is a

learning process that enables employees to acquire and improve the skills, knowledge, and behaviors necessary to perform their jobs effectively. According to Siagian (2008) training is the process of learning to teach by conceptually using certain techniques and methods aimed at improving the work skills of a person or group of people. Those who already work in an environment that promotes efficiency, effectiveness and productivity usually feel the need to be more pragmatic. This study aims to determine whether the support group that has attended the training can use what has been taught during the training in their work.

Training is an important factor in improving employee performance and the quality of public services. A study by Lamsah et al. (2021) showed that training can improve the knowledge, skills and ability of public sector workers to perform tasks more efficiently. This is supported by Ismail et al. (2018) found a significant correlation between training and job performance in the context of public sector organisations in Malaysia. Optimal human resource management can ensure that training has a positive impact on employees. However, studies show that most of the training implemented in public sector organizations is still at a satisfactory level and needs improvement (Lamsah et al., 2021). This emphasizes the importance of studying the effectiveness of training from the perspective of the employees involved. In addition, good and creative training can also affect employee participation and satisfaction levels. A study by Hanaysha (2016) found that effective training management can increase employee motivation and productivity. This is important because employees who are satisfied with training tend to be more motivated and deliver better performance. This shows that training plays an important role in improving employee performance and the quality of public services. However, the effectiveness of training still needs to be improved through improvements in training management and evaluation from an employee perspective. This is an important basis for a study on the effectiveness of 'basic enforcement' training among local authority workers in Selangor.

Prawirosentono (2008) stated that the effectiveness of training is a situation that is constantly changing when a number of tasks and functions are implemented in the process of implementing the work in accordance with the goals and policies of the proposed program. The effectiveness of employee training is very important especially for developing human resources. Training and development of Human Resources in organizations, educational institutions, or other institutions is carried out to improve employee performance (Noer, 2016). The effectiveness of training can be influenced by various factors. A study by Hanaysha (2016) identified elements such as employee motivation and training program content as major contributors to training effectiveness. This is in line with the findings of Santos and Stuart (2017) who asserted that these factors can also influence employee perceptions of training effectiveness. In addition, work environment factors also play an important role in determining the effectiveness of training. A study by Ismail et al. (2018) found that a conducive work environment can improve the transfer of learning from training to job performance. This is supported by the findings of





Hashim, Mohamad, Saemi, Ahmad and Ahmad (2009) which show that positive reward factors in the workplace are an important element affecting the effectiveness of training.

In addition, the employee's background such as level of education and work experience can also influence their perception of the effectiveness of training. A study by Lamsah et al. (2021) found that training designed based on employee profiles can improve training effectiveness and subsequently job performance. This shows the importance of understanding the individual factors that influence the effectiveness of training. This shows that the effectiveness of training is influenced by various factors, including employee motivation, training program content, work environment, as well as employee background and profile. A thorough understanding of these factors is essential to design and implement more effective training programmes in the context of public sector organisations.

The reaction stage in the Kirkpatrick Model is the most basic and common assessment stage in evaluating training programs. At this stage, an assessment was carried out to measure the perception and level of satisfaction of participants in the exercise program followed (Walid, Jusoh & Omar, 2021; Manan, Nor & Omar, 2013; Kirkpatrick, 1976). This is important because the positive reaction of participants can be an early indicator of the effectiveness of the program. Evaluation at the reaction level usually includes aspects such as training materials, instructor delivery, facilities, and benefits felt by participants. The results of the assessment at this stage can provide an important response for the maintenance to improve and improve the quality of the training program in the future (Walid, et. al, 2021; Manan et al., 2013; Kirkpatrick, 1976). Several previous studies have shown that the reaction stage in Kirkpatrick's Model has a significant influence on the later stages of evaluation, such as the stage of learning and behavior change (Bartlet, 1999; Alliger & Janak; 1989). Therefore, a careful assessment of the reaction level becomes an important basis for the success of the training program as a whole.

The learning stage in the Kirkpatrick Model focuses on the extent to which participants have mastered the knowledge, skills, interests, confidence, and commitment expected from an exercise program (Manan et al, 2013; Walid et al, 2021; Kirkpatrick, 1976). At this stage, an assessment is carried out to determine whether there is an increase or change in these aspects after participating in the program (Manan et al, 2013; Praslova; 2010). The results of the assessment at the learning level can provide clues about the effectiveness of the training program in achieving the set learning goals (Manan et al, 2013; Walid et al, 2021). This is important because the participants' mastery of the training material will be the basis for the application of such knowledge and skills in their work. Previous studies have shown that elements such as participants' basic knowledge and skills, self-abilities, attitudes, and motivation to learn have a significant impact on the level of learning in Kirkpatrick's Model (Manan et al. 2013; Alliger & Janak 1989). Therefore, understanding these elements can help training providers better design and implement programs.

The behavioral stages in Kirkpatrick's Model help to understand the extent to which participants can apply the knowledge and skills gained from the exercise program into their work and daily tasks (Manan et al, 2013; Kirkpatrick, 1976; Praslova; 2010). At this stage, an assessment is carried out to see the behavioral changes that occur and the continuous benefits that the participant obtains. Assessment at the behavioral level generally includes aspects such as the ability of participants to apply what has been learned, changes in attitude and work motivation, as well as the resulting positive impact on the organization (Manan et al, 2013; Alliger & Janak, 1989). The results of the assessment at this stage can provide important information for training organizers to determine how far the program has been successful in achieving the expected goals. Several previous studies have shown that the level of behavior in the Kirkpatrick Model has a significant influence on the level of results or the final effect of the exercise program (Manan et al, 2013; Praslova, 2010; Alliger & Janak, 1989). Because of this, a good understanding of the changes in participants' behavior becomes an important key to the success of the training program as a whole.

### 3. METHODOLOGY

This study used a quantitative approach with data collection methods through questionnaires to test the extent to which changes in reactions, learning and behavior affect the effectiveness of training. The selection of this method is suitable for measuring the perception of local authority enforcers on the effectiveness of the training they have followed. Data collection was carried out using questionnaires distributed to respondents.

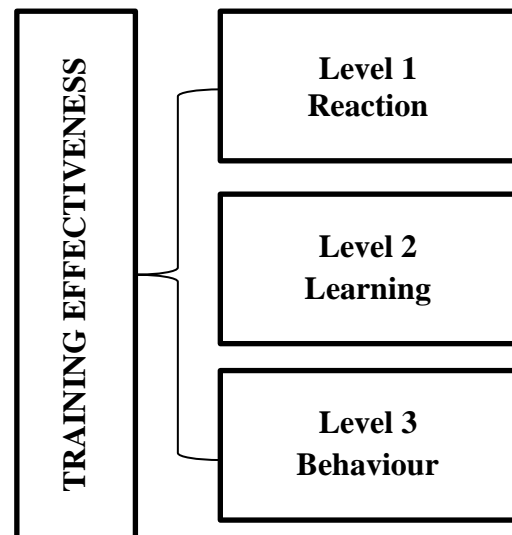


Figure 1: Concept Framework

The respondents of this study consisted of 344 local authority enforcement officers in Selangor who had attended the 'basic enforcement' training. This selection criterion ensures that the respondent has direct experience with the training program being evaluated, so that it can provide relevant and important feedback.

The questionnaire instrument is taken from Thuaiabah, Omar, Zip, Ismail and Zulkifli (2009) which contains three parts.





## 4. RESULT AND DISCUSSION

### 4.1. Demographics Of Respondents

The study used descriptive statistical analysis to describe demographic characteristics and training characteristics in general. Demographic characteristics of respondents described were gender, age, academic qualifications, PBT rating and length of Service.

Table 1 shows that a total of 344 respondents comprising local authorities in Selangor who have participated in this study. The results found that male respondents exceeded female respondents by 30.2 percent, namely 224 people (65.1%) while female respondents were 120 (34.9%). The findings also showed that 150 (43.6%) respondents were between 31-40 years old, and 114 (33.1%) between 41-50 years old, 70 (20.3%) were less than 30 years old and 10 (2.9%) were more than 51 years old. The survey found that the majority of respondents were those with SPM qualifications of 175 people (50.9%). While the lowest percentage recorded were those with other qualifications of 7 people (32.0%). As for the rating, the analysis showed that 122 (35.5%) respondents were below the city rating, 216 (62.8%) were below the municipal rating and 6 (1.7%) were below the district rating. This shows that the majority of respondents are under the rating of the city. Finally, the survey showed that most of the respondents were those who had served more than 10-14 years, namely 130 people (37.8%) while respondents who served more than 15 years recorded the lowest percentage of 52 people (15.1%)

**Table 1: Profile Of Survey Respondents**

Demographics	Category	Frequency	Percent (%)
Gender	Male	224	65.1
	Female	120	34.9
	<b>Total</b>	<b>344</b>	<b>100.0</b>
Age	<30 years	70	20.3
	31-40 years	150	43.6
	41-50 years	114	33.1
	>51 years	10	2.9
	<b>Jumlah</b>	<b>344</b>	<b>100.0</b>
Education	Bachelor	79	23.0
	Diploma	83	24.1
	SPM	175	50.9
	Others	7	2.0
	<b>Total</b>	<b>344</b>	<b>100.0</b>
Rating	City	122	35.5
	Municipalities	216	62.8
	District	6	1.7
	<b>Total</b>	<b>344</b>	<b>100.0</b>
Experiance	<5 years	56	16.3
	6 - 9 years	106	30.8
	10-14 years	130	37.8
	>15 years	52	15.1
	<b>Total</b>	<b>344</b>	<b>100.0</b>

### 4.2 Perception at Reaction Level

Table 2 shows the reaction rate of the respondents to the training. The results of the study showed that most respondents considered the level of evaluation of the effectiveness of training to be at a high level. Overall, respondents responded positively to the training program they participate.

With a mean value of 3.983, the results of the study for the

reaction stage were very good. The results of the analysis also showed that all seven training items were at a high level, while none of the items received moderate or low scores. The trainer's satisfaction with the trainer is one of the components that affect the effectiveness of training at the reaction stage. The results of this study showed that the coach gave a positive reaction to the coach, including a deep understanding of the content of the training, the ability to comprehensively explain the knowledge, the ability to handle time well and pay full attention. The choice of a quality coach can affect the effectiveness of training and the transfer of trainer knowledge. A study written by Azman, Azmi, Zainol and Abidin (2020) supports the idea that coaches can serve as important predictors of training effectiveness. Furthermore, Isa, Noor and Daud (2013) confirmed in their study that the coach element has a great influence on the effectiveness of training.

**Table 2. Reaction Level**

Item	Mean	SD	Level
The training fulfill my knowledge that i need.	4.00	0.810	High
Training materials are clear and easy to Understand.	4.17	0.693	High
The facilities are completed and ready to use	3.93	0.854	High
The facilities are completed and ready to use.	3.58	1.117	High
Trainer has a full understanding of training content	4.13	0.697	High
The trainer able to explains knowledge, use comprehensive methods, give full attention, and practice time management.	4.24	0.646	High
The trainer able to use attractive coaching methods in delivering program materials.	3.82	0.565	High
<b>Total Mean</b>	<b>3.983</b>	<b>0.569</b>	<b>High</b>

The choice of a quality coach can affect the effectiveness of training and the transfer of trainer knowledge. A study written by Azman, Azmi, Zainol and Abidin (2020) supports the idea that coaches can serve as important predictors of training effectiveness. Furthermore, Isa, Noor and Daud (2013) confirmed in their study that the coach element has a great influence on the effectiveness of training.

According to Zumrah (2016), organizations need to increase the level of employee reaction to training in order to achieve more efficient knowledge transfer. This is because a satisfactory training environment is important. Therefore, coordination between training content and employee tasks as well as an emphasis on practical application can help to achieve this goal. Additionally, a study by Thangaraj (1998) found that trainees responded well to courses. But Albahussain's (2000) study shows that seminars, conferences, and lectures are the most popular training methods. This shows that training methods can work well in a variety of ways depending on the situation and needs of the organization.

This study improves the understanding of the components that



affect the effectiveness of training at the reaction stage. In planning and conducting successful training, several important points should be taken into account. This includes choosing a high-quality coach, creating a balance between theoretical and practical training, and creating a comfortable training environment. Therefore, management needs to ensure that training meets the needs of trainees and meets their expectations in order to achieve the best learning outcomes.

### 4.3. Perception at Learning Level

Table 3 shows the distribution of respondents' perceptions of the level of learning of participants in the training. The findings showed that all respondents agreed that the training that has been followed can improve existing knowledge and skills. Most respondents also considered the level of learning of the training program followed to be at a high level.

**Table 3. Learning Level**

Item	Mean	SD	Level
My understanding of the given material is increase	4.07	0.707	High
I can understand the SOP (standard operation procedure) enforcement during unit operation.	4.15	0.706	High
I am able to understand basic knowledge about enforcement correctly and effectively	4.61	0.495	High
This training has developed my better understanding in Enforcement	4.71	0.462	High
My skill is improved after this training	4.62	0.498	High
<b>Total Mean</b>	<b>4.431</b>	<b>0.294</b>	<b>High</b>

For the learning stage, the study achieved very good results with a mean value of 4.431. This indicates that participants' knowledge, information and practical skills have increased as a result of attending the training because they have learned about various laws, theories and practices, or they have found information about a job that they did not know before. The results of the analysis also showed that all five learning level items were at a high level, while none of the items received moderate or low scores. They include increased understanding, knowledge, and skills on enforcement standard operating procedures (sops), as well as overall skills improvement. Thus, this study suggests that trainees' understanding and skills of enforcement are enhanced by this training.

A study by Sabilan, Hamzah, and Ishak (2023) which found that the level of teacher learning after participating in a training program is positive and can have an impact on behavior change. In addition, Mohamed Lip et al. (2016) support the idea that learning and training can improve trainee knowledge and skills. This reinforces the confidence that the findings of this study are in line with the results of previous studies on learning and training.

### 4.4 Perception at Behaviour Level

Table 4 shows the distribution of respondents' perceptions of the level of participants' outcomes of the training. The findings showed that all respondents agreed that the training that has been followed can provide the desired results. Most respondents also considered the level of results on the training

program followed to be at a high level.

**Table 4. Behavior Level**

Item	Mean	SD	Level
This training can help improve my creativity and skill	4.03	0.772	High
This training can help reduce my error rate	4.02	0.706	High
This training can improve my performance rate	4.61	0.495	High
This training helps me to be able to identify and perform actions that standardize in the right way	4.69	0.474	High
<b>Total Mean</b>	<b>4.338</b>	<b>0.326</b>	<b>High</b>

The findings for the overall behavior level were high with a mean value of 4.338, all four items tested were also at a high level, and none were evaluated at a low and medium level. At the behavioral level, the trainee is usually evaluated three months after the end of the training. At this stage, respondents noted that training can help improve creativity, quality of work, deal with problems and mistakes, and improve work performance. Trainers are also aware that training has changed their behavior and feel positive changes in perception of themselves, others, and the training environment.

The results of this study are in line with previous studies that support improved performance and positive changes after exercise (Aguinis & Kraigner, 2009). There have been past studies showing that exercise can have a positive impact on an individual's motivation, engagement, and learning outcomes (Brown & McCracken, 2009). Ismail, Hamuzan and Maarof (2021) proved that proper training can change behavior and improve performance, in line with the findings that training can increase creativity and quality of work. Therefore, the findings of this study are in line with those views which indicate that respondents are very eager to improve their abilities through training. This study also emphasizes elements such as increased creativity, problem-solving and error-solving skills, improved performance, and the ability to find and execute the right actions.

## 5. CONCLUSION

Enforcement employees enforce local laws and various other services to the community. Therefore, these employees need to receive appropriate training to improve and enhance their quality and performance as they perform the responsibilities entrusted to them. To ensure that the training program is effective, process monitoring is required before, during and after training. According to Kirkpatrick's model, the level of behavior, reaction and learning is important for the implementation of training because it determines the success or failure of the training program. Through the evaluation process, it can help the process of getting participants' feedback on the training program followed. This can not only help employees acquire new knowledge and skills, but it can also improve the way they view their responsibilities. All this will benefit both employees and the organization as a whole.

## REFERENCES

- Kirkpatrick, D. L. (1976). *Evaluation of training*. In R. L. Craig (Ed.), *Training and development handbook: A guide to human resource development* (2nd ed., pp. 18.1-18.27). New York, NY:



- McGraw-Hill
2. Alliger, G. M., & Janak, E. A. (1989). Kirkpatrick's levels of training criteria: Thirty years later. *Personnel Psychology*, 42(2), 331-342.
  3. Bartlett, K. R. (1999). *The relationship between training and organizational commitment: A study in the health care field*. *Human Resource Development Quarterly*, 10(4), 335-352.
  4. Praslova, L. (2010). Adaptation of Kirkpatrick's four level model of training criteria to assessment of learning outcomes and program evaluation in Higher Education. *Educational Assessment, Evaluation and Accountability*, 22(3), 215-225.
  5. Hanaysha, J. (2016). Examining the Effects of Employee Empowerment, Teamwork, and Employee Training on Organizational Commitment. *Procedia - Social and Behavioral Sciences*, 229(2016), 298-306.  
<https://doi.org/10.1016/j.sbspro.2016.07.140>
  6. Hashim, J., Mohamad, B., Saemi, M. M. N., Ahmad, A., & Ahmad, W. M. R. W. (2009). Faktor Persekitaran Kerja Dan Kebolehan Pelatih Yang Mempengaruhi Keberkesanan Sistem Latihan Dual Negara (SLDN)
  7. Ismail, M. S., Rahman, M. N. A., & Mohamad, I. N. (2018). Hubungan Di Antara Keberkesanan Latihan Dan Kesan Motivasi Terhadap Prestasi Kerja Kakitangan Sektor Awam : Kajian Kes Di Politeknik Dan Kolej Komuniti, Jeli, Kelantan. *Journal of Business and Hospitality Management (JBHM)*, 4(1), 45-46.  
<https://www.upikptss.edu.my/ojs/index.php/jbhm/article/view/6>
  8. Lamsah, M. S., Che Rose, R. A., & Baker, R. (2021). Tahap Kepuasan Pekerja di Sektor Awam Terhadap Latihan Secara Atas Talian Mendepani Pandemik COVID-19 di Malaysia. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 6(1), 27-39. <https://doi.org/10.47405/mjssh.v6i1.605>
  9. Lamsah, M. S., Che Rose, R. A., Johari, M. D., Baker, R., & Ismail, M. S. (2021). Pengaruh Latihan Bercirikan Ketenteraan Keatas Pembangunan Prestasi Pekerja: Organisasi Sektor Awam di Malaysia. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 6(2), 53-64.  
<https://doi.org/10.47405/mjssh.v6i2.631>
  10. Manan, K. A., Nor, S. M., & Omar, B. (2013). Model Penilaian Kirkpatrick: Mengkaji Pengaruh Komunikasi Terhadap Keberkesanan Latihan. *Jurnal Komunikasi*, 29(2), 31-50.
  11. Noe, R. A. (2017). *Employee Training and Development*. New York: McGraw-Hill.
  12. Santos, A., & Stuart, M. (2017). Employee perceptions and their influence on training effectiveness. *Human Resource Management Journal*, 13(1), 27-45. <https://doi.org/10.1111/j.17488583.2003.tb00082.x>
  13. Sudarmo, E. N. N., & Fadzil, F. H. (2017). Hubungan Faktor Demografi dan Latihan Pendidikan Usahawan Mara Di Negeri Melaka Terhadap Keberkesanan Usahawan. *Semantic* <https://www.semanticscholar.org/paper/Hubungan-Faktor-Demografi-dan-Latihan-Pendidikan-Di-Sudarmo-Fadzil/c02d33fbb572c9c8616830f1132f57aef00530a3>
  14. Thuaibah, A. M. A., Omar, R., Zip, N. E. M., Ismail, N. S., & Zulkifli, T. (2009). CORE View metadata, citation and similar papers at core.ac.uk provided by Universiti Teknologi Malaysia Institutional Repository.
  15. Wahid, Z. B. A., Hussin, Z. B., & Putih, A. T. B. (2017). Reaksi Pelatih Orang Kurang Upaya Berdasarkan Model Kirkpatrick Terhadap Pelaksanaan Program Pra Vokasional Bidang Lukisan Dan Batik. *Juku: Jurnal Kurikulum & Pengajaran Asia Pasifik*, 1(4), 28-37.  
<https://mj.es.um.edu.my/index.php/JUKU/article/view/7966/5490>
  16. Walid, D. A., Jusoh, A. J., & Omar, S. Z. (2021). Analisis Model Kirkpatrick dalam Menilai Keberkesanan Program Kaunseling Berdasarkan Kajian Literatur. *E-Prosiding Webinar Konvensyen Kaunseling Kebangsaan Kali\_Ke-22*.  
<https://www.semanticscholar.org/paper/>
  17. Thuaibah, A. M. A., Omar, R., Zip, N. E. M., Ismail, N. S., & Zulkifli, T. (2009). CORE View metadata, citation and similar papers at core.ac.uk provided by Universiti Teknologi Malaysia Institutional Repository
  18. Wahid, Z. B. A., Hussin, Z. B., & Putih, A. T. B. (2017). Reaksi Pelatih Orang Kurang Upaya Berdasarkan Model Kirkpatrick Terhadap Pelaksanaan Program Pra Vokasional Bidang Lukisan Dan Batik. *Juku: Jurnal Kurikulum & Pengajaran Asia Pasifik*, 1(4), 28-37.  
<https://mj.es.um.edu.my/index.php/JUKU/article/view/7966/5490>
  19. Walid, D. A., Jusoh, A. J., & Omar, S. Z. (2021). Analisis Model Kirkpatrick dalam Menilai Keberkesanan Program Kaunseling Berdasarkan Kajian Literatur. *E-Prosiding Webinar Konvensyen Kaunseling Kebangsaan Kali\_Ke-22*.





# THE EMERGENCE AND FORMATION OF ENTREPRENEURIAL THOUGHTS IN THE MINDS OF EARLY HUMANS

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## ABSTRACT

*This article discusses the emergence of entrepreneurial thinking in the minds of ancient people, its historical roots, formation, and development, as well as the reasons for its appearance and the genesis of entrepreneurial philosophy, particularly its ontological foundations in social and economic aspects. It also covers the degrees of change in the phenomenon of entrepreneurship, its direct correlation with the nature of trade relations established with peoples, and the role of labor activity in the formation of early entrepreneurial thinking, all explored from a scientific-theoretical perspective.*

**KEYWORDS:** *entrepreneurship, entrepreneurial thinking, historical roots, formation, trade relations, Neolithic revolution, social division of labor, progress, and prosperity.*

The emergence, formation, and development of entrepreneurship, based on the rise of business thinking in the minds of ancient people, have historical roots unique in both time and space. According to this perspective, the historical roots of entrepreneurship in a broad sense encompass the activities of people aimed at satisfying their own and others' needs and interests, moving from simple to complex, with the goal of generating more income from agriculture, livestock breeding, and craft production towards a whole system of labor activities. This is oriented and has a historical place based on business thinking inherited from ancestors to generations. In a narrow sense, it refers to the historical role of the entrepreneurship sphere, which is studied as an objective entity by certain scholars or the scientific community. The concept of "historical root" broadly refers to all existing aspects of all things and events that are situated in historical space and time, while in a narrow sense, it pertains to things and events aimed at knowledge and change by specific subjects occupying means of place in historical space and time [1]. Consequently, primary attention was given to studying its ontological foundations, existing as material value. Looking back thousands of years, first and foremost, favorable natural conditions for the life, work, and interaction of people, namely fertile lands, abundant rivers, and plenty of sunlight, led to increased agricultural productivity. Secondly, the abundance of various ores and other valuable minerals above and below the ground facilitated the development of crafts; thirdly, the presence of large steppe zones prepared the ground for the emergence of livestock breeding.

More specifically, entrepreneurial activity based on the levels of business thinking of ancient peoples, although tightly connected with the geographic environment, natural resources, and economic life, has undergone stages such as progress and prosperity, decline and stagnation, persecution and cessation, rejuvenation and development. Its prospects have always been linked to the political processes occurring in the region, particularly internal and external conflicts, ruthless wars, the

state of the country, and the economic policies pursued by its rulers.

"We can observe in sequence the impact of external and internal factors influencing the consumer's purchasing of goods and services in the consumer movement, his dialectical step-by-step research, and the influence of the socio-cultural environment in determining the processes related to his consumption in the future" [2].

In the minds of people, entrepreneurship based on business thinking primarily involves material objects, and the relationships aimed at appropriating them to maximize profit and generate income. Naturally, this raises the question of when the roots of entrepreneurship based on this type of business thinking first emerged among humans. Archaeologists emphasize that the origins of such entrepreneurial activities, based on business thinking, trace back to the 6th-4th millennia BCE, namely 8-6 thousand years ago during the "Neolithic Revolution" and subsequent Chalcolithic and Bronze Ages in our country's history [3].

The "Neolithic Revolution" was a revolutionary shift in the business thinking of our ancient ancestors, marked by the transition from foraging to agriculture, from nomadism to sedentary life, and the invention of pottery, sewing, and weaving based on improved stone tools. This period initiated the first material and partially spiritual resources for conducting entrepreneurship based on business thinking, including the transition from foraging to agriculture; the creation of small labor tools; the shift to a sedentary lifestyle; the construction of adobe and mud-brick houses next to livestock pens; and the introduction of pottery, sewing, and weaving.

The ancient "Homo habilis" – skilled (learning) human, saw the development of business thinking by the 6th-5th millennia BCE leading to a natural type of economy management, where people, families, and tribes met their essential needs through reciprocal relations involving the natural exchange of finished





products. In this context, people focused on which objects could best serve as tools, aiming to use these tools for business purposes to satisfy their needs and interests.

The Chalcolithic period, which saw the discovery and utilization of copper alongside stone tools and extended from the 4th to the 3rd millennium BCE, represents a historical era marked by efforts to create both material and spiritual goods necessary for life. During the Bronze Age (3rd to 2nd millennium BCE), metal production commenced. This era brought about profound changes in their material and spiritual lives, capturing a unique period in historical space and time. This era witnessed the following discoveries and inventions: mining and smelting of ores, creation of labor tools from the extracted metals; better cultivation techniques using metal tools; establishment of irrigation in agriculture; expansion of arable lands to produce surplus products and organize their exchange; construction of multi-room houses from raw bricks; invention and utilization of the wheel and wheeled carts; domestication of plants; taming and domesticating animals such as cattle, camels, horses, sheep, and goats; creation of beads and necklaces from precious stones; invention of pottery wheels and production of intricately patterned tall vases, pots, and jugs from fired clay; manufacturing of various ornaments, amulets, and mirrors from metals like copper, brass, gold, and gems. As a result, the first division of labor emerged from agriculture to animal husbandry, which then provided ample opportunities for the second division of labor, namely, the emergence of craftsmanship as a separate field. These discoveries and inventions undoubtedly served as the initial material and spiritual factors ensuring the emergence of entrepreneurship based on business thinking.

The Bronze Age corresponds to the 2nd millennium BCE (about 4,000 years ago). During this period, people achieved significant advancements in craftsmanship, weaving, pottery, jewelry making, and construction. They invented the wheel during this time, used it to construct carts, and transported goods. Similarly, the population used hand mills (querns) to prepare flour products and constructed waterwheels to irrigate fields, marking the advancement of craftsmanship. Jewelers made bronze bracelets and mirror-frames. Essentially, the primary object of commodity exchange during this period was metals made from bronze alloys (copper, tin, lead).

Since ancient times, business thinking had evolved in accordance with the era. This led them to initiate mining operations, process the extracted raw materials, manufacture objects that met people's spiritual needs, and actively engage in entrepreneurial activities by trading these goods across the entire Eurasian region.

In ancient times, by the late Bronze and early Iron Ages, the widespread use of metal labor tools in society facilitated the formation and development of entrepreneurship based on business thinking, which was characterized by: firstly, urbanization, namely, the increasing role of cities in societal development; secondly, communities uniting to perform certain complex tasks (such as building small irrigation structures, defending against enemies, etc.); thirdly, the development of

craftsmanship into a distinct division of labor; and fourthly, the emergence of the first city-states, which laid the groundwork for transitioning from natural commodity exchange to “commodity-money” relations.

By the Late Bronze Age, the specialization and development of craftsmanship as a distinct economic sector was crucial for economic progress in society and played a pivotal role in the formation of the first cities and states, stimulating the increase of surplus products. The emergence of the first states was significantly influenced by the exchange, trade, and cultural relations within these first cities. As we reach the Late Bronze Age, the interaction and cultural exchanges between the nomadic herding tribes of the north and the settled agricultural populations of the south intensified. Numerous similarities found in artifacts from both northern and southern regions indicate economic and cultural interactions, which, along with the development of ancient routes, are considered fundamental factors in the early urbanization and state formation processes [4].

The significance of ancient trade routes was immense in the entrepreneurial activities based on the business thinking of ancient peoples. The emergence of these ancient communication and trade routes can be attributed to the natural need to connect with areas rich in other food resources to meet food demands; the emergence of the need to exchange products due to natural conditions; the migration of populations from one area to another due to natural or socio-economic conditions; the formation of ideas about the natural state and geographical location of new places in people's minds, as well as the domestication and utilization of animals, the invention of the wheel, among others.

Thus, communication and trade routes had a significant impact on the formation of entrepreneurial thinking, serving as a unique “place of entrepreneurs” connecting East and West.

The development of thoughts on entrepreneurship based on business thinking and the emergence of the earliest peoples engaged in various sectors of social labor distribution such as the Parthians, Bactrians, Sogdians, Chorasmians, and Saka-Massagetae are extensively documented. These peoples founded ancient states like Bactria, Khwarezm, and Sogdiana, whose populations engaged in “commodity exchange” based relationships. Extensive information about these interactions is provided in historical texts such as Herodotus' “Histories”, Strabo's “Geography”, Arrian's “Anabasis of Alexander”, Quintus Curtius Rufus' “The History of Alexander the Great of Macedon”, and Diodorus Siculus' “Library” [5]. Thus, in ancient times, another material basis for entrepreneurship based on business thinking was the exchange of grain products.

Based on the development stages of entrepreneurial thinking among the populations along the “Great Silk Road”, their engagement in entrepreneurial activities focused on the exchange of various rare goods, using coins minted by states as the medium of exchange. These coins, known as “tanga”, were metal pieces guaranteed and defined by the state, marked with a special seal to indicate their value and authenticity. Primarily, tangas minted by the Sogdians, Kushans, Byzantines,



Sasanians, Muslim dynasties, Karakhanids, Khwarezmshahs, Mongols, and Timurids were used.

In conclusion, it can be said that from the inception of humanity, society has always been actively engaged with its surrounding environment to sustain life. This fact is universally acknowledged and undeniable. "In essence, the natural environment and its various changes have influenced people's physical appearance, spiritual values, psyche, and the growth of their thinking level. This interplay, inducing movement (biological, social, ...), change, and development, is an essential aspect of this dynamism". Therefore, recognizing the organic nature of this process as a principle of active engagement based on the development of entrepreneurial thinking in human relations is appropriate. In this context, we can note the development of thoughts on entrepreneurship based on the business thinking of ancient peoples, evidenced by the studied trade relations in various places and the construction of trade-related infrastructure.

#### THE LIST OF USED LITERATURE

1. Яхшиликков Ж.Я., Муҳаммадиев Н.Э. Миллий ғоя – тараққиёт стратегияси. Монография. – Тошкент: Фан, 2017. – Б.160.
2. Haydarov, Asliddin Nizamitdinovich. "The role of economic and social spheres in increasing the level of consumption of the population. "Theoretical & Applied Science 8 (2020): 27-29.
3. Очерки истории формирования и развития предпринимательства в Узбекистане. Монография. – Тошкент: ФБАН РУз. И.Муминов, 2011. – С.8 (145 с.)
4. Эшов Б. Ўзбекистон давлат ва маҳаллий бошқарув тарихи: Биринчи китоб. – Тошкент: Янги аср авлоди, 2019. -Б. 50-51. (432 бет)
5. Қадимги тарихчилар Ўрта Осиё ҳақида. Терма парчалар. – Тошкент: "Yurist-media markazi", 2008. – Б. 184.
6. Бекмуратов А., Индиаминова Ш. Буюк упак йўли: қитъалар ва асрлар оша. Монография. – Тошкент: «O'zbekiston», 2017. - Б. 243. (384 б)
7. Nizamitdinovich, Haydarov Asliddin. "Human and Nature: An Increase in the Level of Production and Consumption. "International Journal of Innovations in Engineering Research and Technology". 7.05 (2020): 278-281.



# EFFECTIVENESS OF SWISS BALL EXERCISE VERSUS FLOOR EXERCISE ON CORE MUSCLE ENDURANCE IN ATHLETES

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Article DOI: <https://doi.org/10.36713/epra17764>

DOI No: 10.36713/epra17764

## ABSTRACT

**Introduction:** Core muscles serve as a critical bridge for force transfer between the upper and lower limbs, playing a vital role in body stabilization and force generation during sports activities. The core is visualized as a box comprising the abdominal muscles (front), para-spinals and gluteus muscles (back), diaphragm (roof), and pelvic floor and hip girdle musculature (bottom). Within this structure, the inner unit (transverse abdominals, multifidus, pelvic floor and hip musculature) provides internal stability, while the outer unit (rectus abdominals, external and internal obliques) facilitates movement and external stability. Effective core performance requires coordination of these muscles to maintain posture, balance and functional movement.

**Methodology:** This true experimental, comparative study employed random sampling via the lottery method, involving 30 male athletes aged 17-24. Conducted over four weeks at Jawaharlal Nehru Stadium, the study utilized the McGill Torso Muscular Endurance Test Battery (trunk flexor, lateral flexors (right and left), and extensor endurance tests) to measure core muscle endurance. Tools used included a Swiss ball, mat, high couch, board or step, stopwatch, and rope. Participants were divided into three groups: Group A (Floor Exercise), Group B (Swiss Ball Exercise), and Group C (Control Group).

**Procedure:** Pre-assessments were conducted using the McGill Torso Endurance Test Battery. Over four weeks, Group A performed floor exercises, Group B performed Swiss ball exercises, and Group C received no specific exercise intervention. Post-assessments followed, comparing pre- and post-test results to determine the effectiveness of each exercise regimen on core muscle endurance.

**Discussion and Results:** All groups showed significant improvement ( $p < 0.05$ ) in core muscle endurance. Inter-group analysis revealed that Group B (Swiss Ball Exercise) had more significant improvements in all measures (flexor, extensor, right and left lateral flexion) compared to Group A (Floor Exercise) and Group C (Control Group). The unstable surface of the Swiss ball increased muscle recruitment and spinal stabilization, providing a dynamic training environment that enhanced core muscle performance.

**Conclusion:** Intra-group analysis indicated that all three groups improved core muscle endurance. However, inter-group analysis demonstrated that Swiss Ball exercises were more effective than floor exercises and no intervention in enhancing core muscle endurance.

**KEYWORDS:** Core Muscle Endurance, Swiss Ball Exercises, Floor Exercises, Athletes

## INTRODUCTION

The Core muscles act as a bridge between upper limbs and lower limbs and the force is transferred from the core often called the powerhouse of the limbs. Core muscles have been suggested not only to protect the spine from excessive force, but also to play an important role in body stabilization and force generation during sporting activities. Core plays an important role in stabilizing lower extremity and knee movement during activities. (1)

The core muscles can be visualized as a box, consisting of several key muscle groups that work together to provide stability and strength to the body's trunk. At the front of this box are the abdominal muscles, while the back is supported by the para-spinals and gluteus muscles. The diaphragm forms the roof of the box, and the pelvic floor along with the hip girdle musculature create the bottom. (2,3,4)

Within this core structure, there are two distinct units: the inner unit and the outer unit. The inner unit is composed of the transverse abdominals, multifidus, and the pelvic floor and hip musculature. These muscles are crucial for maintaining internal stability and support. On the other hand, the outer unit includes the rectus abdominals and both the external and internal oblique muscles. These muscles are primarily responsible for movement and external stability. Together, the inner and outer units of the core work synergistically to maintain posture, balance, and overall functional movement. (5)

A good core performance should co-ordinate all these muscles as one working unit. The inner unit musculature system provides the necessary joint stabilization for the spine. The outer unit musculature system provides aids in movement and function. The outer unit muscles of basically prime movers of the core muscles and extremities. Core muscular endurance is the ability of an isolated muscle group to perform



repeated contractions over a period of time with the intensity of activity being moderate. Endurance is one of the basic elements of muscular performance that has a great relevance to activity of daily living like lifting and bending as well as sports related performance. Poor core endurance trunk muscles may induce strain over the lumbar spine and hence result in low back ache. Core muscular endurance is the ability of an isolated muscle group to perform repeated contractions over a period of time with the intensity of activity being moderate. Endurance is one of the basic elements of muscular performance that has a great relevance to activity of daily living like lifting and bending as well as sports related performance. Poor core endurance trunk muscles may induce strain over the lumbar spine and hence result in low back ache. (6,7,8)

## METHODOLOGY

The study was designed as a true experimental, comparative study, utilizing random sampling through the lottery method. A total of 30 subjects participated, with the study conducted over a duration of four weeks at the Jawaharlal Nehru Stadium. Participants were selected based on specific inclusion and exclusion criteria. The inclusion criteria required subjects to be male athletes within the age group of 17 to 24 years. Exclusion criteria included any history of recent spinal or abdominal surgery, recent fractures, or any other systemic illnesses. (9). This study did not include female athletes due to the difficulty in obtaining a sufficient sample size and because certain physiological conditions may prevent them from completing the four-week session.

The primary outcome measure for the study was the McGill Torso Muscular Endurance Test Battery, which includes the trunk flexor endurance test, trunk lateral flexion endurance test (both right and left sides), and trunk extensor endurance test. These tests were used to evaluate the endurance of core muscles. Various tools were utilized throughout the study, including a Swiss ball, mat, high couch, board or step, stopwatch, and rope. These tools facilitated the execution and measurement of the endurance tests to determine the effectiveness of the core muscles among the subjects. (10,11,12)

## PROCEDURE

The study included 30 athletes who met both the inclusion and exclusion criteria. These athletes were divided into three groups: Group A (Floor Exercise), Group B (Swiss Ball Exercise), and Group C (Control Group). Each group contained an equal number of participants. Group A performed floor exercises, Group B performed Swiss ball exercises, and Group C served as the control group with no specific exercise intervention. The McGill Torso Endurance Test Battery was used to assess core muscle endurance. Pre-assessments were conducted, followed by a four-week intervention period. Post-assessments were then carried out, and the pre- and post-test

results were compared to determine which group showed the most significant improvement in core muscle endurance. (13)

The Swiss Ball Exercise regimen included Swiss ball bridges, Swiss ball crunches, Swiss ball push-ups, Swiss ball planks, and Swiss ball hamstring curls. These exercises were performed in three sets with repetitions of 10, 12, and 15, and each repetition was hold for 15 seconds. The Floor Exercise regimen consisted of curl-ups on the floor, planks, bridges, prone cobra, and quadruped position exercises. These exercises were also performed in three sets with repetitions of 10, 12, and 15, and each repetition was hold for 15 seconds. By comparing the pre- and post-test results, the study aimed to identify which exercise group (floor exercises or Swiss ball exercises) was more effective in improving core muscle endurance. (14,15,16)

## DISCUSSION AND RESULTS

In all the group the p-value is (0.000) less than 0.05, so we reject the null hypothesis. Hence, the evidence is sufficient to say there is a significant improvement from pre and post value of outcome measure in all three groups. The inter-group analysis clearly showed that the group-B [Swiss ball exercise] is effective than group-A [floor exercise] and group-C [control group] in terms of improvement in all four measures flexor, extensor, lateral flexion [right and left] n of core muscles endurance. (17,18,19)

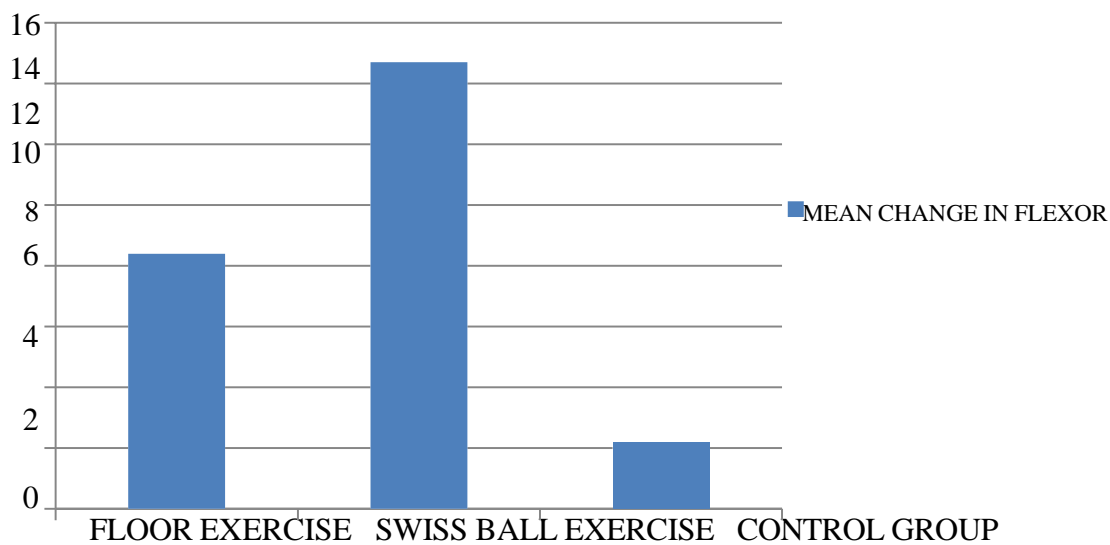
This study aimed at comparing the effect of Swiss ball exercise vs floor exercise with control group on core muscles endurance in long distance athletes. After the four week of intervention there was a significant change seen in group-A and group-B when compared to control group in pre and post values, this was because group-A performing core exercise on floor and group-B performing core exercise on Swiss ball. Control group or group-C performing our daily practice. (20,21)

In June 2016, Osama Ragaa Abdelraouf, states during physical activity, the trunk musculature provides both mobility and stability to the lumbo-pelvic region. Changes in trunk specific activity in form of weakness or insufficient motor control, typically observed in individuals with LBP may lead to increased dysfunction and suboptimal athletic performance. In 2015 Dr. K. Sai Sudha et al, core stability is an important factor in all sports persons especially in cricketers to prevent the risk of injuries. Barati et al. that the core endurance is important to spinal stability during prolonged activity or exercise. Koblbauer et al, suggest that the positive relationship exists between core endurance and running kinematics. Tong et al, indicates that the high intensity maximum run might induce the core muscle fatigue. Therefore, improving core endurance may benefit running performance. In 2019, kwong- chung hung. It states the 8 weeks of core training improved the core endurance as well as running economy. (22,23,24,25)



**MEAN CHANGE IN FLEXOR (GROUP A, B, & C) GRAPH-1**

Post-Hoc-Test	Mean	Diff	SE	T-Value	P-Value
A-Flexor Diff	8.40	-6.30	1.24	-5.07	0.000
B-FlexorDiff	14.70				
A-FlexorDiff	8.40	6.20	1.24	4.99	0.000
C-Flexor Diff	2.20				
B-FlexorDiff	14.70	12.50	1.24	10.07	0.000
C-Flexor Diff	2.20				



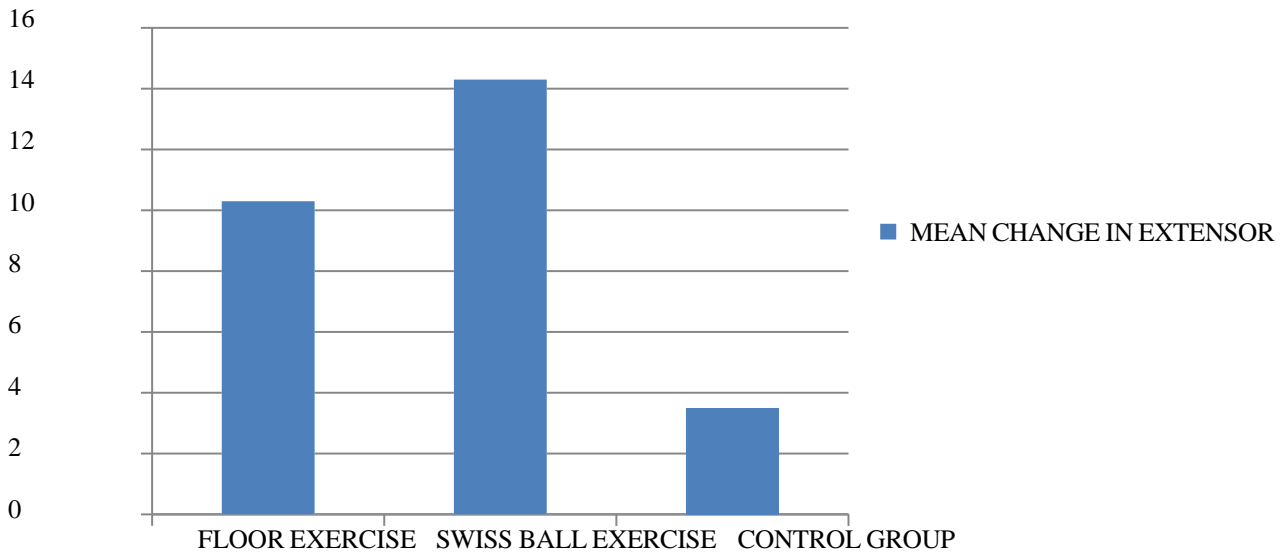
Graph-1

**MEAN CHANGE IN EXTENSOR (GROUP A, B, & C) GRAPH-2**

Post-Hoc-Test	Mean	Diff	SE	T-Value	P-Value
A-Extensor diff	10.30	-4.00	1.06	-3.76	0.001
B-Extensordiff	10.40				
A-Extensordiff	10.30	7.90	1.06	7.43	0.000
C-Extensor diff	2.40				
B-Extensordiff	14.30	11.90	1.06	11.19	0.000
C-Extensor diff	2.40				



MEAN CHANGE IN EXTENSOR



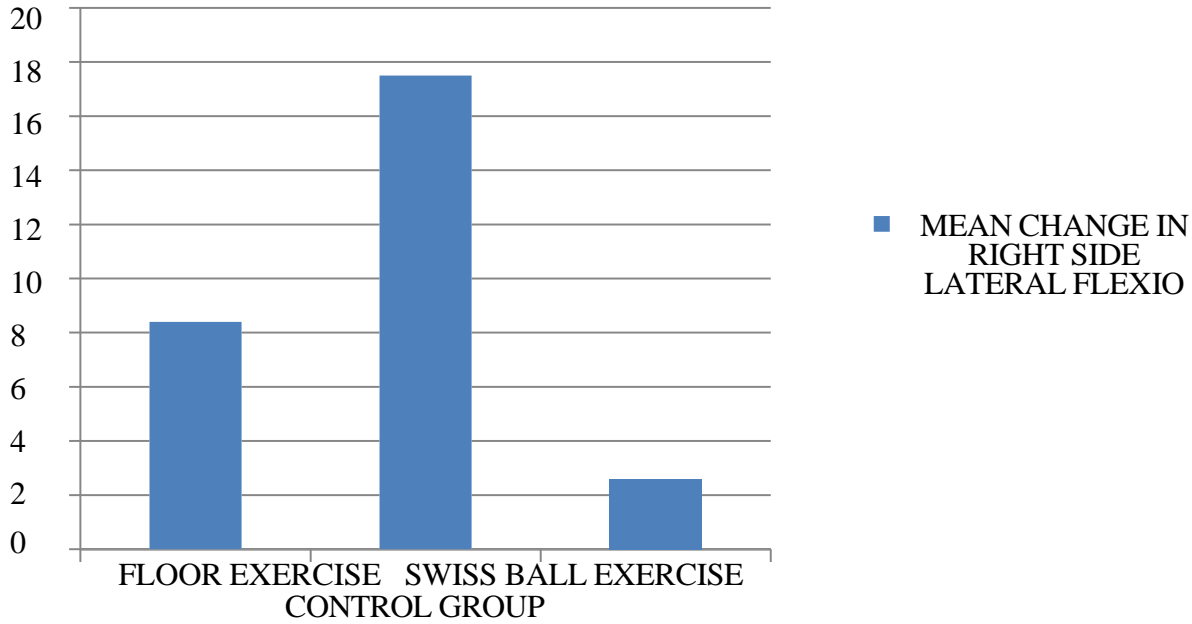
GRAPH-2

MEAN CHANGE IN RIGHT SIDE LATERAL FLEXION (GROUP A, B, & C) GRAPH-3

Post-Hoc-Test	Mean	Diff	SE	T-Value	P-Value
A-right side Lateral flexion	8.40	-9.10	1.25	-7.27	0.000
B- right side Lateral flexion	17.50				
A- right side Lateral flexion	8.40	5.80	1.25	4.64	0.000
C- right Side Lateral flexion	2.60				
B- right side Lateral flexion	17.50	14.90	1.25	11.91	0.000
C- right Side Lateral flexion	2.60				



**MEAN CHANGE IN RIGHT SIDE LATERAL FLEXION**

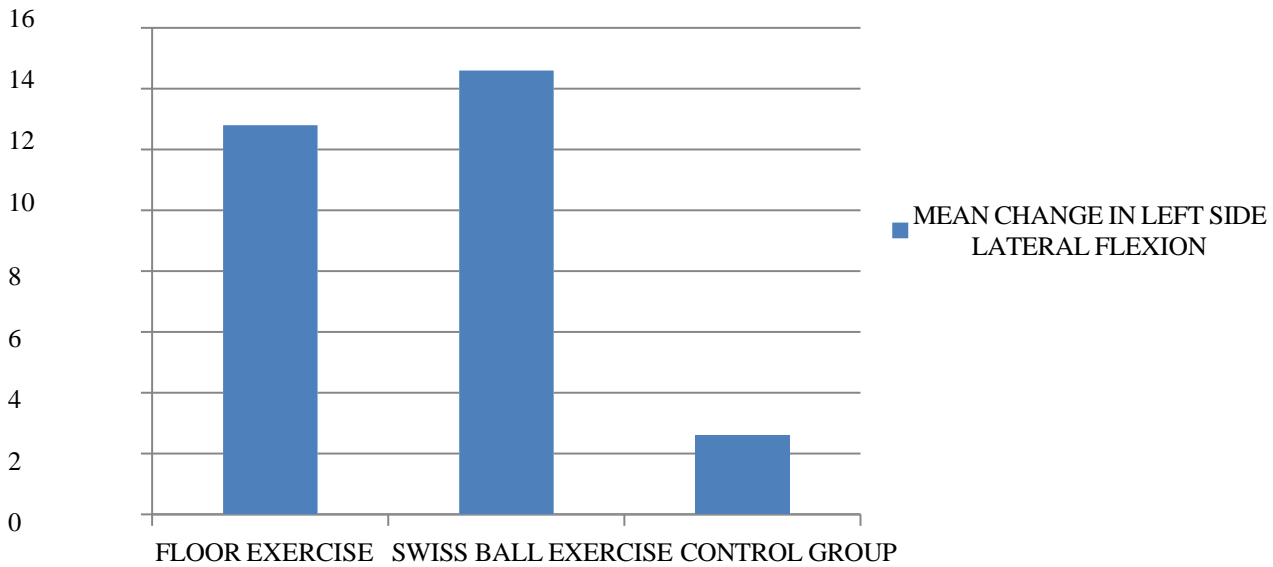


**MEAN CHANGE IN LEFT SIDE LATERAL FLEXION (GROUP A, B, &C) GRAPH-4**

Post-Hoc-Test	Mean	Diff	Se	T-Value	P-Value
A-Left side Lateral flexion	12.80	-1.80	1.68	-1.07	0.294
B- Left sideLateral flexion	14.60				
A- Left side Lateral flexion	12.80	10.20	1.68	6.06	0.000
C- Left side Lateral flexion	2.60				
B- Left sideLateral flexion	14.60	12.00	1.68	7.13	0.000
C- Left side Lateral flexion	2.60				



**MEAN CHANGE IN LEFT SIDE LATERAL FLEXION**



**GRAPH-4**

A total of 30 athletes were assessed as planned. After a four week of protocol period, the athletes in floor exercise and Swiss ball exercise as well as control group shows improvement in all outcome measures.

Graph-1 shows improvement between pre and post value of floor exercise group.

Graph-2 shows the improvement between pre and post value of Swiss ball exercise group.

Graph-3 shows the mild improvement between pre and post value control group

In Graph-1, Graph-2 and Graph-3 are shows the intra group analysis by the means of paired samples t-test.

Graph-4,5,6 and 7 shows the inter group analysis between Group-A, Group-B and Group-C by the means of one-way ANOVA.

**MEAN CHANGE IN FLEXOR**

According to the multiple-comparison test, group-A is significantly different from group-B ( $t=-5.07, p < 0.05$ ), group-A is significantly different from group-C ( $t=4.99, p < 0.05$ ), and group-B is significantly different from group-C ( $t=10.07, p < 0.05$ ). On the whole the group-B is effective than group-A and control group in terms of improvement in flexors

**MEAN CHANGE IN EXTENSOR**

According to the multiple-comparison test, group-A is significantly different from group-B ( $t=-3.76, P < 0.005$ ), group-A is significantly different from group-C ( $t=7.43, P < 0.05$ ), and group-B is significantly different from group-C ( $t=11.19, p < 0.05$ ). On the whole the group-B is effective than group-A and control group in terms of improvement in extensor.

**MEAN CHANGE IN RIGHT SIDE LATERAL FLEXION**

According to the multiple-comparison test, group-A is significantly different from group-B ( $t=-7.27, p < 0.05$ ), group-A is significantly different from group-C ( $t=4.64, p < 0.05$ ), and group-B is significantly different from group-C ( $t=11.91, p < 0.05$ ). On the whole the group-B is effective than group-A and control group in terms of improvement in right side lateral flexion

**MEAN CHANGE IN LEFT SIDE LATERAL FLEXION**

According to the multiple-comparison test, group-A is significantly different from group-B ( $t=-1.07, p < 0.05$ ), group-A is significantly different from group-C ( $t=6.06, p < 0.05$ ), and group-B is significantly different from group-C ( $t=7.13, p < 0.05$ ). On the whole the group-B is effective than group-A and control group in terms of improvement in left side lateral flexion.

\*Group-A performing floor exercise

\*Group-B performing Swiss ball exercise

\*Group-C control group

According to statistical analysis group-A [Swiss ball exercise] is very effective in improving core muscles endurance when compared to group-B [floor exercise] and group-C [control group] because performing core exercise in Swiss ball like unstable surface increases the muscular activity of core muscles. The major benefit of unstable surface is the ability to recruit more muscles units to perform without the need to increase the total load. It can also be due to the increase the perturbation on Swiss ball, more control of center of gravity with a limited base of support, due to reduced contact area performing activity on Swiss ball is more vertical position when compared to floor, thus more muscle recruitment is required to





produce spinal stabilization. Swiss ball exercise provides dynamic training environment which challenge the nervous system and improving the ability to react to a changing base of support, that's way it improves the nervous system function that result in improve functional core muscles performance.

The technique behind Swiss ball training is to concentrate and shift the weight to maintain the stability on the ball, which will not occur in other exercise. (26,27)

## CONCLUSION

1. The intra-group analysis showed that the three groups [A, B, C] are effective in terms of improvement in flexor, extensor, lateral flexion [right and left] scores of core muscles endurance.
2. However, the inter-group analysis clearly showed that the group-B [Swiss ball exercise] is effective than group-A [floor exercise] and group-C [control group] in terms of improvement in all four measures flexor, extensor, lateral flexion [right and left] of core muscles endurance. (28)(29)

## LIMITATION

1. Sample size is small.
2. Duration of the study is short [only 4 weeks].
3. Only males are taken in this study.
4. Other factors like running performance, balancing training was not considered.
5. Only core muscles are identified in outcome measure test, there is no supporting muscle identification like gluteus, hamstrings.
6. Only college students are taken in this study.

## RECOMMENDATION

1. The confounding parameters like running performance, balancing can be considered.
2. In this study only male athletes were taken, so female athletes can be considered.
3. Further study can be done to identify long term effects of this study.
4. Different type of sports game can be considered.
5. Large size samples were recommended.
6. Further studies can be done with different age group (30)

## REFERENCES

1. Andywaldhelm, li li. *Journal of sport and health science*.1(2012)121-128. Endurance tests are the most reliable core stability related measurements.
2. Prateeksrivastav, nirmalanayak, sudeepnair, lobangbhutisherpa, dianadsousza. *Journal of clinical and diagnostic researech*.2016 dec, vol-10(12): YC01-YC03. Swiss ball vs mat exercises for core activation of transverse abdominis in recreational athletes.
3. Rafael f. escamilla, Clare Lewis, duncanbell, gwenbramblet, jasondaffrol, Steve lambert, anandapecsol, rodneyimamura, lonniepaulos, james r. andrews. *Journal of orthopedic and sports physical therapy* \vol 40\ no:5\May 2010\265. core muscles activation during swiss ball and traditional abdominal exercises.
4. Pardisnoormohammad pour, mahlakordi,

- mohammadalimansournia, maryanakbari- fakhrabadi, raminkordi. *Asian spine journal*.2018;(3):490-502. The role of a multi-step core stability exercise program in the treatment of nurses with chronic low back pain.
5. kwong-chung hung, ho-wachung, clarechung-wahyu, hong-chunglai, feng-hua sun, department of health and physical education. *Journal pone* 0213158 8-March 2019.effects of 8-week core training on core endurance and running economy.
6. amralmazabdel-aziem, PhD; *The international journal of sports physical therapy* \vol 2\ num 3\ june 2016. The relationship between core endurance and back dysfunction in collegiate male athletes with and without nonspecific low back pain.
7. Rajanbalakrishnan, emanyazid, mohammedfaziee bin mahat; *International journal of physical education, sports and health* 2016;3(1):347-356. effectiveness of the core stabilisation exercise on floor and swiss ball on individual with non-specific low back pain.
8. 8.K. Sai Sudha, Dr.a. Viswanath Reddy, m.p.t(sports)PhD, Dr.k. Madhavi, m.p.t(c.t), PhD, fiap, (*international journal of physiotherapy*. volume2(5) 738-744.october 2015). Effectiveness of swiss ball vs floor exercise on core muscles strength in elite cricketers.
9. Kellie c huxelbliven, phdat, and Barton e Anderson, ms, act, at sports health dec 2013 core stability training for injury prevention.
10. Tomokookada.kellie c huxel and thomas w, nesser, *journal of strength and conditioning research* 25(1) \252-261 2011, relationship between core stability functional movement and performance.
11. Gaurishanker, vinodchaurasis, *international journal of health science and research*, vol.2; issues 5; aug 2012. comparitive study of core stability exercises with swiss ball in imporving trunk endurance.
12. Maja kalauz, ninaivancic, jelenapausic, *research of physical education, sport and health*, 2016, vol.5 no.1, pp.102-106. reliability and validity of the lateral trunk endurance test.
13. Cosio-lima lm, reynolds kl, winter c, paolone v, jones mt. effects of physioball and convectional floor exercise on early phase adaptations in back and abdominal core stability and balance women. *J strength cond Res*. 2003; 17:721-725
14. saeterbakken, A. H., and sterio, m. muscle activity and association between core strength, core endurance and core stability.
15. Behn, D.G., A. Kenneth, and R.S. curnew. Muscle force and activation under stable and unstable condition. *J. strength cond.Res*.3:416-422. 2002.
16. shanker g., chaurasia v., zambareP.D. Effects of core stabilisation exercise in improving trunk endurance. *International journal of health sciences and research*. Oct.2011.vol.1: issue.1.
17. Stanton, R, Reaburn, PR, and Humphries, B. The effect of short term swiss ball training on core muscle stability and running economy. *J, stregthcond RES*.18:522-528, 2004
18. Nesser, TW, Huxel, KC, Tincher, JL, and Okada, T. The relationship between core stability and performance in division 1 football players. *Journal strength cond, RES* 22:1750-1754, 2008.
19. Reed CA, Ford KR, Myer GD, et al. The effect of isolated and integrated core stability training on athletic performance measures: a systematic review. *Sports med*. 2012;42(8):697-706.



20. Kibler WB, Press J, Sciascia A. *The role of core stability in athletic function. Sports medicine. (Auckland, N.Z.). 2008;36(3):189-198.*
21. Koblbauer JF, van Schooten K, Verhagena, van Dieën JH. *Journal of science and medicine in sport. 2014;17(4):419-24. kinematic changes during running-induced fatigue and relation with core endurance in runners.*
22. Tongk, McConellak, Lin H. *Journal of science and medicine in sports. 2014.13(2): 244-51. the occurrence of core muscles fatigue during high intensity running exercise and its limitation to performance; the role of respiratory work.*
23. Cissik JM. *The role of core training in athletic performance, injury prevention, and injury treatment. Strength and conditioning journal. 2011;33(1):10-5.*
24. Sato K, Mokha M. *dose core strength training influences running kinematics, lower limb stability, and 5000m performance in runners? The journal of strength and conditioning research. 2009;23(1):133-40.*
25. Hodges PW. *Core stability exercise in chronic low back pain. Orthopclin north Am 2003; 34:245-54.*
26. Hodges PW. *Is there a role on transversus abdominis in lumbo-pelvic stability? Man Ther. 1999;4(2):74-86.*
27. Lehman GJ, Hoda W, Oliver S. *Trunk muscle activity during bridging exercises on and off a swiss ball. Chiroprasteopat. 2005; 13:14.*
28. Marshal PW, Murpy BA. *Core stability exercise on and off a swiss ball. Arch phys med rehabil. 2005(2):242-49.*
29. Jeong -oh yoon, Min-hyeok kang, Jun-seok kim, Jae-seop oh. *2018 effect of modified bridge exercise on trunk muscles activity in healthy adult: a cross-sectional study. Brazilian journal of physical therapy 22:2, 161-167.*
30. Nuzzo JL, McCaulley GO, Cormie P, Cavill MJ, McBride JM. *2008, Trunk muscle activity during stability ball and free weight exercises. J strength cond Res. 22:95-102.*



# PERSONAL AND PROFESSIONAL STRESSORS (PPS) AS FACTORS AFFECTING SUICIDAL TENDENCY AMONG TEACHERS

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Article DOI: <https://doi.org/10.36713/epra17776>

DOI No: 10.36713/epra17776

## ABSTRACT

*There has been growing attention on the effects of psychosocial hazards and risks and work-related stress among researchers and policymakers. Work-related stress is now generally acknowledged as a global issue affecting all professionals. This study aims to investigate the relationship between personal and professional stressors as factors affecting suicidal tendencies among teachers. In doing so, this will hopefully lessen the tendency of teachers to commit suicide. Thus, this study will enable teachers to reflect on the impacts of stress that trigger them for suicidal tendencies. The identified respondents constitute the newly hired teachers of the IAD III, particularly from the districts of San Ricardo and Pintuyan. These respondents are made to answer an adapted/researcher-made questionnaire and interview guide to gather necessary data. Findings revealed due to the negative and alarming impact of stress on teachers' life, such as ineffective teaching, poor teaching-learning performance, and general health status, putting effective measures in place is pertinent to their academic success. In terms of relationships, it was found that by identifying the main causes of stress which can be personal and professional stressors or a combination of both that includes changes in lifestyle, increased workload, new responsibilities, and interpersonal relationships, and finding the appropriate remedy will help minimize suicidal attempt among teachers due to maladaptation in a general sense.*

**KEYWORDS:** *maladaptation, pertinent, psychosocial hazards, stressors, suicidal tendency.*

## 1. INTRODUCTION

The 21st century is a "century of stress". Stress is an index for the causes (demands or stressors), inferences (distress and eustress), and stabilizers of the psychological phenomenon known as the stress response (Cannon, 2015) - "the emergency response" for the complexity of mind-body actions. This response depends upon the individual's capacity to handle and sustain stress. It also explains their adjustment capacity that enables them to rightfully handle stress. The inability to handle stress results in its maladaptation (Selye, 1974). Thus, this study claims that personal and professional stressors are factors of suicidal tendency among teachers-a state of maladaptation. Stress is directly linked to seven of the ten leading causes of death in the world (Cooper, 2002), and teachers are one of the vulnerable victims of stress. Two recent cases of suicide among teachers in just two months are attributed to work-related stress (Basas, 2018). Job stressors are factors that lead teachers to commit suicide, in Britain rises each year by 80 percent, which educators say they fail to cope with (McDevitt, 2011). Coping and managing stress using maximizing the use of technology was emphasized in the DepEd of Tacloban City after a teacher in Leyte province reportedly committed suicide due to "paperwork".

Surveys conducted by Kansas State University reveal a 58% increase in stress-related mental health issues reported to campus counselors between 1988 and 2001 (Hoover 2003). Additionally,

many of the emotional and physical symptoms that occur commonly in the teacher population, such as headaches, fatigue, depression, anxiety, and the inability to cope, can be attributed to or exacerbated by stress (Dusselier, 2005). The stress teachers experience may test their ability to cope and adapt to the environment they find themselves in. The impact of stress on teachers can be looked at from various angles. Result from another study stated that premature death and disability along with chronic suffering from occupational stress are not inevitable despite being known risks, (Cannon, 2015). He added that stress is one of the leading causes of death. Researchers in the field of psychoneuroimmunology (PNI) research suggests that chronic stress can lead to or exacerbate mood disorders such as depression and anxiety, bipolar disorder, cognitive (thinking) problems, personality changes, and problem behaviors. Balandzio (2012) stated that there is no universal solution how to deal with everyday stress but when people learn to take responsibility for their own lives and adapts easily to life changes, they will experience less stress.

However, if job demands and pressures in the workplace exceed the skills and abilities of an individual or if the employees' goals and values conflict with these work demands, a misfit between the characteristics of an individual and his or her work environment occurs. According to the National Mental Health Association, stress ranks among the top three workplace problems



for newly hired professionals due to maladaptation to the environment. The purpose of this study is to look for possible means to investigate the relationship between personal and professional stressors as factors affecting suicidal tendencies among teachers. This will hopefully lessen the tendency of teachers to commit suicide. Thus, this study will also enable teachers to reflect on the impacts of stress that trigger them for suicidal tendencies.

### 1.1 Research Objectives

This study intends to establish the relationship between personal and professional stressors as factors affecting suicidal tendencies among teachers in IAD III in the Division of Southern Leyte, Philippines in the year 2019-2020.

Specifically, this study intends to answer the following questions:

1. What are the personal stressors perceived as factors affecting suicidal tendencies among teachers in IAD III in the Division of Southern Leyte, Philippines?
2. What are the professional stressors perceived as factors affecting suicidal tendencies among teachers in IAD III in the Division of Southern Leyte, Philippines?
3. Is there a significant relationship between personal and professional stressors as factors affecting suicidal tendencies among teachers?
4. Is personal and professional stressor perceived as a factor for suicidal tendency among teachers?

## 2. THEORETICAL AND CONCEPTUAL FRAMEWORK

This study is anchored on various theories of stress namely, the theory on transactional, person-environment fit, and cybernetic theory. These theories try to explain how stress whether personal or professional is manifested through the interaction of the individual and its environment, as factors affecting suicidal tendencies among teachers. According to transactional theory, stress is entrenched in an ongoing procedure that involves individuals handle with their environments, making appraisals of those encounters, and efforts to cope with the issues that arise (Cooper, 2001). This theory argues that we can either adopt problem focused or emotion focused coping styles. Coping strategies can be classed as adaptive if they help us manage our stress responses in the long term. In contrast, maladaptive coping behaviors reduce our experience of stress (the arousal or the symptoms) in the short term, but don't help or actually exacerbate the problem on the longer term (Frings, 2017) and his study suggested that our experience of stress is ultimately a system of appraisal, response and adaptation. The transaction relating to stress is between the person and the environment. Depending on the amount of demands that a person is confronted with and the amount of resources that they have to deal with the demands, stress may either be in abundance or avoided entirely (Lazarus & Folkman, 2001).

Likewise, the Person Environment Fit theory (Edwards, Caplan, & Van Harrison, 1998) points out that stress and strain in the

workplace is caused by the interaction of a worker with his or her environment. (Cheyne & Wimalasiri, 2008) argued that the reason that control and support have a positive impact on reducing strain and enhancing well-being will enable the individual to cope more effectively with stressors (including work demands) and that these benefits accumulate over time. In the same line of thought, social support from work colleagues and organizational support for individuals (accommodating their needs) also represent major environmental resources, which can reduce stress and burnout (Halbesleben, 2006), as well as enhancing positive well-being (Luszczynska & Cieslak, 2005). However, poor-work relations as low levels of supportiveness and attention in problem-solving can be potentially stressful when the leadership style is demanding and acknowledgment and praise for effort are valuable for boss subordinate association (Sutherland & Cooper, 2000). In combination with this, point to that in relationship between supervisor and subordinate is harmful, problems of emotional unsteadiness may occur (Cartwright & Cooper 1997). Therefore, along with the work environment, the person role at work has been identified as the major source of stress because of its role conflict, accountability for people and conflict of role border (Cooper & Bright, 2001).

The Cybernetic theory (Cummings & Cooper, 2000) asserting the idea that to regulate discrepancies between the individual and the environment, discrepancies are expressed in terms of negative feedback loop and so stress, coping and well-being are crucial elements in this self-regulating process. Furthermore, the larger discrepancies in the fit between the individual and the environment, the more severe the occupational stress will be and the higher the probability that the individual will experience negative consequence in his/her job performance. This model assumes that individuals are active purposive managers of stress (Cummings & Cooper, 2000) and people use information to regulate their behavior. After adopting a goal or standard, people periodically monitor their behavior and compare it against some standard. The theory has numerous practical applications, that suggests procedures for enhancing well-being at work and reducing the impact of stressors that would lead to suicidal attempt. Bernstein et al. (2008) define the sources of stress as every circumstance or event that threatens to disrupt people's daily functioning and causes them to make adjustments. According to (Centre 2010, 4-6 Davidson 2001) stress is not only negative things that happens positive things also cause stress. There are two types of stressors which is the positive stressors which is known as eustress and negative stressors which is also known as distress. Luke Seaward (2012) also mentions some other types of stress which are different in their own ways. There is another type of stress which is the neustress and "this is any kind of information or sensory stimulus that is perceived as unimportant".

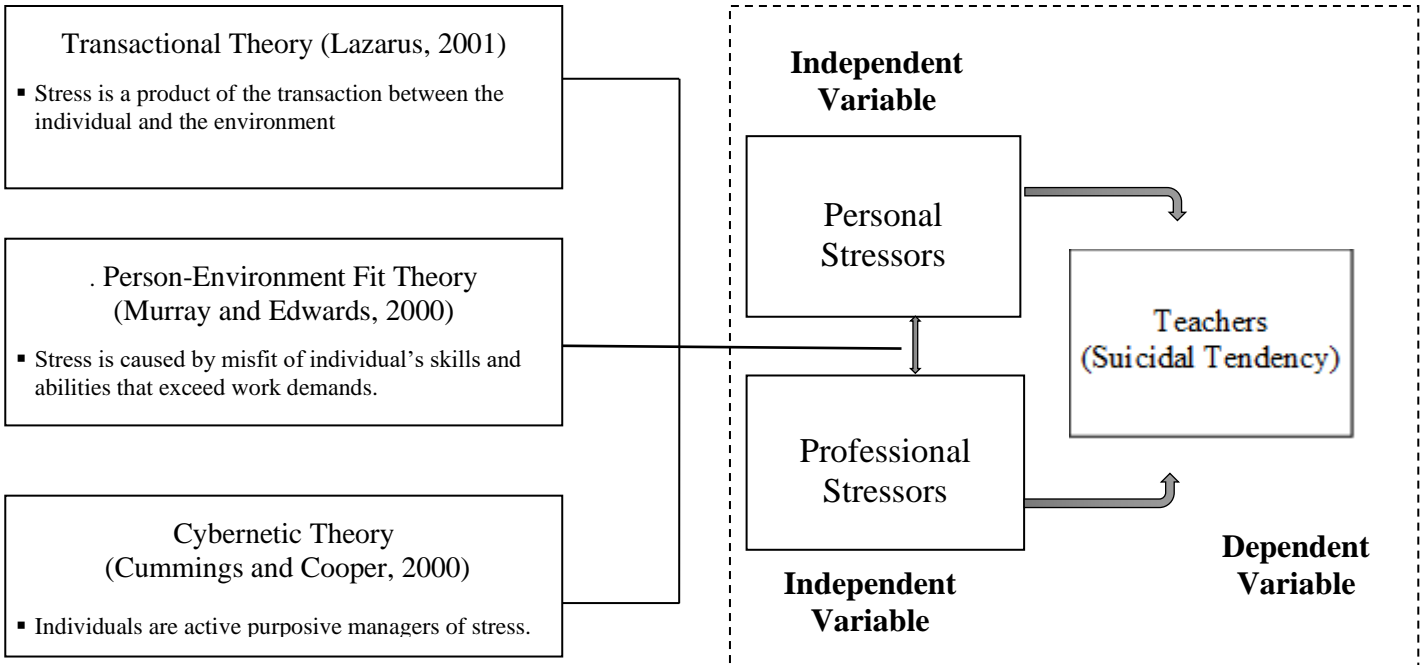
The conceptual framework of the study is presented to provide a clear flow on the process to be done. The dependent variable of this study is the teachers' suicidal tendency while the independent variables are the personal and professional stressors as factors





affecting suicidal tendency among teachers. The data on what are perceived personal and professional stressors can be gathered through adapted/researcher made questionnaire using the standardized questions. The process is to determine how these

personal and professional stressors affect the suicidal tendency among teachers in IAD III in the Division of Southern Leyte (figure 1.)



**Figure 1. Theoretical and Conceptual Framework of the Study**

### 3. RESEARCH METHODOLOGY

#### 3.1 Research Design

This study used a descriptive-correlational research design. The design intends to describe the variables and the existing relationship between and among these variables. It also describes the degree to which two or more quantitative variables are related. The major purpose of this design is to clarify understanding of the phenomenon by identifying relationship among variables (Fraenkel, Wallen & Hyun, 2012). The design defines this study as it tries to investigate the relationship between the personal and professional stressors as factors affecting suicidal tendency among teachers.

#### 3.2 Research Environment

This study was conducted to five selected Secondary High Schools in IAD III of the Division of Southern Leyte. These schools are selected for they have more population of newly hired teachers than other secondary schools in IAD III. The schools selected are the following:

Esperanza National High School is located at Brgy. Esperanza Dos, part of San Ricardo district. The barangay is located in between Brgy. Pinut-an and Brgy. Camang. The school is located along the national road from Brgy. Esperanza going to the municipality of San Ricardo. The school consists of 15 teachers with which 7 of them are newly hired teachers, headed by Mrs. Carmelita Duran HT-I. Pintuyan National High School is located

at Brgy. PD.Equipilag, Pintuyan, Southern Leyte part of the Pintuyan district. It is located along the national road from the town of Pintuyan going to the neighboring municipality of San Francisco. The barangay is located in between Brgy. Canlawis and Brgy. Poblacion Ibabao. The school is headed by Mr. Mario T. Orias, Principal-I with 24 teachers and 8 of them are newly hired teachers. Pintuyan National Vocational High School is located at Brgy. San Roque, Pintuyan, Southern Leyte and is considered as the one of the biggest technical-vocational High Schools in IAD III in terms of land area and population. It consists of two tracks in senior high program namely: General Academic Strand and TVL Track which offers 10 technical-vocational offering. Pintuyan National Vocational High School has a total of 40 teachers and staff teaching various subjects in the secondary curriculum including senior high school level that offers a track on General Academic Strand (GAS) with which 20 of them are newly hired teachers both from the junior and senior high schools headed by a two department heads and by Dr. Rico L. Amper as their school head. Pinut-an National High School is located at the upper part of the relocation area of Brgy. Pinut-an, San Ricardo, Southern Leyte which is approximately 18 kilometers away from the municipality of San Ricardo. The barangay is located in between Brgy. Esperanza and Brgy. Looc. The school is presently headed by a Teacher In-charge, Mrs. Sylvia E. Lumactod with the support of 14 teachers, with which 9 of them are newly hired teachers both from the junior and senior high schools. San



Ricardo National High School is located at Brgy. Poblacion, part of San Ricardo district. It is located at the northern most part of the town of San Ricardo and is accessible to the national road. The school is presently offering two tracks in the senior high school department particularly ABM and TVL in Agriculture. San Ricardo National High School is composed of 19 teachers with which 7 of them are newly hired teachers and the school is presently headed by Mr. Wenceslao T. Piloton Jr., HT-I.

### 3.3 Respondents

The target respondents of this study were newly hired teachers who have rendered services for at least 1 to 5-year experiences,

for mostly they are in a transition and adjustment period. Teachers must be in teaching related work and in relation to the existing civil service commission and DepEd policies on actual classroom teaching load and working hours prescribed by RA 4670 Magna Carta for Public School Teachers stipulates that public-school teachers shall render at most six (6) hours of actual teaching a day, except when undertaking academic activities that require presence outside the school premises and other functions given. This study will utilize non-probability sampling particularly purposive sampling.

**Table 1. Distribution of the Respondents**

Schools	Teachers	
	Frequency	%
Esperanza National High School	9	16.98
Pintuyan National High School	8	15.09
Pintuyan National Vocational High School	20	37.74
Pinut-an National High School	9	16.98
San Ricardo National High School	7	13.21
<b>TOTAL</b>	<b>53</b>	<b>100</b>

### 3.4 Instruments

This study utilized an adapted/researcher made questionnaire and interview guide to measure the validity and content reliability of the data. Once validated, the questionnaire was ready to use.

The research questionnaire consists of four parts. Part I of the questionnaire collects information on the profile of the respondents. This includes the respondents' highest educational attainment, number of years in teaching, teaching loads and their academic rank. Part II identifies information of newly hired teachers' experiences. It consists of 15 statements that solicit the personal stressors as factors in suicidal tendency among teachers and respondents will check either highly agree or strongly disagree from their selected experiences.

Part III identifies information of newly hired teachers' difficulties during their 1 to 5 years in teaching. It also consists of 15 statements that collect information of the common professional stressors at work and respondents will check either highly agree or strongly disagree from their selected experiences.

Part IV inquires the relationship of the personal and professional stressors as factors affecting suicidal tendency among teacher which has 15 statements which solicits teachers' degree of agreement and disagreement. Pilot-testing will be conducted to test the consistency of the results and the relationships among variables.

### 3.5 Data Gathering Procedure

Adapted /research made questionnaire will be personally conducted by the researcher to the respondents after the approval of permission from the school principal. The schedule for the conduct of the study was stipulated on the letter in order to inform all the concern authority regarding when and where the study is conducted. The researcher went to the selected schools on the month of November 2018 and discussed the significance of the study to the respondents.

The adapted questionnaire was employed during the free time of the respondents. The newly hired teachers were the target respondents of this study. They were oriented of the study and given direction in answering the questionnaire and asked to answer the adapted/research made questionnaire with utmost honesty then after that the researcher collected the questionnaire. The data gathered was carefully recorded and tabulated for analysis.

### 3.6 Data Analysis

The data gathered were presented in tables and figures which served as basis for the discussions. In analyzing the data, the statistical technique employed was frequency counts in the form of checklist as a data gathering tool. The data gathered were analyzed and interpreted from various angles and statistical perspectives.



#### 4. RESULTS

**Table 2. Frequency Count of Teachers' Personal Stressors**

Experiences__ Statements	Personal Stressors				
	Highly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.School Heads changing their minds about what they want to be done.	23	20	0	4	6
2. Lack of support from School Heads.	22	16	0	7	8
3. Feeling put-upon by School Heads.	23	19	0	6	5
4. Bullying behavior by Colleagues.	3	3	2	24	21
5. Pressure from School Heads.	21	26	0	4	2
6. Bullying behavior by School Heads.	2	3	3	21	24
7. Interruptions by Colleagues.	2	3	2	20	23
8. Seeing others not pulling their weight.	2	1	0	24	26
9. Interruptions by School Heads.	4	3	0	20	22
10. Lack of support from colleagues.	5	6	1	19	22
11. Worrying of events that have not happened yet.	6	8	3	19	17
12. Lack of time/perceived lack of time.	14	10	3	10	16
13. Too many open folders.	11	14	5	13	10
14. Lack of Clarity/Tentative Status/Indecision.	13	11	7	12	10
15. Physical Health/Relationships.	12	16	5	11	9

The table above contains statements about teacher's personal experiences of stress as factors affecting suicidal tendency among teachers. Descriptive analysis shows that most of the newly hired teachers significantly agreed that they had experienced these statements that are considered personal stressors during their first and second years in teaching as newly hired teachers than the teachers who have longer experienced are effective in managing

stress at school. Among the 53 newly hired teachers who qualified as respondents both from the districts of Pintuyan and San Ricardo in IAD III in the division of Southern Leyte, more than 73% significantly agreed that they have experienced most of the statements as personal stressors and contributory factors that affect suicidal tendency among newly hired teachers.

**Table 3. Frequency Count of Teachers' Professional Stressors**

Difficulties__ Statements	Professional Stressors				
	Highly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Having to take on others peoples work.	20	26	0	4	3
2. Lack of job satisfaction.	3	4	2	25	19
3. Lack of control over the working day.	17	7	5	19	5
4. Frustration with the working environment.	6	8	3	19	17
5. Having to work long hours.	21	25	2	3	2
6. Feeling undervalued.	12	14	2	14	11
7. Workloads.	22	24	0	4	3
8. Targets.	21	19	2	6	5
9. Type of work people have to do.	12	16	2	12	11
10. Obvious drop in duty performance.	11	15	7	13	7
11. Lack of knowledge.	10	17	3	14	9
12. Deadlines.	23	19	0	7	4
13.Changing jobs.	12	15	4	12	10
14. Indecision in applying for jobs.	5	10	3	19	16
15. Pressure from school heads.	19	17	6	7	4

The table above contains statements about teachers' difficulties in professional experiences of stress as factors affecting suicidal tendency among teachers. Descriptive analysis shows that most of the newly hired teachers significantly agreed that they had experienced these statements that are considered professional

stressors during their first and second years in teaching as newly hired teachers than the teachers who have longer experienced in teaching and are effective in managing work stress at school. Of the 53 newly hired teachers who qualified as respondents both from the districts of Pintuyan and San Ricardo in IAD III in the



division of Southern Leyte, more than 75% significantly agreed that they have experienced these difficulties in teaching and in handling the stress from work as professional stressors and factors that affect suicidal tendency among newly hired teachers. This is

also relative in the case of personal experiences of newly hired teachers where they find hard to manage personal stress which means that they have a greater chance of suicidal tendency as ineffective managers of stress.

**Table 4. Frequency Count of Teachers' Situational/Occasional Stressors**

Situational__ Statements	Situational/Occasional Stressors				
	Highly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Unkempt personal appearance.	15	19	7	8	4
2. Feelings of hopelessness or helplessness.	12	17	5	13	6
3. Perceived Burdensomeness.	14	19	3	11	6
4. Previous suicide attempts.	19	23	4	5	2
5. Drug or alcohol abuse.	25	19	2	4	3
6. Social withdrawal.	15	21	5	7	5
7. Loss of interest in hobbies and in sex.	9	10	7	16	11
8. Reckless behavior, self-mutilation.	11	16	2	15	9
9. Physical health complains, changes/loss of appetite.	10	22	2	11	8
10. Complaints of significant sleep difficulties	13	18	5	9	8
11. Themes of death in letters and notes	22	19	3	6	3
12. Giving away personal possessions	11	15	2	13	12
13. Finalizing personal affairs	12	14	4	13	10
14. Formulating a plan to include acquiring the means to kill oneself	19	17	3	8	6
15. Talking or hinting about suicide	17	22	4	6	4

The table above contains statements about situational and occasional stressors which teachers are vulnerable to experience with, like in managing personal stress in life and professional stress in the work environment as factors affecting suicidal tendency among them. Descriptive analysis shows that most of the newly hired teachers significantly agreed that they had

experienced these statements that are considered situational and occasional stressors during their first and second years in teaching as newly hired teachers than the teachers who have longer experienced in teaching and are effective in managing work stress at school.

In your own view how can stressed (personal and/or professional stressors) be managed?	
1	Teachers taking some time off and relaxing their minds
2	By calming down and getting your mind off stressing things, for example, different hobbies and sports
3	Exercise, time outs and time management
4	A work life balance practice
5	Engage in fun and entertaining activities
6	Could be handled by having a positive view on the not so bright "situation" on WORLD's STAGE;
7	Have a moment for yourself and do something that you like and that takes your mind out of the stressful things, such as reading a book you like.
8	By attending parties with friends by accepting the situations, by sharing with close friends
9	Seek for guidance on stressful issues and give yourself a "me time".
10	Sports and physical activity - Individual should find own thing what decrease stress levels. For example, hobby (jogging, yoga or bicycling etc.) or playing video games for reasonable time.

**Figure 2: Illustration showing the responses from the respondents on managing stress**

The above responses were related to how stress can be managed, there were 53 respondents in all. Majority of the respondents agree that having enough time and engaging in extracurricular activities like sports and other entertaining hobbies play a significant role in helping to deal with stress. Also seeking

guidance and counselling and or discussing with friend like environmental factors as causes of stress helps a lot along the process in managing stress.





<b>In your view, should stress awareness be taught on the newly hired teachers in DepEd, through trainings and seminars? And why?</b>	
1	Yes, there should be a course of trainings/seminars, once or twice a year to raise more awareness.
2	Yes, it should. Managing better the stress can allow teachers to have a better teaching performance in the school and in the working environment.
3	Yes, better overall health, better attitude, can handle larger workloads, less issues working in teams, less stressed teachers equals better teaching performance.
4	This is a way to help teachers deal with stress during instructional time and also very helpful for their working life in the future.
5	Stress awareness should be given to teachers but school heads should also give some kind of technical assistance or training so they will treat newly hired teachers with compassion.
6	Definitely no. No need to attract unnecessary attention on stress factors. Teachers, anyway, can receive technical assistance and specialist's help if needed.
7	Not necessarily taught but at least small information. Some of the teachers may be having heavy struggles with the stress at their first and second year in teaching and don't know how to handle it.
8	Yes, small information of how you can manage it may give them a small help of where to start before the stress causes bad physical or mental problems.
9	Not really. I suggest that everyone who is stressed should look for someone to talk to.
10	No need, its personal problems.

**Figure 3: Illustration showing the responses from the respondents on stress awareness should be taught**

With regards to whether stress awareness should be taught or not, majority again were in support that it should be taught at least once a year. Newly hired teachers find it very useful as it affects their teaching performance and academic life whereas minority who were not in support were of the opinion that dealing with stress issue is a personal thing.

## 5. DISCUSSION

This study tries to investigate the relationship between the personal and professional stressors as factors affecting suicidal tendency among teachers. Descriptive analysis shows that most of the newly hired teachers significantly agreed that they had experienced those statements that are considered personal stressors during their first and second years in teaching as newly hired teachers than the teachers who have longer experienced are effective in managing stress at school.

Of the 53 newly hired teachers who qualified as respondents both from the districts of Pintuyan and San Ricardo in IAD III in the division of Southern Leyte, more than 75% significantly agreed that they have experienced those difficulties in teaching and in handling the stress from work as professional stressors and factors that affect suicidal tendency among newly hired teachers. This is also relative in the case of personal experiences of newly hired teachers where they find hard to manage personal stress which means that they have a greater chance of suicidal tendency as ineffective managers of stress.

The data collected on a variety of situations that respondents may have considered were a problem for themselves, their family member or close friends. Types of situations included death, serious illness, mental health problems, not being able to get a permanent job and divorce or separation. The magnitude of the negative impact of work-related stress and its health outcomes in

an important part of the global working teacher population is very evident owing to the wealth of the evidence base on the prevalence of associated physical and mental health disorders. Work-related stress has a considerable impact in organizational safety, productivity and overall performances.

The results in the interview of newly hired teachers shown in Figure 2 tells that their responses related to how stress can be managed. Among the 53 respondents, majority of them agree that having enough time and engaging in extracurricular activities like sports and other entertaining hobbies play a significant role in helping to deal with stress. Also seeking guidance and counselling and or discussing with friends like environmental factors as causes of stress helps a lot, along the process in managing stress. Work-related stress cannot be considered the problem of a few working individuals; however, it has to be recognized as a collective problem with major implication for the well-being of individuals like teachers, their families and societies as a whole.

While people's perceptions of their own personal stress may be improving, the impact of stress on their physical health and their inability to prevent stress is cause for continued concern. At the same time, while there is an awareness that stress can have a health impact, there is a disconnect when it comes to the awareness of the impact stress may have on an individual's personal health. Department of Education should be aware of the negative effects of the psychosocial hazards (personal and professional stressors) that may affect teachers as a result of overwork and lack of control over their tasks, with the consequences of work-related stress and coping behaviors and health outcomes. Unfortunately, many teachers are only conscious that a harmful stress level has been reached once its negative effects like suicidal attempt among them, have affected their work and well-being.



Most initiatives on stress management in the workplace have included teacher counselling, induction and mentoring of new teachers, on-going support by co-teachers. The adoption of collective measures in the workplace can offer support and allow teachers to become more productive without enduring the effects of negative stress. Conversely, it is generally agreed that improving the teacher's ability to cope with stress can be a valuable complementary strategy as part of the wider, collective and organizational process of combating work-related stress. Therefore, it is essential to find innovative ways of handling the causes and the consequences of work-related stress with a combination of both collective and individual measures to avoid suicidal tendency among teachers.

These results suggested that making the institutions and teachers aware, informed and competent to address these new risks creates a safe and healthy working environment, builds a positive and constructive preventive culture in the organization, boosts engagement and effectiveness, protects the health and well-being of workers, and increases productivity. The ideal response to stress is to prevent its occurrences. This may be achieved by tackling the core of the problem, namely its causes. The causes may have their origins at work, at home, in the social environment or in the community.

This study found out that the best way to address work-related stress is by means of strategies like an effective workplace program to prevent work-related stress which requires proper identification of psychosocial risks (personal and professional stressors) and assessment of work performance and personal problem resulting from stress. Teacher's participation in this process is crucial. They should be involved in identifying those risks which they feel cause unnecessary stress in their jobs and in rating them in such a way as to establish priorities for interventions.

The assessment should be done in a systematic way and teachers should be asked to express their concern about any situation that may be causing stress at work. Once the existence of work-related stress has been recognized and the psychosocial hazards (personal and professional stressors) at its origin identified, an action to address them at the source should be taken. Therefore, action should be aimed at eliminating as many causes as possible, so that the action taken reduces and prevents future work-related stress and minimize suicidal tendency among newly hired teachers due to a state of maladaptation.

## 6. CONCLUSIONS

Based from the results of the study, due to the negative and alarming impact of stress on teacher's life, such as ineffective teaching, poor teaching-learning performance and the general health status, putting effective measures in place is pertinent to their academic success. This study concludes that by identifying the main causes of stress which can be personal and professional stressors or a combination of both that includes changes in lifestyle, increased workload, new responsibilities, and

interpersonal relationships and finding the appropriate remedy will help minimize suicidal attempt among teachers due to maladaptation in general sense. A lot of research has been done on stress and its management and pragmatic solutions given and so, the researcher hopes that, based on the analysis made, this study will be of great help in helping teachers to become an effective managers of stress, which would lead them to have an excellent academic teaching performance and productive-meaningful life.

## 7. RECOMMENDATIONS

This study found out that the best way to address work-related stress is by means of strategies like an effective workplace program to prevent work-related stress which requires proper identification of psychosocial risks (personal and professional stressors) and assessment of work performance and personal problem resulting from stress. Teacher's participation in this process is crucial. They should be involved in identifying those risks which they feel cause unnecessary stress in their jobs and in rating them in such a way as to establish priorities for interventions.

The assessment should be done in a systematic way and teachers should be asked to express their concern about any situation that may be causing stress at work. Once the existence of work-related stress has been recognized and the psychosocial hazards (personal and professional stressors) at its origin identified, an action to address them at the source should be taken. Therefore, action should be aimed at eliminating as many causes as possible, so that the action taken reduces and prevents future work-related stress and minimize suicidal tendency among newly hired teachers due to a state of maladaptation.

## REFERENCES

1. Balandzio, E. H. (2012). *Coping with stress: A personalized approach*. *Psychology Today*. <https://www.psychologytoday.com/blog/coping-stress-2012/06/personalized-approach>
2. Basas, C. G. (2018). *The tragic cost of teacher stress*. *Philippine Star*. <https://www.philstar.com/lifestyle/health-and-family/2018/08/27/1846532/the-tragic-cost-of-teacher-stress>
3. Bernstein, D. A., Penner, L. A., Stewart, A. C., & Roy, E. J. (2008). *Psychology (8th ed.)*. Houghton Mifflin Company.
4. Cannon, W.B. (2015). *The wisdom of the body (Revised ed.)*. W.W. Norton & Company. (Original work published 1932)
5. Cartwright, S., & Cooper, C. L. (1997). *Managing workplace stress (Vol. 1)*. Sage Publications.
6. Centre, K. C. (2010). *Stress and Stress Management*. London: Press books.
7. Cheyne, A., & Wimalasiri, V. (2008). *The moderating effect of control and social support on job demands and strain relationships: Evidence from Sri Lanka*. In *Proceedings of the 11th European Congress of Psychology (pp. 7-12)*.
8. Cooper, C. L. (2001). *A transactional model of stress and coping*. In N. J. Smelser & P. B. Baltes (Eds.), *International*



- encyclopedia of the social and behavioral sciences* (Vol. 22, pp. 15183-15190). Elsevier.
9. Cooper, C. L. (2002). *The effects of stress on health and mortality*. In J. Jones & J. Smith (Eds.), *Stress in the modern world* (pp. 145-178). Oxford University Press.
  10. Cooper, C. L., & Bright, J. (2001). *Individual differences in reactions to stress*. In F. Jones & J. Bright (Eds.), *Stress: Myth, theory and research* (pp. 111-132). Pearson Education.
  11. Cummings, T. G., & Cooper, C. L. (2000). *A cybernetic theory of organizational stress*. In C. L. Cooper (Ed.), *Theories of organizational stress* (pp. 101-121). Oxford University Press.
  12. Davidson, J. (2001). *Stress Management*. Macmillan USA: A Person Education Company. Directorate of Labor Inspection (Norway); Act of 17 June 2005 No. 62 relating to working environment, working hours and employment protection, etc. (The Working Environment Act - «Arbeidsmiljøloven») as subsequently amended, last by the Act of 14. December 2012 No. 80; Chap. 4, Section 4-3
  13. Dusselier, L. (2005). *The effects of stress on coping mechanisms and mental health*. *Journal of Applied Psychology*, 90(3), 584-592.  
<https://doi.org/10.1037/0021-9010.90.3.584>
  14. Edwards, J. R., Caplan, R. D., & Van Harrison, R. (1998). *Person-environment fit theory*. *Theories of organizational stress*, 28, 67.
  15. Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). New York: McGraw-Hill.
  16. Frings, D. (2017). *The transactional model of stress: Appraisal, response and adaptation*. *Stress & Health*, 33(5), 556-566. <https://doi.org/10.1002/smi.2741>
  17. Halbesleben, J. R. (2006). *Sources of social support and burnout: A meta-analytic test of the conservation of resources model*. *Journal of Applied Psychology*, 91(5), 1134-1145.
  18. Hoover, E. (2003). *The rising tide of student stress: A statistical look at mental health on college campuses*. *The Chronicle of Higher Education*, 49(30), 12-14.
  19. Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
  20. Luszczynska, A., & Cieslak, R. (2005). *Protective, promotive, and buffering effects of perceived social support in managerial stress: The moderating role of personality*. *Anxiety, Stress, and Coping*, 18(3), 227-244.
  21. McDevitt, J. (2011). *Alarming rise in teacher stress levels in the UK*. *The Guardian*.  
<https://www.theguardian.com/education/2011/oct/23/teacher-stress-levels-rising-uk>
  22. Seaward, B.L. (2012). *Managing stress*. Seventh ed. Mississauga, Ontario: Jone & Bartlett learning.
  23. Selye, H. (1974). *Stress without distress*. Philadelphia: J.B. Lippincott Company.
  24. Sutherland, V. J., & Cooper, C. L. (2000). *Strategic stress management: An organizational approach*. Macmillan International Higher Education.



# UNDERSTANDING THE PERCEPTIONS OF LOCAL PEOPLE ABOUT HERITAGE TOURISM: A CASE STUDY IN TAWANG MONASTERY OF ARUNACHAL PRADESH

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## ABSTRACT

This paper seeks to explore the perceptions of local people on heritage tourism in Tawang Monastery, an important heritage tourism site in Arunachal Pradesh. The study also examines the trend and growth of tourists' inflow in Tawang during 2015 to 2021 based on secondary data. Data were collected through field survey from randomly selected 100 households covering ten villages in January 2023. The results showed that local people participate in tourism activities only moderately and voluntarily. They mainly participate in provision of food, accommodation and transport activities. The people stated that tourism enhances their income by promoting sales of handlooms and handicrafts, transport services, provides jobs and business opportunities. The study indicated that local people faced difficulties and disadvantages while participating in tourism services due to lack of skills and knowledge and lack of professional training. The study calls for providing training to local people to enhance their skills to enable them to take up different tourism-based activities.

**KEYWORDS:** Heritage tourism, Tawang Monastery, tourist arrivals, local people, perceptions

## INTRODUCTION

Tourism is considered one of the most significant and fastest-growing service providing sectors in the world. Before the outbreak of covid-19 pandemic, travel & tourism is the key sector for economic development and job creation throughout the world. Travel & Tourism accounted for 1 in 5 new jobs created across the world during 2014-2019, and 10.3% of all jobs (334 million) and 10.4% of global GDP (US\$ 10 trillion) in 2019. In 2022, the Travel & Tourism sector contributed 7.6% to global GDP, an increase of 22% from 2021 and only 23% below 2019 levels. 22 million new jobs were created in the year 2022, representing an increase of 7.9% over 2021, and only 11.4% below 2019. The spending of domestic visitors was increased by 20.4% in 2022, which is 14.1% below than in 2019. International visitors spending rose by 81.9% in 2022, but still behind 40.4% that of 2019. The year 2022 is the time for the revival of travel and tourism sector. The growth and development of tourism sector largely depends on the participation of the people all over the world towards tourism industry. The participation of local people in the mobilization and management of resources for providing tourism related services is very important for tourism development. It provides economic benefit to the local community and encourages them to participate in the conservation and preservation of economic resources. So the participation of local community promotes sustainable development in tourism industry. According to the World Tourism Organization (WTO), tourism comprises "the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business, and other purposes."

In the world tourism map, India has made a unique place for tourists. Tourist attraction to India is because of its rich natural and cultural landscapes and is considered one of the most liked tourist destinations in Asia. The beauty of the cultural heritage and natural sites makes India a tourist paradise. The beautiful beaches, museums, ancient places, wildlife, national parks, sanctuaries, snow cover mountain peaks, rivers, temples, technological parks, diverse cultures, places of pilgrimage, etc are some of the tourist attractive places in India. The increasing number of UNESCO World Heritage sites in India makes the country more attractive to tourists, the list of UNESCO World Heritage sites reached 40 in India, out of which 7(seven) are Natural World Heritage sites, 32 (thirty-two) are Cultural World Heritage sites and 1(one) is Mixed World Heritage Site. Many more sites are on the list for reorganization by UNESCO. Tourism in India is important for the country's economy. It has the potential to generate employment, earn foreign exchange, and promote traditional customs and values across the world. It also leads to several intangible benefits. It plays a powerful tool in global peace and integrity. Tourism also creates incentives for the conservation and preservation of the natural and cultural heritage of countries.

The India's travel and tourism sector has witnessed substantial growth in the recent period. The sector is expected to grow at an annual rate of 7.8% to reach around ₹33.8 trillion (US \$457 billion) which representing 7.2% GDP of the whole economy by 2031 (IT&T 2022, WTTC). The sector has immense potential for further expansion in the tourism sector on account of the vast natural and cultural heritage in India.





There are several challenges in this sector. Eliminating all these challenges will help the sector to realize its full potential and shape the tourism industry for tomorrow.

The North Eastern region of India which comprises of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, Tripura and Sikkim was gifted by nature a huge potentiality for tourism development. The region falls in the Eastern Himalayan range which comprise of mainly hills, mountains and river valleys. Tourists from India and all over the world like to visit the region because of its unique natural beauty. The snow covered mountains, green forest, blue river water, varieties of rare flora and fauna and the cultures and traditions of different ethnic groups makes the region an attractive tourist destination. However, the share of tourists received by this region is less than one per cent of the total tourist's arrival in the country.

Arunachal Pradesh is one of the states of North East India. It has a huge potentiality for tourism development. The total geographical area is 83,743 square kilometer out of which 80.50 per cent of its area is under forest cover which is one of the highest in India. The state is least densely populated with only 17 persons per square kilometer due to which vast forest and natural resources of the state are still unspoiled (Lama, 2016). The state has been emerging as one of the most favoured tourist destination of India. It is situated in the Eastern Himalayan ranges and the topography of the state mainly comprises of hills, mountains, snow capped peaks, river valleys, passes, waterfalls, lakes, green forests and a house of diverse species of flora and fauna which make its landscape a unique and beautiful one. Arunachal Pradesh is the home of many indigenous tribes and all the tribes have their own colourful festivals, unique cultures and traditions which attract tourists from across the world. The state is also endowed with historical and cultural heritage sites such as the Itafort, the Bhalukpong fort, Bishmaknagar, Galden Namgyal Lhatse (Tawang monastery), Parshuram Kund, etc.

Thus, the state has a high potential to attract tourists for various types of tourism such as nature-based, ecotourism, heritage tourism, cultural and pilgrimage tourism, adventure tourism, rural tourism, wildlife-based tourism and spiritual tourism. The tourist arrivals in the state has been growing rapidly in the last few years due to dedicated efforts made by the state government in the form of organizing fairs and festivals, infrastructure development, vigorous advertisements, simplifying entry formalities, and promoting tourist cab services under the Chief Minister's Paryatan Vikas Yojana. In the year 2005, the total number of tourist arrivals in the state was 50,873 out of which 50,560 were domestic tourists and 313 are foreign tourists. The total number of tourist arrivals has increased to 5,20,089 in the year 2018, out of which 5,12,436 were domestic tourist and 7,653 are foreign tourists. During 2010 to 2018, tourist arrivals in the state grew at a compound annual growth rate of 9.42 per cent, which is much higher than the northeastern regional average of 5.4 per cent. The high growth of tourist arrivals in the state indicates that tourism can be one of the engines of

growth of the state's economy if promoted with proper planning and management. The state's share in total tourist arrivals in the north eastern region improved from 3.72 per cent in 2010 to 5.20 per cent in 2018.

## OBJECTIVES

The objective of this study is to measure the impact and dependence of local people and the economy on the development of heritage tourism in Tawang Monastery of Arunachal Pradesh. The study is expected to provide necessary and valuable information to the policy maker in designing appropriate policy for the development of tourism sector and also provide maximum benefit to the local peoples and local economy.

## DESCRIPTION OF STUDY AREA

The paper focuses mainly on the tourism development in Tawang Monastery and its impact on the livelihood of the peoples residing in the periphery and on the way to Tawang Monastery. Tawang Monastery is an important cultural/religious heritage site located in Tawang district of Arunachal Pradesh, India. Tawang Monastery was founded by Merak lama Lodre Gyatso in the year 1680-81. The monastery stands on the spur of a hill, about 10,000 feet above sea level and has ravines in the south and west, narrow ridge on the north and gradual slope on the east. It offers a commanding and picturesque view of the Tawang Chu (river) Valley. From a distance it appears like a fort as if guarding the votaries in the wide valley below.

The monastery is the largest Buddhist monastery in India and second biggest and oldest in Asia which is also known as Gaden Namgyal Lhatse. Being the largest and the oldest Buddhist monastery in India, it is considered as the fountain-head of the spiritual life of the Buddhist people of that region. Tawang Monastery is the largest of its kind in the country and is one of the largest monasteries in Asia. A cluster of 65 residential buildings for the monks was present inside the campus of Monastery. Though it has the capacity for housing about seven hundred monks, the actual number of resident lamas (monks) varies time to time. It has a center for Buddhist Cultural Studies where young monks are taught Arithmetic, English and Hindi besides traditional monastic education. Near to the main building of the monastery, it has a library with valuable old books and scriptures (Norbu, 2016; <https://tawangmonastery.org>).

## TREND AND GROWTH OF TOURISTS ARRIVALS IN TAWANG MONASTERY

Tawang is a favoured destination for the tourists and Tawang Monastery is one of the important place for tourist attraction in Tawang District. All domestic and foreign tourists who visit Tawang keep Tawang Monastery on their list of visits. So the number of tourists visit to Tawang District will be the same as the number of tourists visit to Tawang Monastery. The trend and growth of tourists' arrivals in Tawang Monastery and Tawang District of Arunachal Pradesh are presented in the following Table and Figures.



**Table 1: Tourists Arrivals in Tawang Monastery from 2015 – 2021**

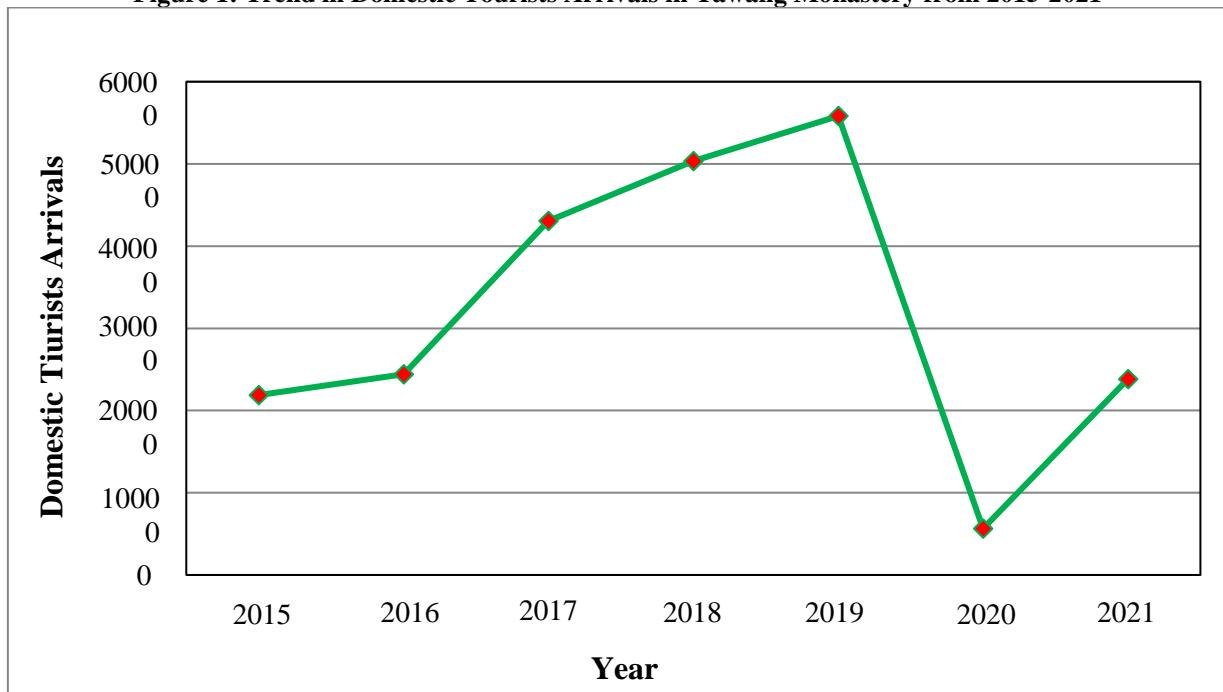
Year	Tourists Arrivals			Annual Growth Rate (%)		
	Domestic	Foreign	Total	Domestic	Foreign	Total
2015	21875	305	22180	--	--	--
2016	24423	279	24702	11.65	-8.52	11.37
2017	43059	235	43294	76.31	-15.77	75.27
2018	50357	245	50602	16.95	4.26	16.88
2019	55823	421	56244	10.86	71.84	11.15
2020	5639	45	5684	-89.90	-89.31	-89.89
2021	23842	4	23846	322.81	-91.11	319.53

Source: District Tourism Office, District Tawang, Government of Arunachal Pradesh.

Table 1 shows the arrivals of tourists in Tawang Monastery from 2015 to 2021. It has been seen that the number of domestic tourists arrivals in Tawang Monastery was 21875 in the year 2015, after that there is a continuous increase in domestic tourists arrivals up to 2019 (55823). The year 2020 and 2021 witnessed a decline, which may be due to the restriction of COVID-19 pandemic. During the same period 2015 to 2021, the number of foreign tourist's arrivals was 305 in 2015 and declined to 235 in the year 2017. The year 2018 and 2019 showed an increase to 245 and 421 respectively. In the year

2020 and 2021 the number foreign tourists' arrivals declined due to the restriction of COVID-19 pandemic. There has been a continuous increase in the total number of tourists visiting Tawang Monastery from 2015 to 2019. The year 2020 registered a decline of -89.89 per cent as compared to 2019. The year 2021 witnessed a growth of 319.53 per cent in total visitors and 322.91 per cent in domestic visitors over the year 2020 whereas the visits by foreign visitors registered a negative growth of -91.11 per cent over 2020.

**Figure 1: Trend in Domestic Tourists Arrivals in Tawang Monastery from 2015-2021**

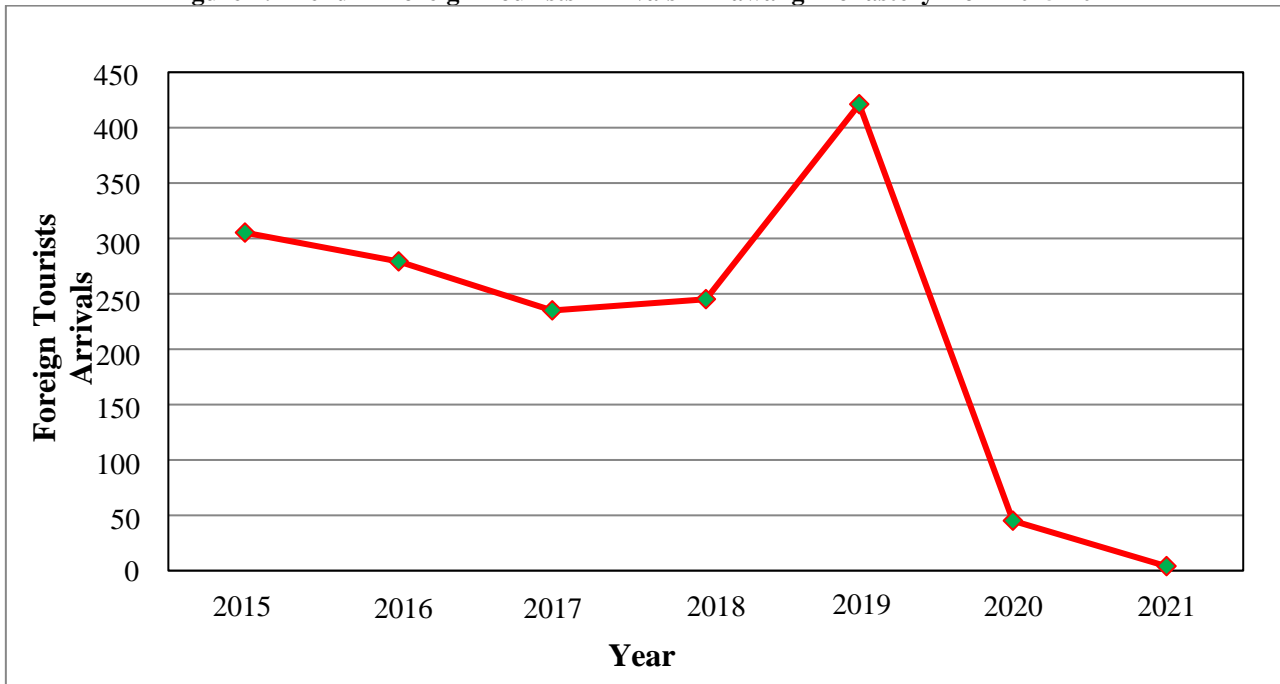


Source: District Tourism Office, District Tawang, Government of Arunachal Pradesh.

The above Figure 1 reveals that the number of domestic visitors visiting Tawang Monastery of Arunachal Pradesh from 2015 to 2021 has registered an increasing trend, except in the year 2020 the number of domestic visitors visiting Tawang Monastery recorded a decline.



Figure 2: Trend in Foreign Tourists Arrivals in Tawang Monastery from 2015-2021

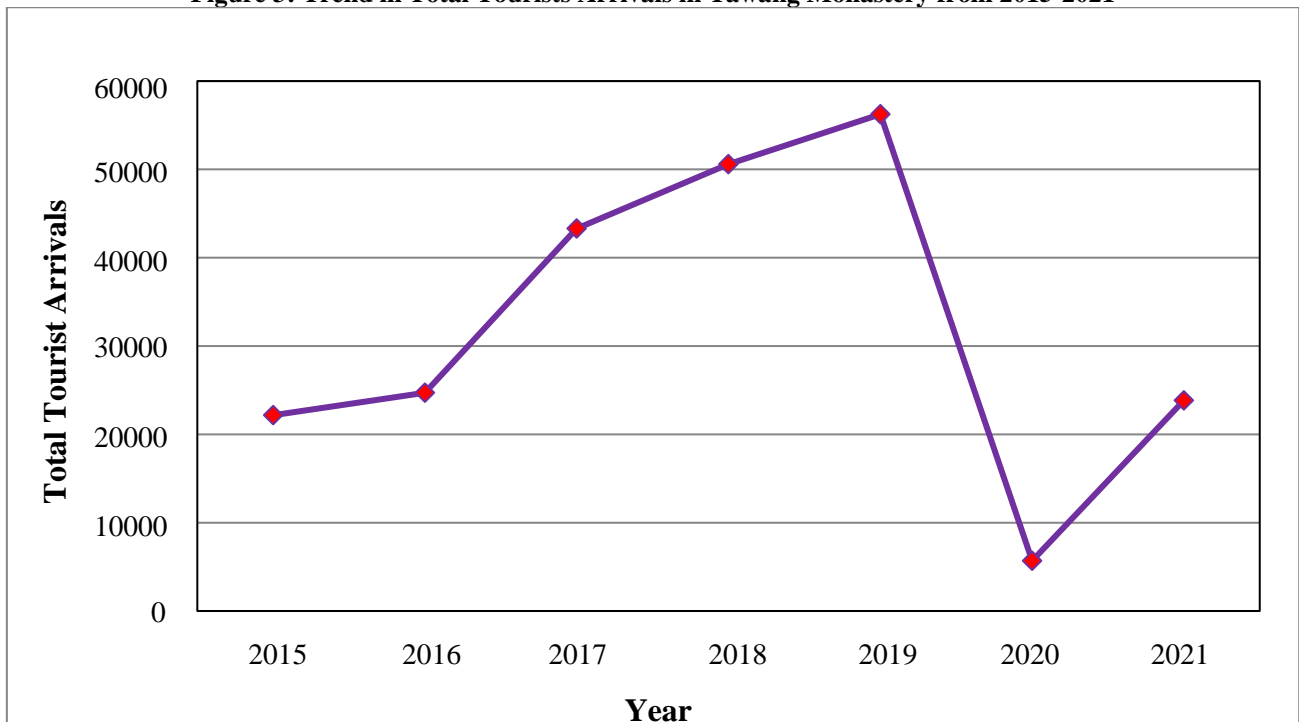


Source: District Tourism Office, District Tawang, Government of Arunachal Pradesh.

From the above Figure 2, it is apparent that the number of foreign visitors visiting Tawang Monastery of Arunachal Pradesh from 2015 to 2021 has registered a fluctuation. It showed a decline up to 2017, thereafter, it registered an

increasing trend in the year 2018 and 2019, and again a decline in the years 2020 and 2021.

Figure 3: Trend in Total Tourists Arrivals in Tawang Monastery from 2015-2021



Source: District Tourism Office, District Tawang, Government of Arunachal Pradesh.

The above Figure 3 reveals that the total number of tourists visiting Tawang Monastery of Arunachal Pradesh from 2015 to 2021 has registered an increasing trend, except in the year 2020

it registered a decline in the annual growth rate of -89.89 per cent over the year 2019 which was mainly due to COVID-19



pandemic. The year 2021 recorded an increasing trend of 319.53 per cent as compared to the year 2020.

### DATA SOURCE AND METHODOLOGY

The study used both primary and secondary data. The secondary data were collected from Indian Tourism Statistics, Ministry of Tourism, Government of India, District Tourism office, Tawang, Arunachal Pradesh and Tourism Statistics of Arunachal Pradesh, Directorate of Tourism, Government of Arunachal Pradesh. The primary data which were collected by conducting field survey of households in the study area. The survey was carried out with the help of structured questionnaire. The questionnaire was designed to collect the socio-economic variables like age, sex, educational qualification, occupation, income, etc. Face to face interview method was used to collect the information from the surveyed households by using random sampling technique. A total number of 100 households were surveyed from 10 villages namely; (1) Shyo, (2) Mandrelling, (3) Chanprong, (4) Urgelling, (5) Gyangkhar, (6) Maidung, (7) Lebrang, (8) Bomdir, (9) Lumberdung and (10) Kitpi in the month of January 2023. In the household sample survey, the responsible and efficient respondent of the family member mostly the adult member who has sufficient information were interviewed for the household survey. The data were analysed using various statistical.

### RESULTS AND DISCUSSION

The results and discussion of the study are presented as follows:

#### Socio-Economic Characteristics of the Surveyed Households

Socio-economic characteristics of the households influenced to a great extent on the impact of households livelihoods from the development of tourism. Socio-economic characteristics of the households include age, gender, education level, occupation, households' income etc. The study of socio-economic characteristics of the households, their perception, participation, involvement, various benefit accrue from tourism, etc is important to identify the impact of tourism development on the livelihood of the households and local economy.

The head of the surveyed households was classified based on gender. Out of the total 100 surveyed households from ten villages near Tawang Monastery, 81 per cent of households head were male and 19 per cent were female (Table 2).

**Table 2: Surveyed Households Head Classified by Gender (in Percentage)**

Gender	Percentage
Male	81
Female	19
Total	100

Source: Survey Data, 2022-2023

The level of education is an important factor to determine the level of participation and demand for tourism/ environmental goods by the local people. Therefore, during the time of interview respondents were asked about their level of education. The study found that the average level of education of the surveyed respondents was considerably high. There were no illiterate respondents in the surveyed sample, 33.0 per cent were higher secondary level, 26.0 per cent of respondents were

graduates followed by 22.0 per cent of respondents were of primary level and 19.0 per cent of the respondents had the secondary level of education (Table 3 ).

**Table 3: Percentage Classification of Surveyed Respondents by Level of Education**

Education Qualification	Percentage
Primary Level	22.0
Secondary Level	19.0
Higher secondary Level	33.0
Graduate	26.0
Total	100.0

Source: Survey Data, 2022-2023

From the surveyed sample, it was found that 22.0 per cent were government sector employee, 2.0 per cent were having service in the private sector, 41.0 per cent of surveyed visitors were engaged in business and 35.0 per cent of respondents' falls in the category of the farmer (Table 4).

**Table 4: Percentage of Surveyed Respondents Classification by Occupation**

Occupation of the Respondents	Percentage
Service (Government)	22
Service (Private)	2
Businessman	41
Farmer	35
Total	100

Source: Survey Data, 2022-2023

The source of income of the surveyed households is very important to know the dependence of their livelihoods, so the study made an attempt to ask the respondents to indicate their household's source of income. The details are shown in the following Table 5.

**Table 5: Sources of Households Income (in Percentage)**

Household Income Sources	Percentage
Service (Govt. & Private)	12.33
Business	19.86
Income from Agriculture	22.26
Animal Husbandry and Poultry Farming	16.44
Handloom and Handicraft	11.99
Income derived from tourism related activities	17.12
Total	100

Source: Survey Data, 2022-2023

The table revealed that 22.26 per cent obtain their income from the agriculture sector, 19.86 per cent from business activities followed by 17.12 per cent derived from tourism-related activities, 16.44 per cent earn their households' income from animal husbandry and poultry farming, 12.33 per cent get their household's income from the service sector and 11.99 per cent obtained their households income from handloom and handicraft.

An attempt was made to get information from the respondents about their annual household income. Among the surveyed households' respondents, it was found that most of the households were either in the high middle-income group or high-income group. 2.0 per cent of households belonged to annual income range of ₹8 - ₹10 lakhs, 34.0 per cent of households were in ₹5 - ₹8 lakhs range, 46.0 per cent were in





the range of ₹3 - ₹5 lakhs, and the remaining 18.0 per cent fall in the range of ₹1 - ₹3 lakhs annual households income (Table 6).

**Table 6: Percentage Classification of Surveyed Households Annual Income**

Approximate Annual Household Income	Percentage
100000 to 300000	18
300000 to 500000	46
500000 to 800000	34
800000 to 1000000	2
Total	100

Source: Survey Data, 2022-2023

### Perceptions and Opinions of Surveyed Households about Tourism

It is very important to know the perception of the local people about tourism. So, the study made an attempt to ask the

surveyed households respondent to indicate their opinion about tourism, and the responses are divided into six categories namely (a) Tourism creates jobs and income for local residents, (b) Tourism preserves and develops the local culture, (c) Tourism enhances the quality of local business, (d) Tourism increases the knowledge of local residents, (e) Tourism helps to raise the awareness of local residents and (f) Any other.

The study found that 28.53 per cent respondents were of the opinion that tourism creates jobs and income for local residents 26.69 per cent said tourism enhances the quality of local business and the rest 19.32 per cent revealed that tourism increases the knowledge of local residents. 16.26 per cent believe that tourism preserves and develops local culture and 9.2 per cent said tourism helps to raise the awareness of local residents (Table 7).

**Table 7: Surveyed Respondents' Opinions about Tourism**

Opinion about tourism	Responses	Percentage
Tourism creates jobs and income for local residents	93	28.53
Tourism preserves and develops the local culture	53	16.26
Tourism enhances the quality of local businesses	87	26.69
Tourism increases the knowledge of local residents	63	19.32
Tourism helps to raise the awareness of local residents	30	9.2
Total	326	100

Source: Survey Data, 2022-2023

### Opinion Regarding Villagers' Participation in Providing Tourism Services

The participation of local people in providing tourism services is very important in terms of fulfilling the demand for various facilities and services required for the visitors and also providing opportunities for the local people to obtain economic benefits from their involvement in various tourism services. Therefore, an attempt was made to know the kind of tourism services that are being provided to the visitors and tourists by the local peoples.

The study reveals that 20.38 per cent of Tawang Monastery households respondents were of the opinion that villagers were engaged in providing accommodation facilities, 23.51 per cent of Tawang Monastery provided food items, 11.91 per cent of Tawang Monastery were providing travel guide, followed by 10.66 per cent of Tawang Monastery were engaged in selling souvenirs products, 20.38 per cent of Tawang Monastery were engaged in transportation and rental vehicles and 13.16 per cent of Tawang Monastery surveyed respondents said that villagers were engaged in providing trekking facilities (Table 8).

**Table 8: Respondents' Opinion about Villagers' Participation in Providing Tourism Service**

Tourism services	Responses	Percentage
Accommodation	65	20.38
Food	75	23.51
Travel guide	38	11.91
Sales of souvenirs	34	10.66
Transportation and rental vehicles	65	20.38
Trekking facilities	42	13.16
Total	319	100

Source: Survey Data, 2022-2023

### Respondents' Opinion Regarding the Type of Benefits the Local People Accrue

To identify the benefits that can be accrued from tourism development, the respondents were also asked to indicate their opinion regarding the type of benefits that can be accrued by the local people if the site will be developed as a tourist destination. The study found that 26.32 per cent of the respondents considered income from the business as local

people benefit, 25.76 per cent said that employment to the people is a benefit, 24.65 per cent indicated income from transportation services as a benefit and 23.27 per cent of the respondents considered income from the sale of handloom and handicraft as a benefit which the local people will accrue from tourism (Table 9).



**Table 9: Respondents' Opinion Regarding Type of Benefits the Local People Accrue**

Benefits accrued	Responses	Percentage
Employment for the local people	93	25.76
Income from transportation services	89	24.65
Income from sale of handloom and handicraft	84	23.27
Income from business	95	26.32
Total	361	100

Source: Survey Data, 2022-2023

Moreover, respondents were asked whether they perceived any problem due to the existence of the site/place. All the respondents (100 per cent) revealed that the existence of the site does not perceive any kind of problem for them.

**Opinion about the Disadvantages when Participating in Tourism**

The respondents were also asked to give their responses regarding the disadvantages when they participate in tourism.

The study found that respondents' disadvantages when participating in tourism are 27.35 per cent due to lack of experience working in tourism, 23.71 per cent said due to lack of professional training, 23.1 per cent opinion is due to lack of information, 19.75 per cent confessed due to lack of skills and knowledge on tourism, 3.65 per cent said their disadvantages are due to lack of communication skill and 2.43 per cent said language limitation as disadvantages participating in tourism (Table 10).

**Table 10: Respondents' Disadvantages when Participating in Tourism (in Percentage)**

Disadvantage in participating	Responses	Percentage
Lack of skills and knowledge on tourism	65	19.76
Lack of communication skill	12	3.65
Language limitations	8	2.43
Lack of professional training	78	23.71
Lack of information	76	23.1
Lack of experience working in tourism	90	27.35
Total	329	100

Source: Survey Data, 2022-2023

**Respondents' Opinions about Barriers Encountered When Engaged in Tourism Activities**

Barriers to tourism activities hamper the healthy growth and sustainable development of tourism to the site. So an attempt was made to ask the respondents about any barriers/difficulties they have faced since their involvement in tourism activities and the study found that 59 per cent of the surveyed households response 'Yes' they have faced barrier when participated in tourism activities.

Moreover, they were also asked to indicate their responses about the type of difficulties faced since their involvement in

tourism activities and the details are shown in Table 11. The table shows that 25.0 per cent of the respondents were of the opinion that due to lack of skills people faced difficulties when engaged in tourism activities, 19.23 per cent said lack of support from local government acts as a barrier, 24.04 per cent are in the opinion about lack of professional training institutions followed by 3.85 per cent identify their difficulties as lack of collaboration between businesses, governments, and local communities and 27.88 per cent said lack of knowledge as their difficulties to participate in tourism activities.

**Table 11: Opinions about Type of Difficulties Faced when Participating in Tourism Activities**

Difficulties faced	Responses	Percentage
Lack of skills	52	25.0
Lack of support from local government	40	19.23
Lack of professional training institutions	50	24.04
Lack of collaboration between businesses, governments, and local communities	8	3.85
Lack of knowledge	58	27.88
Total	208	100

Source: Survey Data, 2022-2023

**Opinion about the Dependency on the site for their livelihood**

To know the dependency on the site for their livelihood, they were asked to give their level of response about the need for the preservation of the site for their livelihood. The levels of responses are categorized as (1) Strongly Agree, (2) Agree, (3)

Partially Agree, (4) Disagree and (5) Strongly Disagree. It has been seen from the Table 12 that majority of the respondents (81.0 per cent) gave their opinion as strongly agree regarding the preservation of the site for their livelihood and 19.0 per cent indicate their response as agree.



**Table 12: Respondents' Opinion about Preservation of the Site for their Livelihood**

Preservation of the site	Respondents (in Percentage)
Strongly agree	81
Agree	19
Total	100

Source: Survey Data, 2022-2023

Moreover, respondents were also asked to give their opinion on whether they are interested in taking initiatives to promote tourism in their local community. All the respondents (100 per cent) showed that they are interest to promote tourism in their local community.

### Opinion about the Site for the Development of Tourist Destination

The surveyed respondents were asked to respond to whether the site can be developed as a tourist destination. All the respondents said "Yes" the site can be developed as a tourist destination. The study also found that majority (90.0 per cent) of the surveyed respondents considered the site is very useful for them.

### Conclusion and Policy Implication

Based on the above discussion and findings, it can be concluded that Tawang Monastery is an important cultural/ religious heritage tourism site in/at tawang district of Arunachal Pradesh. The Monastery was founded by Merak lama Lodre Gyatso in the year 1680-81 which is the largest Buddhist monastery in India and second biggest and oldest in Asia that stands on the spur of a hill, about 10,000 feet above sea level. Tawang is a favoured destination for both domestic and foreign tourists and Tawang Monastery is one of the main attractions for the tourists visiting Tawang District. A large number of tourists from all over the country and from the world visited every year. However, the inflow of tourists in Tawang district and Tawang monastery during the year 2015 to 2021 has been fluctuating. The year 2015 to 2019 has recorded an increase, but the year 2020 has registered a decline of 89.89 per cent annual growth rate which may be due to covid-19 pandemic and again the year 2021 has recorded an increase of 319.53 annual growth rates.

The impact of tourism development on the local economy and livelihood of the local people can be measured from the socio-economic characteristics, perception, participation, benefits, etc of the surveyed households. The study found that majority of the households head was male. Most of the households' level of Education was higher secondary and graduate level. Occupations of the households reflect on the dependency of the livelihood. The study showed that most of them were engaged in business (41%), farmer (35%) and service govt. & private (24%). Source of income of the households is also an important determinant to identify the impact of tourism development. The source of income revealed that majority of the households income sources were business and agriculture. The households' opinion regarding tourism showed that tourism creates jobs and income for local people as well as it enhances the quality of local business. The study found that villagers participated in tourism by providing accommodation, food, travel guide, transport and trekking facilities. The types of benefits accrued by the local people from tourism development are in the form

of employment, income from transportation service, business and sale of handloom and handicraft products. The study showed that households' respondent faced some disadvantage and encountered barriers when they participated in tourism activities. It was observed that majority (81%) of the surveyed respondents strongly agree regarding the dependency on the site for their livelihood and 90 per cent of the household respondents considered the site as very useful for them.

The result of the study led to the following suggestions that can be made for tourism development and to increase in the participation of local people and the impact on their livelihood. Focus should be made on regular maintenance and beautification of the monastery. There is a need to focus on more hygienic washroom, cafeteria, etc. Well trained tourist guide should be available for the safety and convenience of the visitors. As the local peoples participation was voluntary and moderate, to encourage active participation of the local people on tourism activities, government should focus on training, counseling and awareness programme from time to time. Focus on financial support is also needed to encourage the local unemployed youth in participating tourism related activities. Subsidiary schemes should be provided for the promotion of attractive home stays by the local people, encouragement and support for producing more attractive, varieties and quality handloom and handicraft products to enhance the income of the local people. Cleanliness and maintaining the natural beauty of the place should be focused to attract more tourists who were visiting mainly to enjoy the natural beauty. Policy should focus on better and improved connectivity of the place with the rest of the world.

### REFERENCES

1. Government of India (2021). *India Tourism Statistics at a Glance 2021*, Ministry of Tourism, Government of India, New Delhi.
2. Lama, M (2016). *Tourism Development and Conservation of Environment in Eastern Himalayas: A Case of Arunachal Pradesh*, North Eastern Economic Review, Vol. 1, No. 1, pp. 1-7.
3. Norbu T. (2016): *Tawang Monastery, The Spiritual Wonder of India*, Bhabani Offset & Imaging System Pvt. Ltd.7 Lachit Lachit Lane, Rajgar Road, Guwahati-781007.
4. Statista.com (2021):
5. Lama, A (2021): *Ecotourism Development in a Remote District of India: A Study of Tawang, Arunachal Pradesh*, EPRA International Journal of Research and Development, Vol. 6, issue: 8, pp. 50-62.
6. World Travel and Tourism Council (2019). *Travel & Tourism Global Economic Impact & Trends 2019*.

### WEBSITES

1. <https://www.statista.com/statistics/1250204/india-contribution-of-travel-and-tourism-to-gdp/>
2. <https://whc.unesco.org/en/statesparties/in>
3. <https://tawangmonastery.org>



# REVIEW ON THE USE OF KUKKUTA(HEN) IN SARPAVISHA (SNAKE POISON) CHIKITSA AS FOLKLORE MEDICINE

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Article DOI: <https://doi.org/10.36713/epra17844>

DOI No: 10.36713/epra17844

## ABSTRACT

Snake bites are a major public health concern in India, particularly in rural areas where they are one of the leading causes of death. Despite advancements in medical treatments such as specific anti-venoms tailored to various snake venoms, about 70% of the rural Indian population continues to rely on traditional Folk Medicine practices. These practices, which vary significantly across different regions, often involve unique and localized methods to address snake envenomation.

One such distinctive practice involves the use of live hens in a treatment known as "Kukkuta" or "Hen Therapy" for snake bite management, particularly for cases involving "Sarpa visha" (snake venom). In this traditional method, the folklore practitioner places the anal region of a hen over the bite site. It is believed that the suction action of the hen's anal muscles extracts the venom from the bite. This process may involve using several hens depending on the perceived quantity and type of venom. After the procedure, the hens, now assumed to be venom-laden, are sacrificed and buried.

This practice, while deeply rooted in cultural traditions and local beliefs, underscores the significant gap between modern medical solutions and the reliance on traditional methods in rural India. Addressing this gap requires not only the provision of accessible medical care but also educational efforts to dispel myths and misconceptions about snake bites and their treatments.

The information for the present article has been collected from folklore practitioner Mr Thippeswamy from Sangenahalli village of Hiriyyur Taluk Chitradurga district of Karnataka State.

## INTRODUCTION

Snake bites constitute a significant health crisis in India, ranking among the leading causes of death, especially in rural areas. Each year, thousands of people fall victim to snake envenomation, with a disproportionately high number of fatalities occurring in rural regions. This alarming mortality rate can be attributed to several factors, including limited access to advanced medical care, a lack of first aid knowledge, and widespread panic driven by myths and misconceptions about snakes and their bites.

In contrast to the advanced medical treatments available today, such as specific anti-venoms that neutralize particular snake venoms, a substantial portion of the rural population approximately 85% continues to seek treatment from Folk Medicine practitioners<sup>1</sup>. These traditional healers employ a variety of methods that are tailored to the local fauna and the types of poisonous creatures prevalent in their regions. The diversity in these practices reflects the rich cultural heritage and the deep-rooted beliefs in local healing techniques across different parts of India.

Among these traditional practices is the unique use of live hens in what is known as "Kukkuta" or "Hen Therapy" for treating snake bites. This method is particularly utilized for cases of "Sarpa visha" or snake venom. The practice involves placing the anal region of a hen close to the bite site, with the belief that the suction action of the hen's anal muscles can draw out the venom. Depending on the severity of the envenomation and the type of venom involved, multiple hens may be used during the treatment. Once the hens are believed to have absorbed the venom, they are sacrificed and buried to prevent any potential further contamination.

## PROCEDURE

### Procedure for Kukkuta (Hen Therapy) in Snake Bite Treatment

#### 1. Position the Victim

- Place the victim in a horizontal position to help stabilize them and reduce the spread of venom by limiting movement and maintaining calm.

#### 2. Gather Medical History

- Take a detailed history from the victim or their attendants to identify the type of snake





and confirm the specifics of the bite. This step is critical for understanding the nature of the venom and tailoring the treatment accordingly.

### 3. Prepare Hens

- Request the victim's attendants to bring at least 10 hens, preferably of a wild and native breed. These breeds are chosen for their greater vigour and robust physiological responses, which are believed to enhance the effectiveness of the suction process.

### 4. Make an Incision

- Use a clean blade to make a small incision at the bite site. This incision is intended to facilitate the extraction of venom from beneath the skin.

### 5. Position the Hen

- Place a hen so that its anal region (anus sphincter) is directly over the incision on the bite site. The correct placement is crucial to ensure that the hen's suction action can effectively draw out the venom.

### 6. Initiate Suction

- Allow the hen's natural suction action, driven by the elastic nature of its anal muscles, to begin drawing venom from the bite site into its body. This suction effect is believed to create a vacuum that pulls the venom out.

### 7. Monitor the Procedure

- Repeat the procedure with successive hens, each placed at the bite site, until a hen survives the process, indicating that most of the venom has been extracted. The death of each hen is taken as a sign that it has absorbed a substantial amount of venom.

### 8. Sacrifice and Dispose of the Hens

- After each hen is used and subsequently dies, it is sacrificed and buried separately to prevent any potential risk of contamination.

### 9. Duration and Repetition

- Continue the procedure, using as many hens as necessary, until a hen remains alive after being placed at the bite site. This final hen's survival suggests that the maximum venom has been sucked out.

### 10. Incorporate "Mantra Chikitsa"

- Throughout the procedure, the practitioner may perform "Mantra Chikitsa," reciting specific mantras believed to enhance the healing process and aid in venom extraction<sup>2</sup>.

### 11. Administer Internal Medication

- Following the external treatment, administer prescribed internal medications. These are traditional remedies designed to support the body's recovery and counteract any remaining venom.

### 12. Provide Dietary and Lifestyle Guidance

- Advise the patient on "Pathya" (recommended practices and diet) and "Apathya" (practices and diet to avoid). This

guidance helps in managing the patient's recovery and preventing further complications.

This comprehensive approach, combining traditional techniques and cultural practices, reflects the deep-rooted reliance on indigenous healing methods in rural India. Integrating these practices with modern medical care and educational initiatives could potentially improve outcomes for snake bite victims in these communities.

## Scientific Explanation of the *Kukkuta* (Hen Therapy) in Snake Bite Treatment

### 1. Suction Mechanism of Anal Sphincter Muscles:

#### • Biological Basis

The anal sphincter muscles in hens, much like in other animals, naturally exhibit rhythmic tightening and relaxing actions. This muscle activity can create a suction effect, which is similar to the peristaltic movements that push food through the digestive tract.

#### • Venom Extraction Hypothesis

When the hen's anal region is placed over the snake bite site, the rhythmic contractions of the anal sphincter muscles may generate a negative pressure environment. This negative pressure could theoretically draw out venom from the bite wound into the hen's body, acting as a biological suction device.

### 2. Utilization by Folklore Practitioners

#### • Traditional Knowledge Application:

Folklore practitioners leverage this natural suction mechanism of the hen's anal muscles to extract venom from the snake bite. This approach aligns with their empirical understanding of animal physiology and their need to use locally available resources for medical treatment.

#### • Practical Advantage

The use of hens capitalizes on a natural and passive form of suction that does not require complex equipment or extensive intervention, making it a practical choice in rural settings where access to advanced medical technology is limited and hens are available abundantly.

### 3. Alternative to Mouth Suction (*Achoosana*):

#### Traditional Sucking Methods

In traditional practices, "*Achoosana*" involves the healer using their mouth to suck out venom from a wound, often combined with applying substances like *mirth* (resin), *basma* (ash), *agada* (herbal antidote), or *gomaya* (cow dung) to the bite site. These substances are believed to have protective or absorptive properties<sup>3</sup>.

#### Risks of Mouth Suction

Sucking venom with the mouth poses significant health risks, including the possibility of the healer ingesting the venom and suffering systemic envenomation. Additionally, there is a high risk of infection from direct oral contact with the wound<sup>4</sup>.

#### Safe Alternative

By using the hen's anal sphincter muscles instead, practitioners avoid these risks. The hen acts as a surrogate for the healer, performing the suction action without direct human contact



with the venom, thereby protecting both the healer (*Vaidya*) and the patient from potential harm and complications.

#### 4. Advantages of Hen Therapy Over Traditional Coatings

##### Efficacy of Mechanical Suction

The mechanical suction provided by the hen's anal muscles could be more effective at removing venom compared to applying traditional coatings like *mirth*, *basma*, *agada*, or *gomaya*, which rely on their supposed absorbent or neutralizing properties but do not actively remove venom from the body<sup>3</sup>.

##### Minimizing Complications

Traditional coatings can introduce additional complications such as infection or local irritation, especially if the materials are not sterile. Hen therapy avoids these issues by focusing on a mechanical extraction method that doesn't rely on applying potentially harmful substances to the wound.

##### Logical and Scientific Considerations

###### Rationale for Muscle Use:

The cyclic nature of muscle contractions in the hen's anal sphincter could provide a repetitive suction effect, potentially aiding in drawing out venom from the wound. This is a plausible explanation based on basic principles of fluid dynamics and pressure differentials.

##### Practicality in Resource-Limited Settings

This method makes use of readily available resources (hens) in rural areas, where advanced medical care might be inaccessible. It represents an ingenious use of local knowledge and resources to address a critical health issue.

##### Avoidance of Direct Human Risk

By substituting the hen's suction action for direct mouth suction, the practice minimizes the risk to humans. This aligns

with modern safety principles of avoiding direct contact with toxins whenever possible.

#### DISCUSSION

- The use of hen has been a unique way of treating of *visha*.
- Though there is no much research background to the practice still it has been helpful in effectively treating many snake bite cases and thus saving so many lives
- Since-pre-historical times animals, their parts, and products have created of an inventory of medicinal substances used in numerous cultures.<sup>5</sup>
- While the scientific validity of *Kukkuta* therapy needs rigorous testing and evidence-based evaluation, the practice itself offers insight into how traditional knowledge and natural behaviours of animals are harnessed in folk medicine. Understanding these methods can provide valuable perspectives for integrating traditional and modern medical practices in a culturally sensitive manner.

#### CONCLUSION

- The folklore medicine has been the main medical services for rural area since time immemorial.
- It varies from geographical area and cultural belief of the region.
- The use of hen in has been a unique way of treating of *visha*.it is primarily practised in rural areas of Chitrdurga, Davanagere and Tumkuru districts of Karnataka State.
- It is important to collect and document the folklore practices so that the unique practices can be researched ,explored and can be presented to the world with enough scientific evidences.



Figure1



Figure 2<sup>6</sup>

## REFERENCES

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=2025076>
2. Shastri kaviraj Ambikadutta sushruta samhita(Kalpasthan).Varanasi:Chaukhambha Sanskritsansthan2012, ch.5, verse 13
3. Acharya YT Charaka Samhita with Ayurveda Deepika Commentary ofChakrapanidatta, Reprint ed: Varanasi:Chaukhambha Orientalia, 2015; chikitsasthaan p573
4. <https://my.clevelandclinic.org/health/diseases/15647-snake-bites>
5. Lev E. Traditional healing with animals (zootherapy): medieval to present-day Levantine practice. J Ethnopharmacol. 2003;85:107-18. doi: 10.1016/S0378-8741(02)00377-X. [PubMed] [CrossRef] [Google Scholar]
6. Figure-1.MrThippeswamsy Folklore Practioner Figure 2.depticitng the procedure



## WOMEN AFTER FIFTY – NUTRITION AND DIETETICS

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Article DOI: <https://doi.org/10.36713/epra17847>

DOI No: 10.36713/epra17847

### ABSTRACT

As women age, their metabolisms start to slow down, and generally there is a decline in the normal activity. Therefore, women after 50 years of age, may find it more and more difficult to maintain healthy body weights. Fortunately, a proper diet and regular exercise helps keep women in their 50s looking and feeling their best. At age 50, most women require between 1900 and 2000 calories daily to maintain healthy weights. Women who are above 50 should limit or completely avoid certain foods to help maintain healthy body weights and reduce their risk for chronic diseases, such as heart disease, high blood pressure, high cholesterol and type-2 diabetes. Eating plenty of protein-rich foods in the right time, helps maintain lean muscle mass. For healthy weight management and to minimize disease risks, women should choose fiber-rich carbs, protein rich fermented foods and heart-healthy fats.

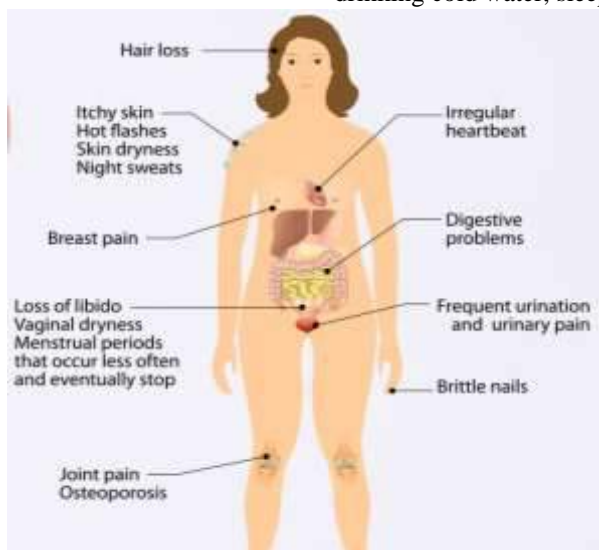
**KEY WORDS:** Metabolic changes, Diet and Exercise, Dietary needs, Psychological needs

### INTRODUCTION

The average midpoint of life is considered about 49 for women, but most women consider themselves middle aged only once they have entered their 50s. Women's nutritional and dietary needs which include the food and water and metabolism change at this age, their metabolism gets slower. Some of the physical changes that women experience are due to decreased hormones, reduced activity level, metabolic changes and medical conditions (1).

### Metabolism

After 50, women's hormone levels (estrogen) drop. This causes insulin (hormone that helps your body use sugar) rise. Thyroid levels go down. This combination makes hungrier. Much of the weight gain occurs around belly (2). More consumption of foods with proper amounts of fiber (berries, whole grains, nuts) to fill you up and help you eat less. Each day about 25 grams of fiber must be part of diet after the age of 40. Other ways to increase metabolism include eating breakfast, Exercising, drinking cold water, sleeping well and eating spicy foods.



**Fig:1** Source: [www.foodmatters.com/article/the-hormone-balancing-food-plan-for-women](http://www.foodmatters.com/article/the-hormone-balancing-food-plan-for-women)



### Things to consider

After 50, most women gain belly fat. An increase in belly fat has many linked complications and diseases like diabetes, high blood pressure, heart disease, dementia, and certain cancers. Women after 50 years of age gradually lose muscle mass twice as fast as men. Most of the loss occurs in core muscles, which supports your abdomen (another reason for belly fat). Crash diets in order to lose weight rapidly within a short period of time, and lack of physical exercise causing leaning of muscle and muscle loss (3).

Women's diet demands the inclusion of protein (dairy, beans, fish, meat and nuts) carbohydrates (whole grains), fats (healthy oils), vitamins, minerals, and water. These foods have been linked to prevention of some diseases such as osteoporosis, high blood pressure, heart disease, diabetes, and certain cancers.

Women might begin to experience peri or pre menopausal-type symptoms, around this time. The symptoms like Hot flashes, Breast tenderness, Worse premenstrual syndrome, Lower sex drive, Fatigue, Irregular periods, Vaginal dryness, Urine leakage when coughing or sneezing.

Women also suffer from psychological disturbances with the appearance of wrinkles and grey hair, life assessment with the peer who are younger.

### Healthful Nutritional Needs

Women aged 50 and over should consume 3-4 serves of low fat dairy food daily. The non-dairy sources of calcium include breakfast cereals, fish with edible bones, dry nuts, seeds and green leafy vegetables. Adequate exposure to the sunlight helps in the maintenance of Vitamin D levels required for absorption of calcium especially in older women.



Fig:2 Courtesy: agelesswithmichelle.com

Consumption of a variety of foods, particularly vegetables, grains and fruit, becomes necessary to achieve a diverse intake of vitamins, fibre and phytoestrogens.

Expanding an assortment of nourishments, especially grains, vegetables and organic product, to accomplish a different admission of nutrients, fiber and phytoestrogens (4).

Zinc assumes a focal job in metabolism, including the osmosis of metabolic fuel and upkeep of immune function. It is a component of numerous enzymes, regularly situated at the dynamic site, It balances out cell films / membranes and can work as a site-explicit cancer prevention agent (5). Women at 40 should build their consumption of zinc through sustenance sources created, predominantly of protein nourishments, for example, meat, fish, poultry, and dairy.

Little measures of fats can be incorporated in the diet and should originate from monounsaturated and polyunsaturated sources, for example, olive and canola oils, fish, grains, nuts, seeds and vegetables (6).

### A few different supplements may profit you as you age, including

**Potassium:** A higher potassium consumption is related with a lower danger of hypertension / high blood pressure, kidney stones, osteoporosis and coronary illness, which are more common among the elderly.

**Omega-3 unsaturated fats:** Heart sickness is the main source of death among the elderly. Studies have demonstrated that omega-3 unsaturated fats can bring down coronary illness hazard factors like hypertension and triglycerides.



**Magnesium:** Magnesium is an imperative mineral in the body. Sadly, elderly individuals are in danger of lack as a result of poor consumption, medicine use and age-related changes in gut work.

**Iron:** Deficiency is basic in elderly individuals. This may cause frailty, a condition in which the blood does not supply enough oxygen to the body.

The majority of these supplements can be gotten from an eating regimen wealthy in organic products, probiotic rich foods, fermented foods, vegetables, fish and lean meats.

Be that as it may, individuals who pursue a veggie lover or vegetarian diet could profit by taking an iron or omega-3 supplement. Omega-3 fats are for the most part found in fish.

Potassium, magnesium, omega-3 unsaturated fats and iron are different supplements you can profit by as you get more seasoned (7).

Drinking a sufficient measure of water is imperative as you age, as your body may turn out to be less ready to perceive the indications of drying out.

All women should be urged to include an eating routine that is low in soaked fat, which contains more grain-based sustenances (eg, breakfast oats, breads, pasta, rice) and products of the soil and nourishments wealthy in calcium and zinc (8). By keeping up a sufficient physical movement and a vitality suitable, diet a woman can amplify her physical wellbeing and mental prosperity (9).

### Physical Needs

In moderately aged women, hereditary variables remain the most grounded effect on the sum and circulation of muscle versus fat, representing up to 60% of the fluctuation. Among the natural elements prompting aggregate and focal weight, diminished physical action could easily compare to vitality admission and dietary synthesis.

Women sought to be urged to keep up physical action, regardless of whether there are a few restrictions, (for example, joint pain) along with proper planned diet.

### Psychological Needs

There is an intricate connection between dejection, self-perception, weight gain and diet. Be that as it may, the information reliably demonstrate that support of sufficient physical action and a nutritious, yet vitality fitting, diet are the keys to expanding physical wellbeing and mental prosperity.

Customary physical action lessens dejection and uneasiness, enhances disposition and has been related with expanded capacity to perform day by day errands.

Ordinary suppers and nutritious evening bites may enhance intellectual execution. Having breakfast frequently enhances disposition and memory, and expands vitality and advances sentiments of serenity.

There are many manners of thinking and changes happening in a lady's body and to stay sound, she should figure out how to best manage them. There is a restored need in the 50's to concentrate on being solid. This decade is basic to making solid way of life changes to eat all right as to exercise, meditate and ensure bone mass and muscles are flourishing (10).

Exercise enables discharge to pressure and as the 50-year-elderly person mulls over what she needs to handle first, the endorphins discharged amid exercise will help lessen the burdens. Despite the fact that in a woman's 20's, 30's she could sit and eat a half quart of frozen yogurt, chomp on a pack of chips or down a container of brownies, and might ordinarily want to in her 50's, that isn't a reality. Ordinarily women ask why they have put on weight when they have not changed their dietary patterns. The truth is that women have to eat diversely beginning in their 50's a result of those hormonal changes that don't enable women to eat a similar way they did in their 20's and 30's, regardless of whether they feel 20 or 30. Women can't overlook as they age, their digestion backs off and the body is affected by all that they do.

Extending and yoga, alongside cardio wellness, will help support digestion. Women should practise 30 to 40 minutes every day, five times each week. Eating adjusted, sound suppers wealthy in products of the soil will help.

Since women will in general complete a ton of self-appearance in the evening time hours, self-journaling to follow considerations and sentiments on paper is incredible treatment. Spreading reflections out on paper organizes and make mindfulness, fabricate self-assurance and use sound judgment. It elucidates who a lady endeavors to be, what she may deeply desire and how to accomplish it. Another valuable outlet for women entering the 50's decade is meeting up with same age lady friends to share any useful info and acknowledge they are all in almost the same situation. Unwinding with lady friends, having a great time, chuckling and not withstanding crying are for the most part great prescription.

### REFERENCES

1. Roberts, S. B., & Rosenberg, I. (2006). *Nutrition and aging: changes in the regulation of energy metabolism with aging. Physiological reviews.*
2. McCleary, L. (2011). *Feed Your Brain, Lose Your Belly: A Brain Surgeon Reveals the Weight-Loss Secrets of the Brain-Belly Connection.* Greenleaf Book Group.
3. Barzilai, N., Huffman, D. M., Muzumdar, R. H., & Bartke, A. (2012). *The critical role of metabolic pathways in aging. Diabetes, 61(6), 1315-1322.* American Institute for Cancer Research: *Nutrition After 50.*



4. Bhadra, P., & Banerjee, P. (Eds.). (2020). *Prebiotics and probiotics: a new era of nutraceuticals* (Vol. 1). Centurion University of Technology and Management.
5. McGary, K. G. (2020). *Know Your Blood, Know Your Health: Prevent Disease and Enjoy Vibrant Health Through Functional Blood Chemistry Analysis*. Simon and Schuster.
6. Sanders, T. A. (2024). Introduction: the role of fats in human diet. *Functional dietary lipids*, 1-28.
7. Stephen, J., Manoharan, D., & Radhakrishnan, M. (2023). Immune boosting functional components of natural foods and its health benefits. *Food production, processing and nutrition*, 5(1), 61.
8. Ziruel, W. B. (2023). *Modeling of Adequate and Low-cost Diets and Their Acceptability by Households Inkitui and Taita Taveta Counties in Kenya* (Doctoral dissertation, University of Nairobi).
9. Fakolujo, I. Y., Gbadeyan, O. M., Ibrahim, F. A., Oladele, J. O., & Oladiji, A. T. (2024). *Nutrition and Fitness*. In *Nutrition and Diet in Health* (pp. 169-180). CRC Press.
10. Coates, K., & Kolkka, S. (2022). *How to Be Well: A handbook for women*. Simon and Schuster.



# JOURNEY FROM SLUMS TO SOCCER STARDOM WITH MEDIA IMPACT: REVIEW OF THE FILM *JHUND* (HORDE)

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Article DOI: <https://doi.org/10.36713/epra17860>

DOI No: 10.36713/epra17860

"You set fire to us, but we are made of hard metal"—this line from the song features at the end of the film excellently shows the struggle and amelioration of the slum youth. *Jhund* is an Indian Hindi-language film written and directed by Nagraj Popatrao Manjule (2022). It is grounded on the life of Vijay Barse, a teacher turned social activist and the founder of a non-governmental organisation (NGO) called slum soccer in India in 2001.

Set in Nagpur city (Maharashtra, India), *Jhund* revolves around slum youth and kids who indulge in drugs, weed selling, hooliganism, and crime and Vijay Borade (played by Amitabh Bachchan), a retired sports professor who rehabilitates slum youth and kids by bringing them into the sport of football. The film depicts how groups of individuals, commonly called criminals and criminals, may undergo a metamorphosis, evolving into a coherent and unified one. *Jhund* is not only a film but rather a docudrama that critiques entrenched socioeconomic disparities.

*Jhund* distinguishes itself from previous Hindi films with a football theme. While there is a lack of exceptional performers, Amitabh Bachchan stands out as an exception. The majority of Indian films have action sequences towards the conclusion of the film. Conversely, the picture has a more significant number of action sequences throughout the initial half compared to the latter half. In Bollywood mainstream films, distinctive dialects such as Nagpuri accents of indigenous languages in *Jhund* are seldom utilised. In Bollywood films, audiences have never heard or sensed Nagpuri's accent. The aforementioned characteristics of the film distinguish it from preceding Bollywood films with a football theme.

During his morning walk, Vijay Borade spots youngsters playing football with a plastic can in a sprawling slum located in Nagpur, and he realises that the youngsters in the slums are addicted to drugs, narcotics, and crimes because they have no other way to progress in life. As Vijay has seen the boys' interest in football, he thinks that football can be a means to shed their load of plight. Vijay's effort to make his idea a reality highlights the intriguing story that is riveting and jaw-dropping as it presents an inclusive portrayal of the slum and its

inhabitants, particularly the grim lives of the slum children and their lifestyles.

Vijay transforms the hardscrabble life of youngsters and helps to rehabilitate those junkies by providing them with appropriate football training and a platform to showcase their hidden talents. He organises a national football tournament for the entire slum football fraternity from far-flung parts of India to bring meaning to their lives. He also teams up with upstanding players. Eventually, the team was invited to represent India in the international slum football tournament. The sport gradually weans them away from the criminal tendencies in their minds and gives them hope for a better tomorrow.

Apart from Vijay, the film also stars Ankush Masram (also known as 'Don'—the head of a crime family) as the second lead character after Vijay. Don is one of the street boys who appears to be *Jhund*'s leader. In addition, the film casts Monika, a tribal girl portrayed by Rinku Raj Guru. By utilising Monika's character, the director illustrates how challenging it is for subaltern Indians to obtain address verification. Undoubtedly, it satirically emphasises the exclusive access to Indian bureaucracy by the privileged. Nevertheless, Manjule refrains from delving into the intricate details of the personal lives of numerous characters portrayed in the film. The interior workings of the subaltern remain concealed. There are no provided justifications for how they are.

Before *Jhund*, only a few films were created with football as their key theme. For instance, the 1984 Hindi sports drama *Hip Hip Hurray* was directed by Prakash Jha. The plot centres on the computer engineer Raj Kiran. After accepting a part-time position as a sports instructor at a school in the Indian state of Jharkhand's Ranchi, he guides the institution to an unprecedented victory in an interschool football tournament. Gul Bahar Singh helmed the 1999 film *The Goal*. The plot centres on a football coach whose football-obsessed friend requests that he coach a group of young men for a club tournament at the regional level. Poor children who, despite their insatiable passion for football, are unable to participate in a game because of their familial and socioeconomic circumstances are also touched upon in the film. In 2007, Vivek Ranjan Agnihotri directed the film *Dhan Dhan Dhan Goal* is





a sports drama in Hindi. In a thrilling climax, the narrative of a football-obsessed South Asian community in the United Kingdom (UK) ascends to victory over Europeans. Another film that depicts the fervour for football among schoolchildren is *Sikandar*. *Sikandar*, a poignant narrative helmed by Piyush Jha in 2009, follows the life of 14-year-old Sikandar Raza, an orphan whose parents were assassinated by militants. Raza is an ardent football enthusiast who aspires to dominate the sport. Several other films are inspired by the sport of football, including *Stand By* (2011) directed by Sanjay Surkar, *27 December 1987 Final Match* (2015) directed by Santosh Badal, *Tu Hai Mera Sunday* (2017) directed by Milind Dhaimade, *Penalty* (2019) directed by Shubham Singh, and *Maidan* (2021) directed by Amit Sharma.

The upbeat tale of Manjule is lengthy and sluggish. Although not all are receptive to the flirtatious romance between Don and the affluent student Bhavana (Sayli Patil), this aspect does not impede the development of the relationship.

Through this film, the director asks, "Is Indian society ready to treat slum youth with respect as Vijay did in the film?". To make all the characters in the film look natural and eye-catching, the director hired actors from Nagpur and the surrounding area to bring incredible authenticity to the film. The non-professional actors—slum boys who starred in the film, did not act; they lived. From struggling with substance abuse and criminal records to earning a spot on India's national slum football team, this film follows the lives of disadvantaged slum youngsters as they undergo remarkable transformations. Just a handful of the visuals in *Jhund* manage to captivate constantly. Investigating the lives of the poor in their humble houses utilising ground-based and aerial drone footage is an admirable effort. Furthermore, these graphics do a great job of drawing attention to the class gap.

The endearing sight of Vijay conversing with the impoverished slum youth in his room following their victory in a cordial match against his university team resonated deeply with many. Babu, a slum boy from the team, says, "This is the first time someone has taken an interest in his life." He says with a soft heart, "*Kisee ne mujhe nahin poocha he ki tum kaiseho* (No one asked me how you are)."

The director overlooks some of the individual characters in the film, yet they are the ones who subsequently bring the film to life. For example, a man who attempts suicide on the railroad tracks subsequently changes his mind and becomes a member of the Indian squad in an international slum football competition. However, Manjule neglected to show the viewers why he attempted suicide. Ajay-Atul's pulsating music, especially the title track, *Aayah Yeh Jhund Hai* (The Horde Has Come), makes the film powerful in terms of musical sense. The film's first half is entertaining and makes the audience laugh and cry. Nevertheless, the screenplay grapples with numerous character elements. *Jhund* experiences visual disorientation as specific individuals and situations start to develop. Manjule could not express all of his thoughts within the limited time available.

The film's duration of over 3 hours is insufficient to engage us in the events and emotions fully. For instance, a scene featuring a deceased individual is skillfully depicted, yet the storyline swiftly transitions to the subsequent scene. Occasionally, the audience perceives that the screenplay fails to provide them with a comprehensive understanding of the tragedy faced by the slum youth. An additional issue with the picture is that the writing fails to establish an emotional bond between the audiences and the youngsters residing in the slums, encompassing their challenges, personal growth, and eventual success.

The climax falls short of expectations. The culmination of this film with a football theme falls short of the anticipated football match or suspenseful last goal. The film concludes with a customary security inspection at the airport before embarking on the aircraft to reach the global football arena. In the film's conclusion, Manjule would have incorporated a football match sequence, enhancing the film's remarkable ending.

Upon viewing the film, one can get unique insights of the use and consumption of media. In this film, Vijay and his slum football squad made significant efforts to promote the national slum football competition across India. However, the mainstream media did not consider the competition to be remarkable. Coach Vijay and his slum football squad employ classic and contemporary media, such as wall posters, transit media, unbound booklets, and digital media tools, to distribute information about the national slum football competition instead of depending on the mainstream media. They were favoured due to their consistent utilisation of inexpensive and readily available alternative media to target specific populations. This exemplifies the prevailing belief among the general population that only mainstream media can attract a substantial audience. Furthermore, it exemplifies the extensive reach of alternative media in terms of its viewership.

At a particular moment, Vijay endeavours to persuade his colleague to organise a match between the college team and the slum boys. In this scene, the professor says to Vijay, "Your horde of junkies will not even last for ten minutes. Forget about winning over the college team." Vijay replies, "Don't call it a horde, sir! call it a team." It portrays the reality of society, beliefs, and the fixed mental sets individuals carry towards a subaltern community or an individual. This illustrates how our educated society perceives and values the culture of slum youth.

Although the film has several unnecessary elements, it effectively communicates a social message to a community that refrains from making judgements on impoverished slum children solely based on their language, personality, or criminal record. The combined efforts of individuals can have a transformative impact on the lives of others by assuming leadership roles and demonstrating respect and affection, akin to the real-life actions of Barse. Overall, *Jhund* accurately portrays Indian civilisation. It shows that each person can contribute towards improving India. I highly suggest this film to adolescents experiencing a lack of purpose. This film will walk you through recovering and remounting in life.

**REFERENCES**

1. Agnihotri, V. R. (Director). (2007). *Dhan dhana dhan goal* [Film]. UTV Motion Pictures.
2. Badal, S. (Director). (2015). *27 December 1987 final match* [Film]. Devkripa Entertainment.
3. Dhaimade, M.(Director). (2017). *Tu hai mera Sunday* [Film]. Golden Village Pictures.
4. Jha, P. (Director). (1984). *Hip hip hurray* [Film]. UTV Motion Pictures.
5. Jha, P. (Director). (2009). *Sikandar* [Film]. Reliance Entertainment Pvt Ltd.
6. Manjule, N. P. (Director). (2022). *Jhund* [Film]. T-Series; Tandav Films Entertainment Pvt Ltd; Aatpaat Films.
7. Sharma, A. (Director). (2022). *Maidan* [Film]. Bayoiew Projects; Zee Studios.
8. Singh, G. B. (Director). (1999). *The goal* [Film]. Children's Film Society India.
9. Singh, S. (Director). (2019). *Penalty* [Film]. Rudrakshh Films.
10. Surkar, S. (Director). (2011). *Stand by* [Film]. BRC Cine Productions.



# DOES THE RELATIONSHIP BETWEEN TEACHERS' MOTIVATION AND THEIR INSTRUCTIONAL PRACTICES HAVE AN IMPACT ON STUDENTS' ACHIEVEMENT MOTIVATION? AN EMPIRICAL STUDY

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Article DOI: <https://doi.org/10.36713/epra17852>

DOI No: 10.36713/epra17852

## ABSTRACT

*Based on different motivation theories a study was conducted to examine the relationship between teachers' motivation and their instructional practices and its effect on students' achievement motivation. The sample size included 45 teachers and 55 students of a private school. Separate questionnaires measuring teachers and students variables were used. The current study used correlation method and regression was run to analyze the data. The results from the current study do not support the findings of the previous researchers as it reported negative correlations for teachers' motivation and their instructional practices. Also the relationship between teachers' instructional practices and students' achievement motivation was partially confirmed. This indicates that the teaching practices of the teachers are not always guided by their goal orientation or their implicit beliefs. Besides, it also implies that the goal orientation of the teachers is not the only determining factor for teachers to evaluate students' abilities.*

**KEYWORDS:** *Teachers' goal orientation, implicit beliefs, instructional practices, students' motivation*

## INTRODUCTION

Motivation has been a topic of research and discussions in the field of educational and psychological research for many years. In the words of Wang et al., (2010) *"One of the most critical influences on students' level of cognitive engagement in school work or their choice of cognitive strategies is their motivation to learn"*. The study on achievement motivation is massive with many researchers emphasizing on the importance of students' motivation and how this affects their academic performances and learning. In an attempt to comprehend the cause and effects on the achievement motivation of the students, it was pointed by Butler in 2007 that the achievement goal theory is suitable for both students and teachers as teachers play a central role at academic institutions. Consequently, many studies were conducted on teachers' goal orientation, self-efficacy, teachers' instructional practices and its impact on students' motivation etc. (see Patrick & Ryan, 2008; Klassen & Chiu, 2010; Shim, Cho & Cassady, 2013; Nitsche et., 2013; Raufelder, & Lazarides, 2017 etc.). However, understanding these relationships as a whole would be useful as this might give more insights on research concerning teachers and students' motivation and learning.

## THEORETICAL FRAMEWORK

The concept of achievement motivation which was present with the initiation of James' (1890) proposition about the link between achievement strivings and self-evaluation took concrete shape after a decade through McClelland, Atkinson, and colleagues'

(Atkinson, 1957; McClelland, Atkinson, Clark, & Lowell, 1953; McClelland et al., 1949) work on need for achievement. It was since been referred as 'the achievement motivation literature' (Dweck & Elliot, 2005). According to Elliot *"Achievement motivation is the energizing and direction of competence-based affect, cognition, and behaviour"* (Elliot, 1999).

### Achievement Goal Theory

Among many models developed by goal theorists, Dweck's model has been found as the best articulated model (Leondari & Gialamas, 2002). The Achievement goal theory developed by Dweck and her colleagues in the late 70s and early 80s focuses on the perception and purposes that students pursue in the academic settings. Subsequently, these goal theorists identified two types of goals which they termed as mastery goals and performance goals. Here, mastery goals are considered adaptive as it focuses on developing competence, where as performance goals are regarded as maladaptive as it focuses on demonstrating competence and withdrawal of effort after a setback (Ames, 1992a; Dweck, 1986; as cited in Kaplan & Maehr, 2007).

### Implicit theory

In the words of Dweck & Leggett (1988), a consistent predictor of children's goal orientation is their "theory of intelligence". According to this theory, an individual respond to a particular situation according to the implicit beliefs; such as entity view and an incremental view that they hold about their intelligence. Entity



theory of intelligence is a fixed trait, a personal quality that cannot be changed. On a contrary, an incremental theory of intelligence conceives of intelligence as malleable and cultivable, which indicates that individuals may become more intelligent through their efforts. This often determines the achievement behaviour of the individuals in the academic settings. According to Dweck, those individuals who have a fixed mindset often attribute their failure to the lack of ability and those who hold growth mindset often attribute their failure to the lack of effort (Dweck 2006).

### Self-determination Theory

According to self-determination theory, both intrinsic and extrinsic motivation needs to be given equal importance as they play a significant role in influencing each other. Deci and Ryan's (1985; Ryan & Deci, 2000a, 2000b) Self-determination theory suggests that motivation involves numerous factors and is not limited to only two existing concepts, such as; mastery and performance goal. Ryan & Deci's research on motivation has found that intrinsic motivation determines more interest and develops persistence and increase the level of performance among the students in comparison to the extrinsic one. The SDT theory proposed by Deci & Ryan (1985) also concerns the external conditions (which include teachers) that elicit and maintain, versus suppress and reduce the inherent tendency within the individuals (Ryan & Deci, 2000).

### Teachers' and Students' motivation

Leroy et al., (2007), mentions in their study that motivation is represented by its intrapersonal nature and it reflects inter-personal processes. They further supported the study conducted by Turner & Patrick (2004) by arguing that the quality of students' motivation depends partly on their relationship with the teachers and the classroom environment that teacher creates. From their study, it was reported that teachers' implicit belief influences their own teaching behavior. Here, teachers' implicit belief is in regard to the abilities of the students in the classroom. Teachers will see students' intellectual abilities as fixed if they are performance oriented, but if they are mastery oriented teachers' will see students' abilities as malleable. Patrick and Ryan's (2008) study on how students perceive mastery goal structure in the classroom when the teachers teach in the classroom presents a broad understanding of identifying what type of instructional practices teachers bring in the classroom. The study conducted by Guvenc, (2015) demonstrated positive relationship between teachers' motivational support and students' motivation orientation, and their active participation in the class. The findings from the study of Hamid et al., (2010) illustrates that the intrinsically motivated students perform much better in academics in comparison to those who are extrinsically motivated.

The study conducted by Naz et al., (2011) on students' achievement motivation and self-concept displayed the existence of link among self-concept, achievement motivation and academic achievement of the students. On 2017, Jonsson & Beach conducted a study which reported that mathematics

teachers hold entity beliefs while social science teachers favoured incremental beliefs. Likewise, students hold entity beliefs for mathematics but developed incremental beliefs for other subjects such as social science. Their study also underscored that teachers with entity beliefs provide a classroom goal structure that demotivate the students in comparison to those holding incremental beliefs where students get highly motivated.

Teachers' motivation highly affect students' motivation and that is the reason why some students were found to have either high motivation but low achievement outcomes or get demotivated and disengage themselves from academic activities thus affecting their learning outcomes. Though study reveals the existing link between teachers and students' implicit beliefs and the achievement goals of the students, yet the association between teachers' implicit beliefs and their achievement goals has not been examined. Therefore, developing additional field-oriented research to explicate the nature of relationship between goal orientations and implicit theories is significant (McCoach & Cepero., 2009).

### Teachers' Goal Orientation

Butler (2007) has correctly pointed out that the goal orientation theory rightly explains the motivation of the teachers and explain its consequences and this was found on the impression that academic context comprises both students and teachers (Nitsche et. al.; 2013). In fact, the motivational model provides teachers with a framework for creating solutions to common motivational problems (Furrer et al., 2014). Mascret et al., (2017) also argues that teachers' achievement goals are equally as important field of study as students' achievement goals. However, not much study has been conducted on teachers' achievement goals and how they personally endorse achievement goals in the classroom.

At present context, teacher motivation is an important field of research (Mansfield et al., 2012). Research on the teacher goal orientations indicates that the mastery/ performance goal conceptualization is also suitable for the teachers (Nitsche et al., 2013). Here, teachers' mastery goal orientation may refer to the aim of intensifying their own professional competences; performance/avoidance goal orientation refers to the aim of demonstrating own superior teaching competencies or to avoid inferior teaching competencies. Prior research (Nitsche et al., 2013) has provided evidence that this conceptualization is more suitable to describe the teachers' goal orientations and that different facet of teachers' mastery and performance goal orientations envisage approach towards help-seeking.

The study conducted by Blackwell (2007) revealed that emphasizing more on the incremental view elicits positive effects and learning outcomes, thus maintaining the argument that the implicit beliefs of the students directly affect their achievement motivation. In a review of literature by Alkharusi (2010), he argues that the learning environment should be considered as an effective mediator between students' achievement goals and academic performance. His review on achievement goals and





classroom goal structure indicates that students' achievement goals need to be fostered in the learning environments which include the classroom. It may be mentioned that the type of classroom environment created by the teachers and their goal orientation highly effects the motivation of the students.

#### Teachers' goal orientation and their instructional practices:

Research on motivation has revealed that mastery goal structures lead to adaptive where as performance goal structures lead to maladaptive outcomes among the students in the academic settings. It is assumed that the relationship between classroom goal structure and students' goal orientation have strong affect on their adaptive and maladaptive learning patterns and is thus crucial at present context (see Meece et al., 2006). When students perceive the classroom as emphasizing mastery goal they tend to use effective learning strategies and feel good about themselves than when they perceive it as emphasizing on comparison of student abilities (Ames & Archer, 1988).

Anderman, E.M., & Patrick, H. (2012) found from their reviews that the students' perception of the classroom goal structure is connected to the quality of their engagement in the classroom. The review paper by Zhang et al., (2017) outlines the connection between mindset and academic achievement among the teachers as well as the students in the academic context based on the studies conducted on mindsets in learning. The study conducted by Leroy et al., (2007) revealed that teachers' implicit beliefs influences their instructional practices and the study conducted by Nitsche et al., (2013) exhibited positive association between teachers' goal orientation and students' achievement motivation. The study conducted by Nitsche et al. (2013), provided support for the assumption that teacher's goal orientations affect the motivation and learning behaviour of the students. Nevertheless, what kind of instructional practices (i.e., mastery or performance goal structure) realized by the teachers will have a strong impact on students' motivation is still not clear. In a study conducted by Park et al., (2016), they found that the self-reported teacher instructional practices predicted children's motivational frameworks at the end of the school year. However, the connection between their goal orientation and implicit beliefs

(regarding the malleability of students' ability) remains unexplored.

Previous research conducted on the academic achievement of the students has focussed mostly on students' motivation (e.g. Dweck & Leggett, 1988; Dweck & Grant, 2003; Hong et al., 1999). However, exploring the influence of teachers' motivation, namely; their goal orientation, as suggested by some researchers, would enrich our understanding of the relationship between students' motivation and their academic achievement. It is the teachers' goal orientations that determine their instructional practices and this further effect students' motivation.

Some researchers like Patrick & Ryan (2008), Radovan & Makovec (2015), Shim et al., (2013), Raufelder & Lazarides, (2017) conducted study on students' perception of the classroom environment. Others focused on teachers' goal orientation and its relationship with their teaching practices and its further impact on students' achievement motivation (Wigfield & Wentzel, 1998; Furrer & Skinner, 2003; Retelsdorf et al., 2010; Nitsche et al., 2013 etc.). On the basis of the existing research (see Nitsche et al., 2013), it was predicted (Hypothesis 1) that teachers' instructional practices will have a direct positive impact on students' motivation. Taking a cue from prior researchers, such as, Nitsche et al., (2013), Park et al., (2016), it was hypothesized that there is a direct relationship between teachers' instructional practices and students' motivation, which includes their goal orientation and implicit beliefs. In contrast to numerous research conducted on students' motivation (Ames & Archer, 1988; Dweck & Leggett, 1988; Midgley et al., 1996; Dweck & Grant, 2003; Covington, 2000 etc.), there is very little research on teachers' motivation for teaching (Retesldorf et al., 2010). Based on prior researches it was predicted (Hypothesis 2) that teachers' motivation will have a direct influence on their instructional practices. (a) Teachers' implicit beliefs (regarding students' abilities) will have a direct effect on their instructional practices. (b) teachers' implicit beliefs will be influenced by their goal orientation. The current research can be explained through a conceptual model (figure 1).

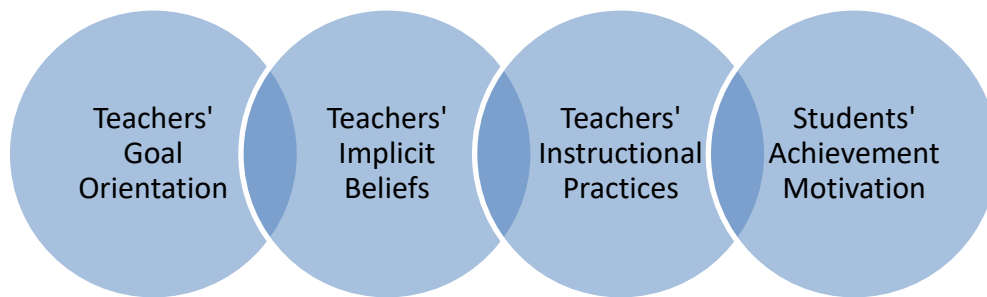


Fig.1. Linear relationships among these variables which includes teachers and students' achievement motivation  
Method



### Participants and Procedure

The sample for the study consisted of teachers teaching classes 8,9 and 10 in a private school in Nagaland. The age group of the students for the study ranged from 14-15 years of 9<sup>th</sup> standard. For this study 55 students were included, out of which there were 31 females and 24 males and 45 teachers. The participants were assured that their identities will not be revealed and that it will remain completely confidential. The variables of the present study were not specific to any subject.. Separate questionnaires measuring these teachers and student variables were employed and data was analyzed accordingly.

### Measures

**Teachers' goal orientation:** For measuring teachers' goal orientation, 8 items adapted from Elliot et al., (2017), were employed.

**Teachers' implicit beliefs:** For the assessment of teachers' implicit beliefs, 8 questionnaires from Dweck et al., (1995) were used.

**Teachers' instructional practices:** To examine teachers' instructional practices, and assessment of students' goal orientation, questionnaires adapted from (PALS, Midgley., 2006) were employed.

**Students' implicit beliefs:** For the assessment of students' motivation, 5 items adapted from (Park et al., 2016) were used.

## RESULT

### Mean, SD and Inter-Correlations

The correlation between teachers' motivation (their achievement goal and implicit beliefs) and their instructional practices and its further impact on students' achievement motivation were examined. Pearson's correlation method was used and regression was run to test the effects of teachers' goal orientation on their implicit beliefs. Also, the direct effect of teachers' implicit beliefs on their instructional practices was tested.

### Preliminary Analysis

The correlation was tested for teachers and students' variables using Pearson's correlation method. From the results of the study, it was found that teachers' incremental beliefs were not positively significant to their mastery goal orientation and their entity beliefs were not determined by their performance goal orientation as predicted. The result obtained from this study showed a negative correlation (.59) between teachers' mastery goal orientation and their entity beliefs. Also, for their incremental beliefs it did not show a positive correlation (.41). Furthermore, a positive correlation (.18) was found between performance goal orientation and the incremental beliefs of the teachers but no positive correlation was found for their entity beliefs (.96). The result obtained from this study shows that the implicit beliefs of the teachers do not determine their instructional practices although it demonstrated positive correlation (.17) for their entity beliefs, yet the level of significance were .49 for teachers' mastery goal structure and their incremental beliefs. Besides, the level of significance was .55 for their performance goal structure and their incremental beliefs and .70 for their entity beliefs.

### Regression coefficients from regression equations

The result obtained from the analysis reported a negative correlation between teachers' mastery goal structure and students' motivation but for performance goal structure it revealed a positive effect on students' motivation. The correlation between the classroom goal structure and students' motivation was not fully confirmed as hypothesized. The significance shown in table 1 provides initial support only for the effect of teachers' performance goal structure on students' motivation. From this analysis, it can be observed that the performance goal structure of the teachers is a strong predictor of students' motivation but it exhibited no direct effect for mastery goal structure on students' motivation which indicates that there is no direct effect of mastery goal structure on students' motivation (see table 1).

**Table 1 Mean, SD of all the variables and Unstandardized regression coefficients from the regression equations**

Variables	N	M	SD	1	2	3
1.Mastery Goal Structure	55	16.50	2.17	-	-	.86
2.Performance Goal Structure	55	19.78	3.60	-	-	.01
3.Students' Motivation	55	35.30	4.90	.86	.01	-

\*p< .05

The correlation was tested for teachers' instructional practices and students' implicit belief using Pearson's correlation method and regression was run separately for both male and female students. The result obtained from this study showed a negative correlations (.72) between teachers' instructional practices and

students' implicit beliefs for male and (.32) for female. The table given below explicates results of the correlations of these variables (see table 2).

**Table 2 Correlation of the variables using Pearson correlation method**

Variables	N	Female	Mean	SD	1	2
1. Teachers' instructional practices	55	31	35.8	4.44	-	.32
2. Students' implicit beliefs	55	31	15.9	3.04	.32	-

Variables	N	Male	Mean	SD	1	2
1. Teachers' instructional practices	55	24	37.3	4.54	-	.72
2. Students' implicit beliefs	55	24	16.0	3.06	.72	-

The given table presents the values of the variables that were evaluated. As shown on the table, the teachers' instructional practices do not predict the motivational framework development of the students as the level of significance for male students was (.72). It is observed from the results of the analysis that there is positive correlation between the two variables only for female students which indicates that the achievement motivation of the students is not always influenced by the instructional practices of the teachers. The formulated hypothesis that the teaching practices of the teachers in the classroom will have an impact on the students' implicit beliefs (mindset) was not confirmed.

## DISCUSSION

The present research proposed a conceptual model of different teachers and students variables and tested in the context of academic setting, that is classroom. It was designed to further the work on teachers' instructional practices and students' motivation based on the studies conducted by previous researchers (Nitsche et al., 2013; Park et al., 2016; Mensah & Atta., 2015; & Meece et al., 2006). Contrary to the findings and suggestions of the previous researchers (see Leroy et al., 2007; Rissanen et al., 2018) the present study found a negative correlation between the teachers and student variables. Additionally, the hypothesis that there is a direct association between teachers' instructional practices and motivational framework development of the students could not be validated. The study also showed that the goal orientation of the teachers is not the only determining factor for teachers to evaluate students' abilities. There may be other factors contributing towards the belief that teachers hold about the intellectual abilities of the students, such as the expectations teachers have on students (Wang et al., 2018). This is supported by the studies conducted by previous researchers like Timmermans, Boer, & Van Der Werf, (2018); Roskamp, Goudsblom, Eijden, Stroet, & Hornstra, (2018) etc.

The findings from the current study do not lend empirical support to the findings of prior research of Nitsche et al., (2013) and Park et al., (2016). The result from the direct effect model indicated that teachers' goal orientation was not a direct positive predictor of their implicit beliefs as both mastery goal and performance goal was found as a negative predictor of incremental belief and entity belief. It may be argued that contrary to Dweck's theory

(Dweck & Leggett, 1988) which suggested that those individuals who hold entity view orient more towards performance goals and those who hold incremental view often orient towards mastery goals, the current study does not support this theory as findings from the present research revealed no positive relationship between the two variables. Conversely, the current study supports the findings of some researchers, for e.g. Leondari & Gialamas, (2002); Dupeyrat, & Marine, (2005) demonstrated from their study that no relationship exists between students' goal orientation and their implicit beliefs. The result from this study corroborates the findings of past researchers (Naz, & Dr. Awan, 2011) where it was found that female students were more highly motivated than male students. Additionally, performance goal structure was found as a direct positive predictor of students' motivation which indicates that teachers' performance goal structure has strong impact on the motivation of the students than the mastery goal structure. The research conducted by Ohtani et al., (2013) revealed mastery goal structure as a positive predictor for students' motivation and a negative predictor of the motivation of the students. Nevertheless, the present study does not support the findings of the previous researchers as the obtained result showed no direct effect of these variables. This shows that the instructional approaches and the behavior of the teachers (see Furrer et al., 2014, Mensah & Atta., 2015, Reeve & Lee, 2014) etc. highly effects the achievement behavior of the students. However, the classroom structure presented by teachers in the classroom is not the only factor that influences students' motivation.

## Suggestions for future research

The current study aimed to contribute to the existing literature by conducting an empirical study on teachers' instructional practices affecting students' motivation. From this study, only the reason why students and teachers orient to certain type of goals and how this affects their classroom engagement can be speculated. However, future researchers can take this into account as it is essential to recognize the existing link between these variables. It is also significant to look at the association between teachers' goal orientation and their implicit beliefs as it still lacks clarity. Besides, this study does not support the findings and suggestions of the previous researchers which illustrate the fact that the instructional practices of the teachers are not always influenced



by their goal orientation. One can argue that it's the self-efficacy of the teachers that might determine their teaching in the achievement settings. As such, further research is required if one need to understand the complex relationships among these variables by looking at self-efficacy as a moderating variable (Bandura, 1994).

Furthermore, studies focusing on teachers' instructional practices affecting students' motivation based on gender would enhance the understanding of teachers and students' motivation and learning as it still remain unclear. As some researchers (see Naz & Dr. Awan, 2011; Berekashvili, 2012), argued that some form of gender biasness exists when teachers teach in the class and this have great impact on the achievement motivation and learning outcomes of the students. On the basis of the findings from the current study it can be argued that the goal orientations of the teachers do not have a direct influence on how teachers assess students' intellectual abilities. This could be because the teachers might hold multiple goals and this might be expressed differently towards different students in the classroom. Studies on students holding multiple goals and how these effect their academic achievement have been conducted by previous researchers (for e.g. Mattern, 2005). Likewise, teachers might also pursue multiple goals when they teach in the class which may determine their instructional practices. However, the influence of multiple goals teachers hold and how these effects their instructional practices remains unexplored. Thus, future researchers can take this into consideration.

## CONCLUSION

In a classroom context, teachers' play a vital role in influencing students' behavior and academic performances. One can argue that teachers' personality such as, emotional stability and openness is critical to their teaching practices and this further have an impact on students' academic performance. Wood, (2019) opined that the ability to understand and engage with students in the classroom is regarded as very critical towards the achievement outcome of the students. Moreover, promoting quality instructions that cultivate not only cognitive development but also the social and emotional development of the students greatly influence their academic performances. In a classroom situation where teachers focus more on their teaching either to improve themselves (mastery goals) or to prove themselves better than others (performance goals) as argued by many goal theorists and researchers (e.g. Wigfield & Wentzel, 1998; Ames & Archer, 1988; Dweck & Leggett, 1988; Roeser et al., 1996), greatly influences their teaching in the classroom and it further influence the achievement motivation of the students. Hence, it is critical for the teacher in the class to be aware of various classroom factors that might have an effect on how students perceive their classroom teaching and behaviors as this may have a strong influence on the achievement motivation of the students and academic performances.

## REFERENCES

1. Alkharusi, H. (2010). "Literature review on achievement goals and classroom goal structure: Implications for future research". *Electronic Journal of Research in Educational Psychology*, Vol. 8(3), pp. 1363-1386, ISSN: 1696-2095
2. Ames, C., & Archer, J. (1988). "Achievement goals in the classroom: students' learning strategies and motivation process". *Journal of Educational Psychology*, American Psychological Association, Vol. 80, No. 3, pp. 260-267.
3. Anderman, E.M., & Patrick, H. (2012). "Achievement Goal Theory, Conceptualization of ability/Intelligence, and classroom climate". In S.L. Christenson, A. L. Reschly, & C. Wylie (Eds.) *The handbook of research on student engagement* (pp. 173-191). Springer Science.
4. Bandura, A. (1994). "Self-efficacy. In V.S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman (Ed.), *Encyclopedia of mental health*. San Diego: Academic Press, 1998.
5. Berekashvili, N. (2012). "The role of gender-biased perceptions in teacher-student interaction". *Psychology of Language and Communication*, Vol. 16, No. 1, pp. 39-52, DOI: 10.2478/v10057-012-0004-x.
6. Devi, B., Dr. Khandelwal, B., & Das, M. (2017). "Application of Bandura's social cognitive theory in the technology enhanced, blended learning environment". *International Journal of Applied Research*, 3 (1), pp. 721-724. ISSN Print: 2394-7500. ISSN Online: 2394-5869.
7. Dweck, C.S., Chiu, C.Y., & Hong, Y.Y. (1995). "Implicit theories and their role in judgments in reactions: A world from two perspectives". *Psychological Inquiry*, Vol. 6, No. 4, 267-285.
8. Dweck, C.S., & Leggett, E.L. (1988). "A Social-Cognitive approach to motivation and personality". *Psychological Review*, American Psychological Association, Vol. 95, No. 2, pp. 256-273.
9. Dweck, C.S., & Grant, H. (2003). "Clarifying achievement goal and their impact". *Journal of Personality and Social Psychology*, Vol. 85, No. 3, pp. 541-553.
10. Furrer, C.J., Skinner, E.A., & Pitzer, J.R. (2014). "The influence of teacher and peer relationships on students' classroom engagement and everyday motivational resilience". *National Society for the Study of Education*, Vol. 113, Issue 1, pp. 101-123.
11. Hamid, K., Khan, M.A., Ali, I., & Afzal, H. (2010). "A study of university students' motivation and its relationship with their academic performance". *International Journal of Business and Management*, Vol. 5, No. 4, pp. 80-88.
12. Jonsson, A.C., & Beach, D. (2017). "The influence of subject disciplinary studies on students' implicit theories of intelligence and achievement goals in one Swedish upper-secondary school". *Education Inquiry*, Routledge, Taylor & Francis Group, Vol. 8, No. 1, pp. 50-67.
13. Kaplan, A., & Maehr, M.L. (2007). "The contributions and prospects of goal orientation theory". *Educational Psychological Review*, Vol. 19, pp. 141-184. DOI: 10.1007/s10648-006-9012-5.
14. Klassen, R.M., & Chiu, M.M. (2010). "Effects of teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress". *Journal of Educational Psychology*, American Psychological Association, Vol. 102, No. 3, pp. 741-756.
15. Leondari, A., & Gialamas, V. (2002). "Implicit theories, goal orientations, and perceived competence: Impact on students'





- achievement behaviour". *Psychology in the schools*, Wiley Periodicals, Inc., Vol. 39, No. 3, pp. 279-291.  
DOI: 10.1002/pits.10035.
16. Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). "Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate". *European Journal of Psychology of Education*, Vol. XXII, NO. 4 pp. 529-545.
17. McCoach, D.B., & Cepero, M.C.G. (2009). "Educators' implicit theories of intelligence and beliefs about the identification of gifted students". *Univ. Psychol.*, Vol. 8, No. 2, pp. 295-310.
18. Meece, J.L., Anderman, M.E., & Anderman, H.L. (2006). "Classroom goal structure, student motivation and academic achievement". *Annual Review of Psychology*, Vol. 57, pp. 487-503.
19. Mensah, E., & Atta, G. (2015). "Middle level students' goal orientations and motivation". *Journal of Education and Training Studies*, Vol. 3, No. 2, pp. 20-33.
20. Mansfield, C., Wosnitzer, M., & Beltman, S. (2012). "Goals for teaching: Towards a framework for examining motivation of graduating teachers". *Australian Journal of Educational & Developmental Psychology*, Vol. 12, pp. 21-34. ISSN 1446-5442.
21. Mattern, R.A. (2005). "College students' goal orientations and achievement". *International Journal of Teaching and Learning in Higher Education*, Vol. 17, No. 1, pp. 27-32.
22. ISSN 1812-9129.
23. Mensah, E., & Atta, G. (2015). "Middle level students' goal orientations and motivation". *Journal of Education and Training Studies*, Vol. 3, No. 2, pp. 20-33.
24. Naz, A., Noureen, G., & Dr. Awan, R.N. (2011). "A study of relationship between achievement motivation, self-concept and achievement in English and mathematics at secondary level". *International Educational Studies*, www.ccsenet.org/ies, Vol. 4, No. 3, pp. 72-79.  
ISSN 1913-9020, E-ISSN 1913-9039.
25. Nitsche, S., Steuer, G., Fasching, M.S., Dresel, M., & Dickhauser, O. (2013). "Relations between teachers' goal orientations, their instructional practices and students' motivation". *Psychology*, Vol. 4, No.7, pp. 572-584.
26. Ohtani, K., Okada, R., Ito, T., & Nakaya, M. (2013). "A multilevel analysis of classroom goal structures' effects on intrinsic motivation and peer modeling: Teachers' promoting interaction as a classroom level mediator". *Psychology*, Vol. 4, NO. 8, pp. 629-637.
27. Park, D., Gunderson, E.A., Tsukayama, E., Levine, S.C., & Beilock, S.L. (2016). "Young children's motivational frameworks and math achievement: Relation to teacher-reported instructional practices, but not teacher theory of intelligence". *Journal of Educational Psychology*, American Psychological Association, Vol. 108, No. 3, pp. 300-313.
28. Radovan, M., & Makovec, D. (2015). "Relations between students' motivation, and perceptions of the learning environment". *Journal of C.E.P.S*, Vol. 5, No. 2, pp. 115-138.
29. Raufelder, D., & Lazarides, R. (2017). "Longitudinal effects of student-perceived classroom support on motivation - A latent change model". *Frontiers in Psychology*, Vol. 8 (417), pp. 1-11. Doi: 10.3389/fpsyg.2017.00417.
30. Reeve, J., & Lee, w. (2014). "Students' classroom engagement produces longitudinal changes in classroom motivation". *Journal of Educational Psychology*, American Psychological Association, Vol. 106, No. 2, pp. 527-540.
31. Retesldorf, J., Butler, R., & Streblov, L., & Schiefele, U. (2010). "Teachers' goal orientations for teaching: Associations with instructional practices, interest in teaching, and burnout". *Learning and Instruction*, Vol. 20, pp. 30-46.
32. Rissanen, I., Kuusisto, E., Hanhimaki, E., & Tirri, K. (2018). "The implications of teachers' implicit theories for moral education: A case study from Finland". *Journal of Moral Education*, Routledge, Taylor & Francis Group, Vol. 47, No.1, pp. 63-77.
33. <https://doi.org/10.1080/03057240.2017.1374244>.
34. Roeser, R.W., Midgely, C., & Urdan, T.C. (1996). "Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belongings". *Journal of Educational Psychology*, American Psychological Association, Vol. 88, No. 3, pp. 408-422.
35. Roskamp, C., Goudsblom, J., Eijden, E.V., Stroet, K., & Hornstra, L. (2018). "Teacher expectation effects on need-supportive teaching, student motivation, engagement: A self-determination perspective". *Educational Research Evaluation*, Vol. 24, Nos. 3-5, pp. 324-345.
36. Ryan, R.M., & Deci, E.L. (2000). "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being". *American Psychologist*, American Psychological Association, Vol. 55, No. 1, pp. 68-78.
37. Ryan, A.M., & Patrick, H. (2001). "The classroom social environment and changes in adolescents' motivation and engagement during middle school". *American Educational Research Journal*, Vol. 38, No. 2, pp. 437-460.
38. Shim, S.S., Cho, Y., & Cassady, J. (2013). "Goal structures: The role of teachers' achievement goals and theories of intelligence". *The Journal of Experimental Education*, Vol. 81(1), pp. 84-104. ISSN: 0022-0973 print/1940-0683 online  
DOI: 10.1080/00220973.2011.635168
39. Singh, K. (2011). "Study of achievement motivation in relation to academic achievement of students". *International Journal of Educational Planning & Administration*, Vol. 1, No. 2, pp. 161-171. ISSN 2249-3093.
40. Timmermans, A.C., Boer, H., & Van Der Werf, M.P.C. (2018). "The effects of teacher expectation interventions on teachers' expectations and student achievement: A narrative review and meta-analysis". *Educational Research and Evaluation*, Vol. 24, Nos. 3-5, pp. 180-200.
41. Wang, J.C.K., Liu, C.W., & Chye, S. (2010). "Achievement goals, implicit theories and behavioural regulation among polytechnic engineering students". *The International Journal of Research and Review*, Vol. 5, Issue 2, pp. 1-17.
42. Wang, S., Rubie-Davies, C., & Meissel, K. (2018). "A systematic review of the teacher expectation literature over the past 30 years". *Educational Research and Evaluation*, Vol. 24, Nos. 3-5, pp. 124-179.
43. Wigfield, A., & Wentzel, K.R. (1998). "Academic and social motivational influences on students' academic performance". *Educational Psychology Review*, Vol. 10, No. 2, pp. 155-175.
44. Wood, R. (2019). "Students' motivation to engage with science learning activities through the lens of self-determination theory: Results from a single-case school-based study". *EURASIA Journal of Mathematics, Science and Technology Education*, 15(7), pp. 1-22. ISSN:1305-8223.



45. Zhang, J., Kuusisto, E., & Tirri, K. (2017). "How teachers' and students' mindsets in learning have been studied: Research findings on mindset and academic achievement". *Psychology*, Vol. 8, No. 3, pp. 1363-1377. ISSN Online: 2152-7199, ISSN Print: 7152-7180.



# EQUALITY IN TEACHER EDUCATION IN THE CONTEXT OF DEPRIVATION AMONG B.ED. STUDENTS

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Article DOI: <https://doi.org/10.36713/epra17856>

DOI No: 10.36713/epra17856

Education is the means by which goals of social inclusion and equality can be achieved in terms of sustainable development. In every country, certain groups confront barriers that prevent them from fully participating in their nation's political, economic and social life. In India exclusion of lower castes is a salient feature of society. The conflicts and disadvantages are often based on social identity.

Social exclusion in India has its roots in historical divisions along lines of caste, tribe and excluded sex i.e. women. All these Reserved groups SC & ST and women require social inclusion. The World Bank group defines social inclusion as the process of improving the terms on which individuals and groups take part in society, improving the ability, opportunity and dignity of those disadvantaged on the basis of their identity.

United Nations has committed to leaving no one behind in an effort to help countries to promote inclusive growth and achieve the Sustainable Development Goals (SDGS). For this the most common social policies around the world are minimum income or food, public education and health care programs. Dr. B.R. Ambedkar in Indian constitution prominently highlighted the 'equality of educational opportunities' so that under privileged masses and women can get a chance to participate in the mainstream of social life. The basic reason for why the socially disadvantaged have failed to take advantage of their access to education is a combination of a history of oppression and a lack of access to local quality education systems.

The term 'Deprivation' refers to certain deficiencies in the environment; which are not only there but are also experienced as such by the individuals. Psychologically, it has been used as construct it means a state resulting, from withdrawal or taking away of a thing from the person which in normal course should have been with him. Deprivation is multi-dimensional; concept implying "dispossession" or "loss" or withholding "blockades". It therefore, can be varied in quantity, quality, time, space etc.

In society, the term deprivation has much broader meaning. It connotes appropriation of fruits of one's labours; the appropriation of being a continuous process. This results in

division of society into rich and poor, haves or have-nots, ruling and ruled, privileged and non-privileged, advantaged and disadvantaged, the poor, the have-nots ruled etc. denoting deprivation. At societal level deprivation when viewed from class angles, acquires a multidimensional character. Important aspects of deprivation such as physical, social, emotional, economic, educational, psychological, parental globally affect the personality of an individual.

Since every individual possesses human rights to exercise on equal basis, denial of their rights due to customary, social, economic and cultural perspectives is in completely disharmony with the concept of development of society as a whole.

'Right to education act 2009' also specifies the parameters of the disadvantage for children. Children belonging to SC, ST, the socially and educationally backward class or any other group having disadvantage owing to social, cultural, economical, geographical, linguistic, gender or any such factor as may be specified by government by notification would be considered disadvantaged. By all accounts, those considered disadvantaged would count among the 'deprived children' meaning those deprived of education. Women also have lower social status as compared to that of fellow men. Thus, in India, various groups identified for facing discrimination due to their social status include OBC, SC, ST and women, as

Quality education should be in reach of every person of excluded groups for social inclusion. This research paper is an attempt to study the deprivation felt by the socially excluded groups (OBC, SC, ST and women) among B.Ed. students so that current scenario of social inclusion can be explored. As the B.Ed. students of Teacher Education institutes are prospective teachers, on the basis of findings suggestion will be given for an improved teacher education programme in future focusing social inclusion based on social, economic, cultural and political factors contributing deprivation.

## OBJECTIVES

1. To compare the deprivation between general category and reserved category B.Ed. students.



- To compare the deprivation between male and female B.Ed. students.
- To compare the deprivation between go aided college and self financed college B.Ed. students.

**HYPOTHESES**

- There is no significant difference in deprivation between general category and reserved category B.Ed. students.
- There is no significant difference in deprivation between male and female B.Ed. students.
- There is no significant difference in deprivation between B.Ed. students of Govt.- aided and self-finance institutions.

**Population:** All the B. Ed. Students of Government aided and self financed B. Ed. Colleges of Prayagraj city.

**Sample:** 100 students studying in B.Ed. colleges of Prayagraj city were selected. Simple random sampling method was used to select 2 colleges- one self financed and one govt. aided. The sample comprised of 50 general and 50 reserved category students, 50 male and 50 female students. 50 govt. aided college students and 50 self financed college students

**Methodology:** Survey method of Descriptive Research has been used in this research paper.

**Tool:** Deprivation Questionnaire by K. S. Misra adopted for use with B. Ed. Students. It consists of 20 items.

**Statistics Used and Analysis:** Mean, S.D. and T-test have been applied for analyzing data.

**RESULTS AND DISCUSSION**

**Table – 1**

**t-test values for comparison of deprivation between general and reserved (OBC,SC,ST) category B.Ed. students**

Sample	n	M	S	D	$\sigma D$	$t = \frac{D}{\sigma D}$
General category B.Ed. students	50	35.6	1.7	2.0	.93	2.15*
Reserved category (OBC, SC,ST) B.Ed. students	50	37.6	2.0			

Note: \*Significant at .05 level.

It can be observed from Table 1, the calculated t-value 2.4 is greater than the table value of t (1.98) with df 98 at .05 level of significance. The calculated value is significant hence the null hypothesis of no significant difference in the mean values of deprivation between general category and reserved category students is rejected at .05 level of significance.

The reserved category B.Ed. students deprivation is significantly higher than general category students deprivation scores. On the basis of mean values, it can be said that reserved category B.Ed. students feel more deprivation as compared to general category students.

**Table – 2**

**t-test values for comparison of deprivation between male and female B.Ed. students**

Sample	n	M	S	D	$\sigma D$	$t = \frac{D}{\sigma D}$
Male students	50	38.1	13.5	.4	.44	.9**
Female students	50	37.7	11.6			

Note: \*\*Not significant at .05 level.

It can be observed from Table 2, the calculated t-value .9 is less than the table value of t (2.0) with df 98 at .05 level of significance. The calculated value is not significant hence the null hypothesis of no significant difference in the mean values of deprivation scores of male B.Ed. students and female B. Ed. Students is accepted at .05 level of significance.

The male students and female students of B.Ed. colleges do not differ significantly on deprivation scores. In other words, it can be said that male and female B.Ed. students are equally deprived.

**Table – 3**

**t-test values for comparison of deprivation between B.Ed. students of Government-aided and self financed colleges**

Sample	n	M	S	D	$\sigma D$	$t = \frac{D}{\sigma D}$
Government aided college B. Ed. Students	50	38.0	9.8	.1	.1	1.0**
Self financed college B. Ed. Students	50	37.9	16.3			

Note: \*\*Not significant at .05 level.





It can be observed from Table 3, the calculated t-value 1.0 is less than the table value of t (1.98) with df 98 at .05 level of significance. The calculated value is not significant hence the null hypothesis of no significant difference in the mean values of deprivation scores of Government aided and Self financed colleges B.Ed. students is accepted at .05 level of significance.

The Government aided and Self financed colleges B.Ed. students do not differ significantly on deprivation scores. In other words, it can be said that Government aided and Self financed colleges B.Ed. students are equally deprived.

## FINDINGS

1. There is significant difference between deprivation mean scores of general and reserved category B.Ed. students. Reserved category B.Ed. students feel more deprivation as compared to general category students.

2. 1. There is no significant difference between deprivation mean scores of male and female B.Ed. students. Male and female B.Ed. students are equally deprived.

3. 1. There is significant difference between deprivation mean scores of government aided and self financed college. Government aided and Self financed colleges B.Ed. students are equally deprived.

## DISCUSSION

### Finding 1

There is significant difference in deprivation of general and reserved (deprived) category B.Ed. students which is in favour of reserved students i.e. OBC, scheduled caste and scheduled tribes students. This finding indicates that despite of various laws, developmental plans, facilities and provisions inequality persists in all aspects of life of deprived group students which is also affecting education.

Although over the years, reservation has helped in creation of new educated middle class in all deprived (OBC, SC, ST) groups, but this covers a small size as majority of children of this group are not getting quality education yet. The implication of this finding is that development organizations and authorities must continue to explore varying levels of incentives and policies to ensure social equality and social inclusion. The caste factor makes teaching learning environment improper for development of students and the deprivation of B.Ed. students will also affect this developmental process adversely.

### Finding 2

No significant difference has been found in deprivation of male and female B. Ed. Students which shows that gender is not a basis for deprivation and both category students feel equal deprivation. It is a positive indication that both boys and girl students find themselves on equal ground because today it is very essential that our education system should teach the important concept of 'Gender equality' and lessons for 'No discrimination on the basis of gender between boys and girls,' to stop the crime against women in the present scenario for social inclusion.

Finding indicates that the B. Ed. Students are getting equal social, economic, educational, emotional and ecological support; it can be thought that when they become a teacher they will help to eradicate the problems and gender issues inside the classrooms, schools and society respectively. It is need of hour to address women's' issues concerning to their survival disadvantage, marriage, access to market and services, their vulnerability to violence and threats to physical harm in the home and outside home. These issues cannot get solution only by laws but also requires a humble society and responsible citizens which can be done only by education through unbiased and sensible teachers.

### Finding 3

No significant difference has been found in deprivation between B. Ed. Students of government aided and self finance institutions, which shows that the students of government aided and self financed institution do not differ from one another on deprivation.

The education sector has changed a lot and as such numerous educational colleges have come up in recent times. It is with the advent of globalization that government aided and self finance institutions have now dominated the education sector. There are many differences between these institutions, but findings indicate positive aspect that B.Ed. students of both institutions are equal on deprivation.

## CONCLUSION

There should be no discrimination among the people in today's world. State shall promote with special care the educational and economic interests of weaker sections of the people.

Teacher education programmes should be planned and implemented with elements for social inclusion of deprived groups containing values of equality, freedom, right against exploitation, freedom of religion and cultural and educational rights mentioned in our constitution.

These values may prove effective to pull out the disadvantaged sections of society and make them par with the main stream of society as education has been considered most potent tool for empowering the socially disadvantaged groups.

## REFERENCES

1. Bhatla S. (2017) *Educational Status of Socially Disadvantaged group in India. Scholarly research journal for interdisciplinary Studies, Vol-4/35. www.srjis.com*
2. *Census of India (2011). Retrived from http://www.Census india.gov.in/ 2011.*
3. Kerlinger, F.N. (1973). *Foundations of Behaviourable Research. New Delhi: Surjeet Publication.*
4. Mishra, G. and Tripathi, L.B. (1977b). *The concept of prolonged deprivation and its measurement. Indian Journal of Behavior, 1(2), 48-68.*
5. Mishra, G. and Tripathi, L.B. (1980). *Psychological consequences of prolonged deprivation. Agra: National Psychological Corporation.*



6. NCERT *Journal of Indian Education* (2011), *Problems of scheduled caste and scheduled tribe children*.
7. 'Inclusion Matters: The foundation for shared Prosperity' World Bank Report, 2013.  
<https://www.worldbank.org> retrieved on 3.12.19
8. 'World Bank, 2011'. *Poverty and social exclusion in India*. Washington D.C.  
<http://openknowledgeworldbank.org>.



# FOREST POLICIES IN THE NIZAM'S STATE OF HYDERABAD

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## ABSTRACT

*Situated in the centre of the Indian subcontinent, the State of Hyderabad<sup>1</sup>, founded by the Nizam, served as a stronghold of princely authority, characterised by a diverse range of customs, traditions, and governmental systems. The state was founded during the turbulent era of British India, and it became a unique entity under the Nizams' rule<sup>2</sup>, who ruled over a large and varied territory. Stretching from the vast Deccan Plateau to the vibrant metropolis of Hyderabad, the state's borders encompassed an area distinguished by its own historical path<sup>3</sup>.*

*Established at the beginning of the 1724, the Nizam's State developed into a conglomeration of princely realms, incorporating elements of both Mughal and Persian governance systems<sup>4</sup>. The political climate of Hyderabad was defined by a careful balance of power, complex diplomatic ties, and a dedication to maintaining the unique identity of the region. A succession of Nizams oversaw the state's development<sup>5</sup>.*

*The importance of the region's forests became a top priority for the Nizams as they attempted to manage the difficulties of governance. The state's varied terrain, which includes both lush forests and desert regions, highlighted the significance of these forested areas for the environment. Beyond their ecological significance, Hyderabad's forests were vital to the city's social structure, providing the local population with resources, income, and a means of subsistence<sup>6</sup>.*

*The Nizam's State's forests were more than just a stand of trees; they were biodiversity repositories that supported a wide variety of species and maintained the state's ecological equilibrium. Furthermore, the forests were deeply ingrained in the daily lives and customs of the local inhabitants, giving them great cultural and spiritual significance.*

**KEY WORDS:** Indian Forest, History of Hyderabad, Revenue strategies, Nizam History.

## 1.0 INTRODUCTION

Situated in the centre of the Indian subcontinent, the State of Hyderabad<sup>7</sup>, founded by the Nizam, served as a stronghold of princely authority, characterised by a diverse range of customs, traditions, and governmental systems. The state was founded during the turbulent era of British India, and it became a unique entity under the Nizams' rule<sup>8</sup>, who ruled over a large and varied territory. Stretching from the vast Deccan Plateau to the vibrant metropolis of Hyderabad, the state's borders encompassed an area distinguished by its own historical path<sup>9</sup>.

Established at the beginning of the 1724, the Nizam's State developed into a conglomeration of princely realms, incorporating elements of both Mughal and Persian governance systems<sup>10</sup>. The political climate of Hyderabad was defined by a careful balance of power, complex diplomatic ties, and a dedication to maintaining the unique identity of the region. A succession of Nizams oversaw the state's development<sup>11</sup>.

### THE REGION'S FORESTS ARE IMPORTANT:

The importance of the region's forests became a top priority for the Nizams as they attempted to manage the difficulties of governance. The state's varied terrain, which includes both lush forests and desert regions, highlighted the significance of these forested areas for the environment. Beyond their ecological significance, Hyderabad's forests were vital to the city's social structure, providing the local population with resources, income, and a means of subsistence<sup>12</sup>.

The Nizam's State's forests were more than just a stand of trees; they were biodiversity repositories that supported a wide variety of species and maintained the state's ecological equilibrium. Furthermore, the forests were deeply ingrained in the daily lives and customs of the local inhabitants, giving them great cultural and spiritual significance.

In light of this, the Nizam's State's forest policies become a crucial part of its historical story. The Nizams' attitude to striking a balance between environmental preservation, economic sustainability, and the welfare of the populations who depend on the forests was reflected in these measures, which were impacted by the historical background of the period. By exploring the subtleties of these policies, we learn about the administrative complexities as well as the significant effects they had on the livelihoods and landscapes of the Nizam's dominion<sup>13</sup>.

### HISTORICAL BACKGROUND

#### A. THE NIZAM'S STATE WAS ESTABLISHED

The origins of the Nizam's State can be found in the early 1724, when the Mughal Empire, which had hitherto ruled the Indian subcontinent without challenge, started to see a slow loss of central power. During this period of political unrest, the Deccan region which includes portions of modern-day Telangana, Andhra Pradesh, and Maharashtra became the centre of political realignment. The Mughal Emperor nominated the



Nizams as viceroys, and they progressively asserted their independence and created a princely state<sup>14</sup>.

In 1724, Mir Qamar-ud-din Khan, the first Nizam, established the state's foundation and designated Hyderabad as its capital<sup>15</sup>. A new political entity with a distinctive fusion of Persian administrative customs and native political frameworks was born with the founding of the Nizam's State. In order to protect their independence, the Nizams engaged in diplomatic wrangling with both regional powers and the British East India Company throughout the course of the ensuing decades.

### 1.1 ENVIRONMENTAL AND SOCIOECONOMIC FACTORS

The Nizam's State was shaped by a variety of social and environmental elements, which reflected the region's diversity and the difficulties its rulers encountered. With its diverse climates and topography, the Deccan Plateau offered a patchwork of ecosystems, from lush forests to parched plains. These varied landscapes were closely linked to the region's agrarian economy, as populations relied on pastoralism, agriculture, and forest resources for their subsistence.

Socio-economic factors including urbanisation, population expansion, and shifting land use patterns started to put pressure on the state's natural resources including its forests as it developed<sup>16</sup>. The Nizams had the dual challenges of providing for the environmental sustainability and satisfying the aspirations of an expanding populace. In light of this, forest regulations have become an essential tool for striking a balance between the region's ecological integrity and the socioeconomic requirements of its residents<sup>17</sup>.

In addition to providing raw materials and timber, the forests were essential in controlling regional temperatures, halting soil erosion, and preserving biodiversity. Aware of these interdependent dynamics, the Nizams struggled to create policies that attempted to find a precarious balance between prosperity and conservation. In dissecting the historical fabric of forest policy in the Nizam's State<sup>18</sup>, it is crucial to look at the ways in which these leaders dealt with the complex web of environmental and socioeconomic issues that were part of their domain.

### 1.3. EARLIER FORESTRY REGULATIONS:

#### A. NIZAMI REGIME POLICIES

##### 1. METHOD FOR CONSERVING FORESTS:

Forest conservation became a key component of the early Nizams' government during their rule<sup>19</sup>. Policies to control and safeguard these essential ecosystems were put in place when it was realised how important forests are ecologically. Preventing over-exploitation, deforestation, and degradation of forested regions was the goal of conservation initiatives.

Understanding the fine line between human necessities and environmental preservation, the early Nizams put laws in place to prohibit illegal logging and grazing<sup>20</sup>. By including indigenous knowledge systems, these programmes frequently involved local populations in the management of forests. The idea was to emphasise that people have a symbiotic relationship

with their natural surroundings and that everyone has a shared responsibility for preserving trees.

### 2. MAKING USE OF FOREST RESOURCES:

The Nizams simultaneously attempted to capitalise on the potential economic benefits of forest resources<sup>21</sup>. In order to promote the sustainable use of raw materials such as timber and non-timber forest products, policies were developed. Particularly valuable economically was timber, which was used for several sectors, including fuel and construction.

The regulations controlling the use of forest resources were designed to strike a balance between the need for environmental stewardship and economic development. Mechanisms for collecting forest revenue were put in place, giving the state a steady stream of income while making sure that exploitation stayed within the bounds of ecological viability.

### B. BRITISH RULE'S EFFECT ON FOREST MANAGEMENT

Princely states like Hyderabad saw a change in their approaches to forest management with the arrival of British authority in India. Motivated by a utilitarian understanding of forests, the British colonial government aimed to extract as much as possible from the resources for financial benefit. The state of the Nizam's forest policies was significantly impacted by this influence<sup>22</sup>.

### 1. THE SCIENTIFIC FOREST MANAGEMENT INTRODUCTION

The Nizam's State saw a change towards scientific forest management techniques under British influence<sup>23</sup>. To maximise the output of timber, the colonial government used ideas including selective logging, clear-cutting, and the creation of tea plantations. These techniques, which have their roots in European forestry principles, were designed to increase resource extraction efficiency<sup>24</sup>.

### 2. REFORMS IN REVENUE COLLECTION

Reforms to the forest revenue collection system were also influenced by the British. Under pressure from shifting global trade dynamics and economic factors, the Nizams instituted new revenue arrangements that frequently put further financial strain on nearby populations who depended on forest resources<sup>25</sup>. This change was a reflection of how colonial economic policies affected the long-standing bond between local people and their natural surroundings.

Comprehending the interplay between the policies implemented by the early Nizams and the impact of British rule offers a sophisticated viewpoint on the changing dynamics of forest management in the Nizam's State during this developmental stage. The course of the natural and economic landscapes in the region was shaped by these initiatives, which also set the foundation for later changes.





## 1.4 DEVELOPMENT OF HYDERABAD'S FOREST POLICIES UNDER THE NIZAM

### A. MODIFICATIONS TO POLICIES FOLLOWING NIZAMS

Under the reigns of succeeding Nizams, the forest policies of the Nizam's State developed, with each Nizam helping to shape environmental governance. The initial policies established the framework, but later Nizams brought about changes brought about by shifting socioeconomic situations<sup>26</sup>, advances in technology, and an increasing comprehension of ecological processes.

#### 1. NIZAM ALI KHAN AND INTEGRATION OF TECHNOLOGY

When Nizam Ali Khan came to power in the late eighteenth century<sup>27</sup>, he saw firsthand how advances in technology were incorporated into the management of forests. Modern surveying methods were introduced during this time, allowing for a more precise evaluation of the forest cover and resources. Technology was used with the intention of improving tax collection and resource utilisation accuracy. This was a departure from customary practices and a move towards a more methodical approach.

#### 2. SIKANDAR JAH AND THE REFORMS OF SOCIO-ECONOMICS

Policies implemented during Sikandar Jah's early 19th-century reign demonstrated a wider focus on social changes. Forest policy prioritised community welfare and rural development in addition to resource exploitation. In order to ensure a fairer distribution of the advantages gained from forest resources, Sikandar Jah adopted steps to address the needs of communities that depended on forests<sup>28</sup>.

#### 3. INITIATIVES FOR CONSERVATION AND MIR MAHBUB ALI PASHA

During the late 19th and early 20th centuries, during Mir Mahbub Ali Pasha's rule, there was a noticeable movement towards conservation efforts. Growing environmental consciousness led to the implementation of laws protecting biodiversity, controlling hunting, and creating animal sanctuaries. During this time, the ecological value of forests was beginning to be recognised more than their economic value.

### B. EXTERNAL FACTORS AFFECTING FOREST MANAGEMENT

#### 1. POLICIES OF BRITISH COLONIALISM

The Nizam's State's forest management is still shaped by British colonial regulations. British authority over forest resources was cemented in the second part of the 1800s, which resulted in the imposition of strict laws. The traditional forest-use practices of the indigenous communities were impacted by the British emphasis on generating cash through the extraction of lumber.

The British Forest Acts, including the Indian Forest Act of 1878<sup>29</sup>, encouraged the Nizam's State to enact comparable legislative measures. The administrative control over woods

was further strengthened by the convergence of princely state and colonial policy.

#### 2. AWARENESS OF THE ENVIRONMENT

In the late 19th and early 20th centuries, environmental protection gained international attention. Sustainability and the long-term effects of unrestrained resource extraction became popular ideas. The Nizam's State's forest policies were influenced by this worldwide movement in environmental consciousness in a subtle but noticeable way<sup>30</sup>.

As knowledge of the significance of ecological balance grew, the state started incorporating environmental awareness into its policies. During this time, initiatives to mitigate the negative consequences of deforestation were launched, including awareness campaigns and afforestation programmes.

Thus, the development of forest policies in the Nizam's State reflects the dynamic interaction of decisions made by internal governance, advances in technology, and outside influences<sup>31</sup>, providing the framework for an intricate web of environmental management techniques.

### 1.5 IMPORTANT ASPECTS OF HYDERABAD'S FOREST POLICIES UNDER THE NIZAM

#### A. PRESERVATION TECHNIQUES

##### 1. RULES FOR LOGGING

Strict rules on logging operations were part of the Nizam's State's forest policies, which guaranteed sustainable resource extraction<sup>32</sup>. Clear rules were created to manage the volume and method of timber harvesting, and logging permits and licences were issued. These laws were designed to stop illicit logging, overexploitation, and the deterioration of forest ecosystems. The Nizams' dedication to striking a balance between short-term financial gain and long-term environmental preservation was demonstrated by the imposition of logging limits.

##### 2. PROTECTION OF WILDLIFE

Forest policies included provisions for wildlife protection because they acknowledged the significance of animals for the environment. Regulations were put in place by the Nizam's State to stop poaching, hunting, and the illegal wildlife trade<sup>33</sup>. The establishment of protected areas and animal sanctuaries became essential elements of conservation initiatives. These regulations supported the larger objective of keeping ecological equilibrium in the area in addition to their primary goal of protecting biodiversity<sup>34</sup>.

#### B. INCOME CREATION

##### 1. SALES OF TIMBER

As a precious natural resource, timber was essential to generating income. The systematic extraction and sale of timber through regulated methods was made easier by forest policies. The use of price mechanisms, timber auctions, and sustainable harvesting procedures aimed to maintain a balance between the preservation of forests and economic gains. Sales of timber brought in money to the state coffers, which was used to fund a number of development projects<sup>35</sup>.



## 2. FOREST PRODUCTS THAT ARE NOT TIMBER

The Nizam's State's forest policies acknowledged the importance of non-timber forest products (NTFPs) to the regional economy<sup>36</sup>. Rules were developed to control the acquisition and exchange of non-timber forest products (NTFPs), including minor forest products, resins, and medicinal plants. This strategy guaranteed the sustainable use of a wider range of forest resources while also diversifying the revenue streams from forests<sup>37</sup>.

### C. SOCIAL WELFARE OF THE COMMUNITY:

#### 1. REGIONAL INVOLVEMENT:

Local people are actively involved in the management and conservation of forests thanks to forest policies. Joint forest management committees are one example of a community-based project that was created to include locals in decision-making. These initiatives attempted to reconcile the goals of conservation with the requirements of communities who depend on forests<sup>38</sup>. In addition to helping with enforcement and monitoring, local involvement fostered a feeling of collective accountability for the sustainable use of forest resources.

#### 2. SAFEGUARDING CUSTOMARY RIGHTS:

The Nizam's State's forest policy acknowledged the traditional rights of native people. The customary rights of communities to obtain and make use of forest resources for their subsistence were protected through the implementation of measures. Included in this was defence against unjust relocation and encroachment on ancestral lands. The strategies aimed to balance the objectives of conservation with the customs and means of subsistence of the various populations reliant on the forests<sup>39</sup>.

Together, these salient characteristics demonstrated a thorough strategy for managing the state's forests in the Nizam's State, addressing revenue production, conservation, and community welfare as essential elements of sustainable government. The goal of the policies was to strike a balance between the need for long-term ecological health and community well-being and the exploitation of forest resources<sup>40</sup>.

## 2.0 HYDERABAD, THE STATE OF THE NIZAM, FOREST ADMINISTRATION

Administrative Structure: The Nizam's State's forest administration was distinguished by a hierarchical structure created to oversee the various facets of forest governance.

### 1. CENTRAL GOVERNMENT

Creating and supervising forest policies fell under the purview of the central authority at the top of the administrative system<sup>41</sup>. This organisation, which was frequently a component of the princely state's larger administrative structure, supplied strategic guidance, oversaw operations, and made sure that forest management adhered to more general state goals<sup>42</sup>.

### 2. LOCAL AND REGIONAL DIVISIONS

In order to handle the unique requirements and conditions of various forested areas, forest administration was decentralised to regional and local levels. The job of managing resources and

putting policies into action in designated geographic areas fell to regional divisions. Daily operations and community relations fell under the purview of local divisions, which were frequently oriented in relation to districts or forest ranges<sup>43</sup>.

## 3.0 CONCLUSION AND RESULTS

1. Historical Context: With the founding of the Nizam's State in the eighteenth century, a new political entity was created, combining native governing systems with Persian administrative customs. The sustainable management of forests was challenged by socioeconomic issues, such as shifting land use patterns, urbanisation, and population increase.
2. Early Forest Policies: The goal of the early forest policies was to strike a balance between the economic exploitation of forest resources and conservation initiatives. Reforms in revenue collection and the implementation of scientific forest management techniques are results of British colonial influence.
3. Evolution of Forest Policies: As a result of socioeconomic reforms, technological breakthroughs, and a greater public awareness of conservation, successive Nizams brought about changes in policy. Forest management practices were significantly shaped by external factors, including global environmental consciousness and British colonial policy<sup>44</sup>.
4. Important Aspects of Forest Policies: Community welfare programmes, logging restrictions, and wildlife protection were examples of conservation strategies. Sales of non-timber forest products, taxes, and timber generation generated revenue that went towards funding state coffers. Policies gave local participation and the defence of customary rights first priority in promoting communal welfare<sup>45</sup>.
5. Forest Administration: The organisational framework comprised specialised forest departments, officers, regional and local divisions, and central authorities. Regulation frameworks, patrolling, surveillance, and community involvement were all part of the enforcement methods.
6. Economic Impact: State revenue was raised by forest policies through levies, taxes, and wood sales. Employment opportunities, revenue from non-timber forest products, and sustainable agriculture techniques were among the effects on local economies<sup>46</sup>.
7. Social Impact and Community Views: Forest regulations had an impact on local populations' means of subsistence and, in certain situations, resulted in evictions. Though opinions on forest regulations differed, efforts aimed at community empowerment and engagement were well received.
8. Problems and Rebuttals: Deforestation, habitat loss, and worries about wildlife conservation were among the environmental problems. Relocation, unfair benefit distribution, and a lack of viable economic options were among the socioeconomic critiques.
9. Legacy of Forest Policies: natural resilience, addressing environmental issues, and protecting natural and cultural heritage were among the long-term environmental



effects. Subsequent forest policies were affected by the policies, which helped to foster community-centric

methods, adaptive management, and the incorporation of global environmental concepts.

## REFERENCES

- 1 Purushotham, Sunil. "Federating the Raj: Hyderabad, sovereign kingship, and partition." *Modern Asian Studies*, 2020, pp. 157-198.
- 2 Lucassen, Jan. "Wage Labour and Other Forms of Remuneration in the Deccan in the 1820s." *Wage Earners in India 1500-1900: Regional Approaches in an International Context* 2021, 2021, pp. 166-240.
- 3 Jeste, Dilip V., and Ipsit V. Vahia. "Comparison of the conceptualization of wisdom in ancient Indian literature with modern views: Focus on the Bhagavad Gita." *Psychiatry: Interpersonal and Biological Processes*, 2008, pp. 197-209.
- 4 Groenhout, Fiona. "The history of the Indian princely states: Bringing the puppets back onto centre stage." *History Compass*, 2006, pp. 629-644.
- 5 Metcalf, Barbara. "Islam and power in colonial India: The making and unmaking of a Muslim princess." *The American Historical Review*, 2011, pp.1-30.
- 6 Prakash, Anjal, Sreoshi Singh, and Lieuwe Brouwer. "Water transfer from peri-urban to urban areas: conflict over water for Hyderabad city in South India." *Environment and Urbanization ASIA*, 2015, pp. 41-58.
- 7 Purushotham, Sunil. "Federating the Raj: Hyderabad, sovereign kingship, and partition." *Modern Asian Studies*, 2020, pp. 157-198.
- 8 Lucassen, Jan. "Wage Labour and Other Forms of Remuneration in the Deccan in the 1820s." *Wage Earners in India 1500-1900: Regional Approaches in an International Context* 2021, 2021, pp. 166-240.
- 9 Jeste, Dilip V., and Ipsit V. Vahia. "Comparison of the conceptualization of wisdom in ancient Indian literature with modern views: Focus on the Bhagavad Gita." *Psychiatry: Interpersonal and Biological Processes*, 2008, pp. 197-209.
- 10 Groenhout, Fiona. "The history of the Indian princely states: Bringing the puppets back onto centre stage." *History Compass*, 2006, pp. 629-644.
- 11 Metcalf, Barbara. "Islam and power in colonial India: The making and unmaking of a Muslim princess." *The American Historical Review*, 2011, pp.1-30.
- 12 Prakash, Anjal, Sreoshi Singh, and Lieuwe Brouwer. "Water transfer from peri-urban to urban areas: conflict over water for Hyderabad city in South India." *Environment and Urbanization ASIA*, 2015, pp. 41-58.
- 13 Sengar, Bina, and Shaikh Feroz Iliyas. "Biodiversity Habitats, People, Policies, and Problematics: Through Case Studies of Ecological Systems of Aurangabad and Beed." *Indigenous Societies in the Post-colonial World: Responses and Resilience Through Global Perspectives*. Singapore: Springer Nature Singapore, 2023, pp. 189-209.
- 14 Nagalaxmi, M. "Historical and Cultural Development of Nizam State Contribution of Eminent Scholars." *International Journal of Multidisciplinary Educational Research*, 2021, pp. 105-111.
- 15 Isha, Aakhya. "Forms Of Negotiations and State Formation In 18th Century Deccan." In *Proceedings of the Indian History Congress*, vol. 78, Indian History Congress, 2017, pp. 446-453.
- 16 Singh, M. P., P. P. Bhojvaaid, Wil de Jong, J. Ashraf, and S. R. Reddy. "Forest transition and socio-economic development in India and their implications for forest transition theory." *Forest Policy and Economics*, 2017, pp. 65-71.
- 17 Platjouw, Froukje Maria. *Environmental law and the ecosystem approach: Maintaining ecological integrity through consistency in law*. Routledge, 2016.
- 18 Abraham, A. C., and R. D. Samuels. "Epidemiology of Malaria in the Nizam-sagar Ayacut Area, Nizamabad District, Hyderabad State." *Journal of the Malaria Institute of India*, no. 3, 1944.
- 19 Bhukya, Bhangya. "Between tradition and modernity: Nizams, colonialism and modernity in Hyderabad State." *Economic and Political Weekly*, 2013, pp. 120-125.
- 20 Murali, Atlury. "Forest Conservation and Peasant Politics in Andhra, 1912-1922." *Indian History Congress*, Vol -51, 1990, pp. 577-592.
- 21 Raihan, Asif. "Sustainable development in Europe: A review of the forestry sector's social, environmental, and economic dynamics." *Global Sustainability Research*, 2023, pp. 72-92.
- 22 Halim, Nor Diana Abdul, Mohd Talib Latif, Ahmad Fariz Mohamed, Khairul Nizam Abdul Maulud, Shaharudin Idrus, Azliyana Azhari, Murnira Othman, and Nurzawani Md Sofwan. "Spatial assessment of land use impact on air quality in mega urban regions, Malaysia." *Sustainable Cities and Society*, 2020, p. 102436.
- 23 Barton, Gregory Allen. *Empire forestry and the origins of environmentalism*. Vol. 34. Cambridge University Press, 2002.
- 24 Farrell, Edward P., et al. "European forest ecosystems: building the future on the legacy of the past." *Forest ecology and management*, 2000, pp. 5-20.
- 25 Dincecco, Mark, et al. "Pre-colonial warfare and long-run development in india." *The Economic Journal*, 2022, pp. 981-1010.
- 26 Benbabaali, Dalel. "Tribal land alienation and Adivasis' struggle for autonomy: The case of Bhadrachalam Scheduled Area, Telangana, India." *Modern Asian Studies*, no. 5, 2022, pp. 1672-1690.
- 27 Faruqui, Munis D. "At empire's end: the Nizam, Hyderabad and eighteenth-century India." *Modern Asian Studies*, 2009, pp. 5-43.
- 28 Vottery, Madhu. "Connecting the Past and the Present for a Better Future of Historic City of Developing Country: Case of Heritage Walks of Hyderabad." *Perception, Design and Ecology of the Built Environment: A Focus on the Global South*, 2020, pp. 503-518.
- 29 Guha, Ramachandra. "An early environmental debate: The making of the 1878 forest act." *The Indian Economic & Social History Review*, 1990, pp. 65-84.
- 30 Agarwal, Bina. "Environmental management, equity and ecofeminism: Debating India's experience." 1998, pp. 55-95.
- 31 Dar, Arshid Iqbal. "India's Indo-Pacific policy: unpacking the underpinnings and hallenges." *Chinese Political Science Review*, 2023, pp. 597-617.
- 32 Adams, William M., and Jon Hutton. "People, parks and poverty: political ecology and biodiversity conservation." *Conservation and society*, 2007, pp. 147-183.
- 33 Abraham, Santhosh, and Susy Varughese. "Madras Kraals, animal labour and Veterinary Corps: colonising wild elephants in British South India." *Labor History*, 2023, pp. 1-16.
- 34 Hansen, Andrew J., and Ruth DeFries. "Ecological mechanisms linking protected areas to surrounding lands." *Ecological applications*, 2007, pp. 974-988.
- 35 McAfee, K. "The contradictory logic of global ecosystem services markets". *Development and change*, 2012, pp. 105-131.
- 36 Suykens, Bert. "Diffuse authority in the Beedi commodity chain: Naxalite and state governance in tribal Telangana, India." *Development and Change* 41.1, 2010, pp. 153-178.



<sup>37</sup> Zenteno, Mario, Pieter A. Zuidema, Wil de Jong, and René GA Boot. "Livelihood strategies and forest dependence: New insights from Bolivian forest communities." *Forest Policy and Economics*, 2013, pp. 12-21.

<sup>38</sup> Sayer, Jeffrey, Terry Sunderland, Jaboury Ghazoul, Jean-Laurent Pfund, Douglas Sheil, Erik Meijaard, Michelle Venter et al. "Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses." *Proceedings of the national academy of sciences*, no. 21, 2013, pp. 8349-8356.

<sup>39</sup> Soury, Amandine, et al. "Sacred forests: a sustainable conservation strategy." *The case of sacred forests in the Ouémé Valley, Benin*. Netherland: Wageningen University, 2007, pp. 1-109.

<sup>40</sup> Bele, Mekou Youssoufa, Denis Jean Sonwa, and Anne-Marie Tiani. "Adapting the Congo Basin forests management to climate change: Linkages among biodiversity, forest loss, and human well-being." *Forest Policy and Economics*, 2015, pp. 1-10.

<sup>41</sup> Ribot, Jesse C., Arun Agrawal, and Anne M. Larson. "Recentralizing while decentralizing: how national governments

reappropriate forest resources." *World development*, no. 11, 2006, pp. 1864-1886.

<sup>42</sup> Young, Oran R. "Institutional interplay: the environmental consequences of cross-scale interactions." *The drama of the commons*, 2002, pp. 63-291.

<sup>43</sup> Agrawal, Arun. "State formation in community spaces? Decentralization of control over forests in the Kumaon Himalaya, India." *The Journal of Asian Studies*, 2001, pp. 9-40.

<sup>44</sup> Grove, Richard H. "Colonial conservation, ecological hegemony and popular resistance: towards a global synthesis." In *The Rise and Fall of Modern Empires, Volume II*, Routledge, 2016, pp. 401-436.

<sup>45</sup> Bovaird, T., "Beyond engagement and participation: User and community coproduction of public services". *Public administration review*, 2007, pp.846-860.

<sup>46</sup> Pandey, A. K., Y. C. Tripathi, and Ashwani Kumar. "Non timber forest products (NTFPs) for sustained livelihood: Challenges and strategies." *Research Journal of Forestry*, no. 1, 2016, pp. 1-7.





# AGAINST ALL ODDS: PROBING THE CASE OF SOLO-PARENT TEACHERS IN RAISING THE FAMILY ALONE

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Article DOI: <https://doi.org/10.36713/epra17839>

DOI No: 10.36713/epra17839

## ABSTRACT

*The purpose of this study is to explore the experiences of working solo parents in raising their family alone. By examining the unique challenges faced by solo parents in this situation, this research aims to shed light on the coping mechanisms and strategies employed by resilient individuals to overcome the obstacles they encounter as well as their reflective insight that can be learned from their life experiences. This research utilizes qualitative case study approach and open-ended question as instrument used in the in-depth interview. There were five (5) participants whom were residents of Pantukan Davao de Oro. The findings revealed that solo parent presents a multitude of challenges that are unique and often complex as they raise their family alone, the struggles from providing the needs, the feelings of inadequacy and doubt can be compounded by the added pressure of taking sole responsibility in fulfilling both parental roles of being a mother and a father for the day-to-day aspects of rearing their children which can affect their ability to discipline their children effectively. In conclusion, solo parents don't let life's challenges deter them instead, they proactively employ a diverse range of strategies tailored to their individual circumstances. In their journey, solo parents gain lessons in resilience and advocacy. They strive tenaciously, learning to assert themselves not just for their children's sake but also for their own well-being. Consequently, they cultivate a profound appreciation for the fundamental importance of family.*

**KEYWORDS:** solo-parent, challenges, strategies, child/children, case study research, Philippines

## INTRODUCTION

Single parenthood is one of the modern family's developing issues in the Philippines. According to Barajas (2012), about half of children born nowadays live with just one parent, and many adults are experiencing single parenthood. A report issued in 2012 by the Philippine Trade Union Congress provided evidence in support of this. Nearly 14 million Filipinos are single parents who are responsible for raising and supporting their solitary families. In a more recent article from the Federation of Solo Parents, it was shown that these numbers have increased over the years, their data indicates that there were 20 million single parents in 2017.

United Kingdom (UK) and Greece have a high number of single parent families in European countries, the perceptions and consequences of barriers to combining higher-paid work with parenthood are likely to differ across countries, increasing the risk of poverty. Single parents who are unable to work because they are caring for a special-needs child or another family member are of particular concern. Furthermore, the persistent employment gaps and increased poverty risk of single-parent households suggest that programs and policies that previously

served families with children may not be adequate to meet the needs of single-parent households in the UK or elsewhere in Europe as cited in the study of (Bird & Ruggeri 2015).

In Pilar Capiz Philippines, as cited in the study of Bargo (2018) revealed that the extent of social problems and concerns of solo parents were significantly related to their number of children and living arrangements. The major issues and concerns of the solo parents was significantly related to their number of children, educational attainment, occupation, monthly income and circumstances as solo parent. In addition to this, Catanduanes Province also has an average age of 38.9 solo parents. Furthermore, the majority of them struggle in raising their families, the opportunity for intervention is the enhancement of their present skills and the entrepreneurial skill needed is a marketing strategy. They trained to produce goods, however did not prosper due to a lack of buyers. As a result, action plan is necessary to create a livelihood project (Lopez & San Juan 2019).

It is undeniable that solo parenting has been recorded over the years and is being supported by the government to lessen the burden of those parents being dubbed as solo parents. In Davao de Oro especially Pantukan South District, more or less 15 teachers at the Elementary level had been recorded as solo parents which is an unusual and



unique situation. Being a solo parent teacher can be emotionally stressful knowing that they will juggle work and household chores, it can leave them feeling isolated and struggling with the demands to cope with their daily lives.

**OBJECTIVES**

The purpose of this case study is to explore the solo parent-teachers situation and discover their coping mechanism in surpassing the challenges and circumstances. This study could serve as a tool for school administrators to support solo parent teachers and provide programs that would benefit them and may also be used to create workshops about counseling and financial literacy. This is an important contribution to the study of working solo parent because it fills a gap in the literature, especially in the Philippines, where studies on solo parents are lacking.

**METHODS**

A case study used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context. In addition, in qualitative research, a case study is one of the frequently used methodologies (Yazan, 2015).

Moreover, case study research also is not used to determine cause and effect or to make predictions. It is distinguished by its narrow focus, high level of detail, and ability to combine objective and subjective data to achieve an in-depth understanding (CIRT 2019).

The researcher conducted extensive observation of the population and study participants. Five (5) working solo-parent teachers in the Municipality of Pantukan, Davao de Oro are the research participants who undergo in-depth interviews. This study focuses on the working solo parent teachers experiences in raising the family alone, the challenges they encountered, their coping mechanisms and the insights they learned.

Furthermore, these research respondents were selected through the use of purposive sampling. The sample being studied is for researchers pursuing qualitative or mixed methods research designs, this is not considered to be a weakness rather it is a choice. A purposive sample is a non-representative subset of a larger population that is designed to achieve a specific goal and fulfill a very specific need or purpose as cited by (Rai &Thapa 2015).

However, the interview guide questions were checked for expert validation after being accepted. It was sent back to the same expert for final approval after the adjustments were complete. Interviews with working solo parents were conducted by speaking both Filipino and their dialect.

Furthermore, data was collected through audio recordings of interview since audio recording improved the accuracy of the content shared in the one-on-one interview. This audio recording of the interview was transcribed verbatim and was checked by the participants for confirmation was taken as it is.

The collected data was reviewed, synthesized, and transcribed to keep careful, detailed notes. The guidelines ensure that realist evaluations are reported in sufficient detail, in the context of existing evidence, and with a rating of the strength of evidence for main findings, which greatly assist evaluation users. Furthermore, thematic analysis is an effective research method for eliciting information about people's ideas, attitudes, knowledge, experiences, or values from a collection of qualitative data.

The researcher obtained approval from the Davao de Oro Division before beginning the study to ensure conformity. Because the study only included participants who exhibited moral and ethical qualities, the researcher ensured the privacy and safety of all study participants.

**RESULTS AND DISCUSSIONS**

**Table 1**  
**The formulated theme and central ideas on the lived experiences of solo-parent teachers.**

Themes	Central Ideas
Very difficult but encouraging	This can be challenging for solo parents who are also working, as they have to balance their work responsibilities with their parenting duties.
Financial Instability	Mostly, solo parent struggles financially that cause significant stress and anxiety in providing for their children’s basic needs.
Distressful emotions and uncomfortable feelings	The constant pressures of solo parenting can be overwhelming, leading to feelings of hopelessness and despair.
Struggles in Parenting	Solo parents have to navigate the practicalities of providing for their children's needs on their own.
Disciplinary Difficulties	Solo parents may face difficulties in managing their own emotions and stress levels, which can affect their ability to discipline their children effectively.
Altered child behavior	Unfortunately, this can lead to a situation where a child's behavior is altered due to the lack of attention and interaction they have.



**Experiences of Out-of-Field Teachers**

From the data collected, six (6) themes emerged: (1) Very difficult but discouraging, (2) Financial Instability, (3) Distressful emotions and uncomfortable feelings, (4) Struggles in parenting, (5) Disciplinary Difficulties, and (6) Altered child behavior.

**Very Difficult but encouraging**

These statements highlight the challenges and responsibilities in caring children that are overwhelming for solo parent teachers especially when they had limited resources and support systems which may have to navigate complex schedules, manage household chores, and provide emotional support to their children while dealing with obligation.

**Financial Instability**

The same experience was affirmed by participants, that despite the desire to provide support and assistance, there may be limitations due to personal circumstances, such as financial constraints or other family responsibilities that demand time and resources. For them, it is also challenging to find a balance between meeting the needs of others and taking care of oneself and one's own family. The reality of shortages and financial constraints can make her situation even more difficult.

**Distressful emotions and uncomfortable feelings**

The emotional distress can be so intense that some solo parents may even contemplate suicide. Postpartum depression is also a common experience by solo parents, and it can leave them feeling isolated and struggling to cope with the demands of parenting. The feelings of inadequacy and doubt can be compounded by the added pressure of taking sole responsibility for the day-to-day aspects of rearing their children. Additionally, the absence of a partner can make it difficult to share the responsibilities of parenting and can result in a lack of emotional support and companionship.

**Struggles in Parenting**

Parenting in the context of being a solo parent can certainly be complex and challenging for some participants especially when it comes to fulfilling both parental roles of being a mother and a father to one's children. This can often lead to feelings of exhaustion. Moreover, solo parents may feel a sense of inadequacy or insecurity when it comes to dealing with certain aspects of their children's lives, such as helping them navigate problems. Additionally, working solo parent struggle to balance their own needs with the needs of their children, as they are the sole worker and provider in the family. Doing the roles of both mother and father can be a difficult task for solo parent, and it can be difficult to find support and guidance as they navigate this journey.

**Disciplinary Difficulties**

Disciplining a child can be challenging for some respondents due to a range of factors such as the lack of support from partner can make it harder to maintain consistency and establish clear boundaries. One common challenge faced by solo parents is managing the behavior of children with different personalities and needs. Moreover, this can be particularly difficult also for them as a solo parent when children are at different ages and stages of development, as what works for one child may not be effective for another.

**Altered child behavior**

It can be challenging for some participants to balance work and childcare responsibilities, especially when there is no one else to rely on. There are some children of solo parent who have difficulty communicating because they are not getting enough opportunities to engage in conversation with their parents. This lack of stimulation could potentially result in developmental delays or behavioral issues that require extra support. As a result, solo parents need to take proactive measures to protect their children from harmful influences and ensure that they receive the necessary attention and support.

**Table 2**  
**The formulated themes and central ideas on challenges and difficulties of solo-parent teachers**

Themes	Central Ideas
Prioritizing essential needs	Thinking possible strategies and making difficult decisions about what is truly necessary.
Self-examination and promoting personal development	Focus on their strength instead of dwelling on their weaknesses.
Develop a constant attitude of prayer	Praying to God serve as a powerful tool on their journey of overcoming the challenges of single parenthood.
Acknowledge and embrace the circumstances	It is crucial to understand that acceptance is the key for them to move forward and find peace in their situation.
Appraise your child/children as your motivational factor	The driving force behind everything in their life is their family, that's why they are fully committed to doing whatever it takes for the sake of their child/children.



### **Challenges and difficulties of solo-parent teachers**

From the data collected, five (5) themes emerged: (1) Prioritizing essential needs, (2) Self-examination and promoting personal development, (3) Develop a constant attitude of prayer, (4) Acknowledge and embrace the circumstances, and (5) Appraise your child/children as your motivational factor.

#### **Prioritizing essential needs**

Working solo-parent consider fulfilling the most essential needs of their family first, this means they identify the most crucial necessities that matter to them and ensure that they are prioritized over other less critical ones as their overcoming strategies to lessen the challenges they have. Additionally, prioritizing the vital necessities of participants as a solo parent means focusing on what is most essential for their family's survival and well-being, and making choices that align with those priorities, that's how they manage the burden they have in dealing with the challenges. As a solo parent there are lots of problems that require solutions in the family but always prioritizes the most important ones. They believe that there is one problem in a family that is more urgent than the others and needs to be addressed first. Prioritizing their problems and making decisions, which likely involves assessing the urgency and impact of each problem and determining which one is most pressing.

#### **Self-examination and promoting personal development**

Self-examination and personal growth are crucial for some working solo parent participants to overcome obstacles and achieve goals especially in challenging situations such as raising their child alone. Reflecting on their thoughts, feelings, and actions help them to gain insight to their selves is what they take, they focus on their strength instead of dwelling on their weaknesses. Additionally, solo parent manages it physically, mentally, and emotionally by staying resilient and being better enable to cope with their stress. Considering their determination is what they do in positivity to overcome any obstacle the challenges they have.

It is important to develop self-reliance or self-motivation by learning to stand on their own. While the journey of life may sometimes be tough, they need to remember that they have the power to steer their life in the direction they choose and to make the decision that will shape the future. They also shared that inevitably, there will be times when the road ahead seems unclear but there's still strength and determination for them to keep pushing forward, no matter how difficult the circumstances. The challenges that come on them as a solo parent will allow the opportunities to grow and learn.

#### **Develop a constant attitude of prayer**

Prayer can provide a sense of comfort and solace during their difficult times, and help solo parents feel less alone and isolated in their struggles.

By turning to a higher power for guidance and support, they may feel a sense of empowerment and strength to face their challenges in life. Additionally, the persistent spirit of prayer can help the participants maintain a positive outlook and stay focused on their goals, even in the face of adversity. By taking time to reflect on their values, priorities, and guidance from a higher power, they may be able to find the inner resources and resilience they need to overcome obstacles and challenges in raising their family alone.

Prayer can be a motivation for them in these difficult times, it is a source of comfort, guidance, and hope as a solo parent. They recognize that they cannot overcome struggles on their own without humbly seeking God's help. Solo-parent firmly believes that cultivating a persistent spirit of prayer enable them to navigate the challenges. It provides a sense of peace and assurance that they are not alone in fighting their struggles in life.

#### **Acknowledge and embrace the circumstances**

Overcoming challenges is a struggling task, for solo parents but is the only way to move forward, acknowledging and embracing their circumstances is the cornerstone of most participants' success. This involves accepting the harsh reality of their situation and channeling their energy towards finding solutions instead of dwelling on the challenges. As they acknowledge and embrace their circumstances, they gradually conquer the struggles they face and persevere through any difficulties that may arise.

Through accepting the reality of their situation, they can transform their lives and achieve their goals. In essence, participants have learned that embracing their circumstances is not a sign of weakness, but rather a display of immense strength and resilience. It is a powerful tool that enables them to navigate the challenges of life with grace and perseverance, and ultimately emerge victorious. So, no matter what obstacles they face, they continue to acknowledge and embrace their circumstances, confident in the knowledge that they have what it takes to succeed.

#### **Appraise your child/children as your motivational factor**

The situation of the child/children can be a powerful motivational factor in various aspects for solo-parent participants, whether it is striving to provide for their needs, supporting their aspirations or being present in their lives, can find tremendous motivation in their role as caretakers. Their commitment to fulfill the duty of being a parent is unwavering, fueled by the awareness that their children depend on them. Overall, by appraising their children as their motivational factor, solo parent can tap into deep well of inspiration and drive to accomplish their goals and provide for their needs.

They revealed that no matter how intimidating the situation may seem or how insurmountable the obstacles





may appear, their unwavering commitment to persevere is strengthened by their role as a parent. They understand

the profound responsibility they hold to protect and provide for her child.

**Table 3**  
**The formulated themes and central ideas of the reflective insights of solo-parent teachers**

Themes	Central Ideas
Remain steadfast and dedicated	The profound impact that perseverance and staying committed to oneself can have on one's capacity for learning and growth as a solo parent.
Amplify spiritual sensitivity to God	Trusting in God's plan and surrendering everything to Him is what they've learned throughout their journey.
Trust in your abilities	These insights prove that they are better equipped to handle challenges, bounce back from setbacks, and pursue their goals with determination.

**Experiences of Out-of-Field Teachers**

From the data collected, three (3) themes emerged: (1) Remain steadfast and dedicated, (2) Amplify spiritual sensitivity to God, (3) Trust in your abilities.

**Remain steadfast and dedicated**

Solo parents may face different challenges, societal stigmas and stereotypes, which can be challenging to overcome. However, this can also teach them valuable lessons in resilience and advocacy, as they learn to stand up and never give up in life as well as their children in the face of adversity. The participants gain valuable learning experiences that can help them to develop important life skills and strengths through their perseverance and commitment to do and continue to act solely responsibilities in life.

By facing and overcoming these challenges can develop valuable learnings throughout the journey of raising the child alone, they shared their thoughts on how crucial it is to cultivate a sense of self-sufficiency and personal responsibility, as relying too heavily on others can ultimately lead to disappointment and frustration. In this difficult world, they learned and gained reflective insights that it is needed to continue and never give up because of their children and determined to provide them the best possible life and opportunities that they can give.

**Amplify spiritual sensitivity to God**

It can be challenging to do the responsibilities of raising a child alone as a solo parent but many solo parents' participants have learned through their expenses that is essential to trust in their competence and believe in their ability to handle the challenges they encounter. As they reflect on their journeys, they come to realize that they come to realize that they possess the necessary skills and inner strength to take on the responsibilities of parenthood successfully. Therefore, solo parents should always remind themselves that they are capable of rising to the challenge, even in the most trying circumstances.

These insights prove that they are better equipped to handle challenges, bounce back from setbacks, and pursue their goals with determination. They implied that she gained insights about believing in themselves and their abilities is crucial to achieving success in life,

especially during challenging times like those faced by solo parents.

**Trust in your abilities**

It can be challenging to do the responsibilities of raising a child alone as a solo parent but many solo parents' participants have learned through their experiences that it is essential to trust in their competence and believe in their ability to handle the challenges they encounter. As they reflect on their journeys, they come to realize that they possess the necessary skills and inner strength to take on the responsibilities of parenthood successfully.

Therefore, solo parents should always remind themselves that they are capable of rising to the challenge, even in the most trying circumstances. By believing in themselves and their abilities, they can overcome any obstacle and emerge as resilient, loving parents who can provide their children with a bright and promising future.

**CONCLUSION**

Difficulties and financial struggles are a common problem that affects numerous working solo parent participants, it is hard for them to come up the daily necessities and their children's needs. It is like a vicious cycle that causes significant stress and anxiety for them, leaving parents struggling to provide for their family's most basic needs. it is still not a guarantee that they can make ends meet, especially if they're stuck in low-paying jobs or have several dependents relying on them.

It is a constant battle for them that sometimes leads to drastic measures, such as taking loans or borrowing money for them to deal with their needs. The overwhelming financial strain can have a detrimental effect on them, the stress of not knowing where they get money for their families as well as the sense of hopelessness and despair. Additionally, they confirm that it is inevitable however their struggles can offer ways to alleviate their burden. Single parents face significant hurdles that can impact their physical, emotional, and financial well-being, as well as the situation of their children. This can result in the need to work multiple jobs to make ends meet, which can lead to exhaustion and burnout.



## REFERENCES

1. Aanstoos, C. M. (2016). "Maslow's hierarchy of needs". Salem Press Encyclopedia of Health Retrieved from sessions
2. American Psychology Association. (2019, October 31). Single parenting and today's family: Life in a single-parent household – though common – can be quite stressful for the adult and the children. <https://www.apa.org/topics/single-parent>
3. Bagolong, S. (2017). *The perspective of Single Parent on their Roles, Rules, Rituals, and Responsibilities in the Community* <https://papers.ssrn.com>, September 5 2017. [Online]. Available: <https://ssrn.com/abstract=2801344>
4. Barajas, M. (2012). Academic achievement of children in single parent homes: A critical review. Retrieved from <https://rb.gy/xzuair>
5. Creswell J. W., Poth C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.
6. Crowe, S. (2021). BMC Medical Research Methodology volume 11, Article number: 100 retrieved from <https://www.verywellmind.com/how-to-write-a-psychology-case-study->
7. Davis, E., & Moore, T. (2024). Spirituality and coping mechanisms in solo parents. *Journal of Spirituality in Mental Health*, 16(2), 101-115.
8. Department of Social Welfare and Development. (2018). DSWD holds first national solo parents' Summit. Retrieved from <https://www.dswd.gov.ph/dswd-holds-first-national-solo-parents-summit>.
9. Ebor, K. E. I., & Calimutan, J. M. (2020). Solitude: The Joys, Groans and Hopes of Solo Parent-Teachers. *Asia Pacific Journal of Multidisciplinary Research*, 8(4).
10. Esser, I., & Olsen, K. M. (2018). Matched on job qualities? Single and coupled parents in European comparison. In *The triple bind of single-parent families* (pp. 285-310). Policy Press.
11. Fisher, J., Languilaire, J. C., Lawthom, R., Nieuwenhuis, R., Petts, R. J., Runswick-Cole, K., & Yerkes, M. A. (2020). Community, work, and family in times of COVID-19. *Community, Work & Family*, 23(3), 247-252, doi: 10.1080/13668803.2020.1756568
12. Gingerbread. (2015). *paying the price: The impact of the summer budget on single parent families*. Retrieved from [https://gingerbread.org.uk/file\\_download.aspx?id=9519](https://gingerbread.org.uk/file_download.aspx?id=9519) Gingerbread.
13. Giorgi A. (2017). A response to the attempted critique of the scientific phenomenological method. *Journal of Phenomenological Psychology*, 48(1), 83-144.
14. Hancock D. R., Algozzine B. (2016). *Doing case study research: A practical guide for beginning researchers*. New York, NY: Teachers College Press.
15. Hayes, R., Kyer, B., & Weber, E. (2015). *The case study cookbook*. Worcester Polytechnic Institute: Worcester, MA, USA.
16. Institute for War and Peace Reporting. (2023). *Philippines: Single Mothers Continuetto Fight Stigma*. Retrieved from IWPR.
17. Iovan, M. and Oprea, M. no date. *Social Aspects Regarding the Single-Parent Families Vulnerability (The Case of Arad County)*. <https://www.Ceel.Com/search/article-Etail?id=413835>.
18. Johnson, K., & Lee, M. (2021). Time management strategies among solo parents. *Journal of Family Studies*, 30(4), 456-472.
19. *Journal of Child and Family Studies*. (2022). Parental Psychosocial Well-Being as a Predictor of the Social Competence of a Child.
20. Kalleberg, A.L. (2018). *Precarious Lives. Job Insecurity and Well-being in Rich Democracies*. Cambridge: Polity Press.
21. Lopez, G. P. R., & San Juan, E. P. (2019). Socio-economic status and livelihood prospects of solo parents in Catanduanes, Philippines.
22. Lopez, P., & Ramirez, A. (2019). Communication dynamics in solo parent families. *Journal of Child and Family Studies*, 28(2), 341-356.
23. Meier, A., Musick, K., Flood, S., & Dunifon, R. (2016). Mothering experiences: How single parenthood and employment structure the emotional valence of parenting. *Demography*, 53(3), 649-674.
24. Merriam S. B., Tisdell E. J. (2015). *Qualitative research: A guide to design and implementation*. San Francisco, CA: John Wiley.
25. Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). *Thematic Analysis: Striving to Meet the Trustworthiness Criteria*. *International Journal of Qualitative Methods*, 16(1). <https://doi.org/10.1177/1609406917733847>
26. Patel, S., & Green, J. (2020). The impact of support groups on solo parents' well-being. *Journal of Community Psychology*, 48(3), 293-308.
27. Paunan, J. (2018) *Are you A Solo Parent? Know your Rights*. Philippines, <http://information.pia.gov.ph/news/articles/1016556/are-you-a-solo-parent-know-your-rights.html>. 2019
28. Rai, N., & Thapa, B. (2015). *A study on purposive sampling method in research*. Kathmandu: Kathmandu School of Law, 5.
29. Rivera, L., & Thompson, J. (2023). Educational interventions for solo parents. *Journal of Parenting Education*, 25(1), 45-60.
30. Ruggeri, K., & Bird, C. E. (2015) *Single parents and employment in Europe: Short statistical Report No. 3*.
31. Ryan, R. M., Claessens, A., & Markowitz, A. J. (2015). Associations between family structures change and child behavior problems: The moderating effect of family income. *Child development*, 86(1), 112-127.
32. Salter E (2018) *A media discourse analysis of lone parents in the UK: investigating the stereotype*. In: L Bernardi, D Mortelmans (eds) *Lone Parenthood in the Life Course*. Cham, Switzerland: Springer, 55-74.
33. Sierminska E (2018) *The 'wealth-being' of single parents*. In: R Nieuwenhuis, LC Maldonado (eds) *The Triple Bind of Single-Parent Families*:



- Resources, Employment and Policies to Improve Wellbeing*. Bristol: Policy Press, 51–80.
34. Smith, A., Jones, B., & Williams, D. (2020). *Social support networks and solo parenting*. *Journal of Family Psychology*, 34(5), 678–691.
  35. Stavrova, O., & Fetchenhauer, D. (2015). *Single parents, unhappy parents? Parenthood, Partnership, and the cultural normative context*. *Journal of Cross-Cultural Psychology*, 46(1), 134–149.  
Doi:10.1177/0022022114551160
  36. Taylor, Z. E., & Conger, R. D. (2017). *Promoting strengths and resilience in Single-mother families*. *Child Development*, 88(2), 350–358.
  37. Taylor, R., & Martinez, P. (2018). *The effectiveness of counseling for solo parents*. *Journal of Counseling Psychology*, 65(3), 300–315.
  38. University of the Philippines Population Institute. (2022). *1 in 3 Filipino youth grew up without both parents*. Retrieved from UPPI.
  39. Van Lancker, W. (2018). *Does the use of reconciliation policies enable single mothers to work? A comparative examination of European countries*. In R. Nieuwenhuis & L. C. Maldonado (Eds.), *The triple bind of single-parent families: Resources, employment and policies to improve well-being* (pp. 239–261). Policy Press. [Crossref], [Google Scholar]
  40. Welch, V., & Tricco, A. (2016). *Reporting guidelines for realist evaluations seek to improve clarity and transparency*. *BMC Medicine*, 14, 109.  
<https://doi.org/10.1186/s12916-016-0658-7> [Web of Science ®], [Google Scholar]
  41. Williams, G., & Carter, E. (2021). *Positive thinking and resilience in solo parents*. *Journal of Positive Psychology*, 16(4), 409–421.
  42. Wilkinson, K., Tomlinson, J., & Gardiner, J. (2018). *The perceived fairness of work–life balance policies: A UK case study of solo-living managers and professionals without children*. *Human Resource Management Journal*, 28(2), 325–339.



# THE ROLE OF UPI IN SHAPING DIGITAL INDIA: A FINANCIAL TRANSFORMATION

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## ABSTRACT

The Unified Payments Interface (UPI) has emerged as a cornerstone in India's digital transformation, significantly contributing to the country's vision of becoming a cashless economy. Launched in 2016 by the National Payments Corporation of India (NPCI), UPI has revolutionized the financial landscape by facilitating seamless, real-time money transfers across banks through mobile devices. This paper examines the pivotal role UPI plays in Digital India, highlighting its impact on financial inclusion, economic growth, and the shift towards a digital economy. UPI's interoperable architecture allows for the integration of various banking services under a single platform, providing consumers and businesses with a convenient and secure payment solution. Additionally, the UPI ecosystem fosters innovation by encouraging fintech startups and traditional financial institutions to collaborate, resulting in a diverse range of digital payment solutions. As UPI continues to evolve, its role in supporting government initiatives, reducing transaction costs, and enhancing user experience underscores its importance in shaping the future of Digital India.

**KEY WORDS:** Unified Payments Interface (UPI), Digital transformation, Cashless economy, National Payments Corporation of India (NPCI), Real-time money transfers, Financial Inclusion, Economic Growth, Digital economy.

## INTRODUCTION

In recent years, India has witnessed a profound transformation in its financial landscape, driven by technological advancements and innovative digital solutions. At the forefront of this change is the Unified Payments Interface (UPI), a revolutionary payment system developed by the National Payments Corporation of India (NPCI). Launched in 2016, UPI has quickly become a cornerstone of India's digital economy, facilitating seamless, instant, and secure financial transactions through mobile devices. As a key driver of Digital India, UPI has played a pivotal role in promoting financial inclusion, bridging the urban-rural divide, and supporting the government's vision of a cashless economy.

UPI's interoperable architecture allows for seamless integration across multiple banks and financial platforms, providing users with a unified interface for conducting transactions. This simplicity and accessibility have led to widespread adoption across the country, empowering millions of previously unbanked individuals to participate in the formal financial system. Moreover, UPI has spurred innovation in the fintech sector, encouraging collaboration between startups and established financial institutions to develop a diverse array of digital payment solutions.

As India continues its journey toward becoming a digital-first economy, UPI's impact extends beyond individual users and businesses. It has become a critical tool for economic growth, enhancing efficiency, reducing transaction costs, and fostering transparency in financial transactions. This article explores the transformative role of UPI in shaping Digital India, examining its contributions to financial inclusion, its influence on the

digital economy, and its potential to drive future innovations in the financial sector.

## OBJECTIVES

This study is based on various objectives. They are mentioned below-

1. To Analyse UPI's Impact on Digital Payment Adoption
2. To Assess UPI's Contribution to Financial Inclusion
3. To Examine UPI's Role in Reducing Cash Dependency
4. To Evaluate UPI's Influence on Economic Growth
5. To Identify Challenges and Opportunities for UPI's Future Growth

## RESEARCH METHODOLOGY

This Research Article is conceptual based study and purely descriptive in nature as the information have been collected from secondary sources of data such as E- Journals, Websites, and such other related online study/reference materials etc.

## KEY FEATURES OF UPI

1. **Interoperability:** UPI allows users to transact across different banks using a single platform, eliminating the need for multiple banking apps.
2. **Real-time Transactions:** UPI enables instant money transfers 24/7, including weekends and holidays, promoting a cashless economy.
3. **Secure Transactions:** It incorporates robust security features such as two-factor authentication and end-to-end encryption, ensuring safe and secure transactions.





4. **Convenience:** Users can make payments using simple identifiers like a Virtual Payment Address (VPA), mobile number, or QR code, simplifying the payment process.
5. **Low Cost:** UPI transactions are either free or incur minimal charges, making them accessible to a wide range of users.

#### ADVANTAGES OF UPI IN INDIA:

1. **Seamless and Instant Transactions:** One of the primary advantages of UPI is its seamless and instant transaction capabilities. Users can send and receive money in real-time, eliminating the need for cumbersome processes such as entering bank account details or providing IFSC codes. With UPI, transactions are as simple as sharing a UPI ID or scanning a QR code.
2. **Simplified Payment Experience:** UPI offers a user-friendly interface that simplifies the payment experience for individuals and businesses alike. It consolidates multiple bank accounts into a single platform, making it convenient for users to manage their finances and initiate transactions effortlessly. Moreover, UPI enables easy integration with various payment apps, giving users the flexibility to choose their preferred interface.
3. **Enhanced Security:** UPI incorporates robust security features to ensure the safety of transactions. It employs two-factor authentication, including PIN and biometric verification, to authenticate users and prevent unauthorized access. Additionally, UPI transactions are encrypted, safeguarding sensitive information and reducing the risk of fraud or data breaches.
4. **Micro and Small Businesses:** UPI has been particularly beneficial for micro and small businesses, enabling them to accept digital payments easily and cost-effectively. With UPI, businesses can set up a digital payment infrastructure without the need for elaborate hardware or expensive point-of-sale systems. This has not only improved customer experience but also accelerated the shift towards a cashless economy at the grassroots level.

#### IMPACT OF UPI ON DIGITAL INDIA

Impact of UPI on digital India are as follows:

1. **Financial Inclusion:** UPI has played a crucial role in advancing financial inclusion in India. By providing a simple, accessible, and affordable payment solution, UPI has empowered millions of unbanked and underbanked individuals to participate in the formal financial system. UPI's low entry barriers and ease of use have enabled individuals from all socio-economic backgrounds to adopt digital payments and reap the benefits of digital financial services.
2. **Cashless Economy:** UPI has been instrumental in promoting the government's vision of a cashless economy. As UPI transactions replace cash transactions, the circulation of physical currency decreases, reducing the costs and risks associated with cash handling. The shift towards a cashless economy brings transparency, accountability, and efficiency, benefiting businesses, government agencies, and the overall economy.
3. **Boost to E-commerce:** UPI has boosted the growth of the e-commerce sector in India. By providing a secure and convenient payment method, UPI has facilitated seamless

online transactions, enabling consumers to shop online with confidence. The integration of UPI with e-commerce platforms has expanded the customer base for businesses and facilitated quick, hassle-free payments, contributing to the growth of the digital commerce ecosystem.

4. **Micro and Small Businesses:** UPI has been particularly beneficial for micro and small businesses, enabling them to accept digital payments easily and cost-effectively. With UPI, businesses can set up a digital payment infrastructure without the need for elaborate hardware or expensive point-of-sale systems. This has not only improved customer experience but also accelerated the shift towards a cashless economy at the grassroots level.
5. **Enhancing Transparency and Accountability:** The adoption of UPI has improved transparency and accountability in financial transactions. UPI transactions are traceable and leave a digital footprint, reducing the likelihood of tax evasion and money laundering. UPI has facilitated direct benefit transfers (DBT) and other government initiatives, ensuring that subsidies and benefits reach the intended beneficiaries without leakages.
6. **Driving Innovation and Competition:** The success of UPI has spurred innovation and competition in the financial sector. The rise of UPI has paved the way for a burgeoning fintech ecosystem in India, fostering innovation in digital payment solutions. Traditional banks have had to adapt to the digital age, adopting new technologies and business models to compete with fintech startups and digital payment platforms. UPI has encouraged collaboration between banks, fintech companies, and the government, resulting in a more integrated and efficient financial system.

#### CHALLENGES

Despite its success, UPI faces several challenges:

1. **Cybersecurity Threats:** As digital transactions increase, so do the risks of cyberattacks and fraud. Ensuring robust security measures is crucial.
2. **Digital Literacy:** While UPI has improved financial inclusion, there is still a need to enhance digital literacy, especially among older and rural populations.
3. **Infrastructure Development:** Expanding internet connectivity and mobile infrastructure is essential to support the growth of UPI and digital payments.

#### FUTURE PROSPECTS AND POTENTIALS

The success of UPI has paved the way for further advancements in India's digital payments ecosystem. As UPI continues to gain popularity, there are exciting prospects for its future development. Some potential areas of growth include:

1. **Integration with More Services:** UPI can be integrated with various services beyond payments, such as bill payments, investments, and insurance, providing users with a comprehensive financial platform. This integration would further simplify financial management and enhance the convenience of users.
2. **Expansion to International Markets:** UPI's success in India has sparked interest in exploring its potential for international remittances. Efforts are underway to leverage UPI's infrastructure to facilitate cross-border transactions,



making international remittances faster, more secure, and cost-effective.

- 3. Enhanced Security Measures:** As UPI evolves, it is expected to introduce additional security measures to combat evolving threats. Technologies such as biometrics, tokenization, and artificial intelligence can be leveraged to strengthen the security of UPI transactions, ensuring the utmost trust and confidence among users.

## CONCLUSION

The Unified Payments Interface (UPI) has been a game-changer in India's journey toward becoming a digital economy. By promoting financial inclusion, driving the cashless economy, enhancing transparency, and fostering innovation, UPI has played a pivotal role in shaping Digital India. As the platform continues to evolve and expand, it holds the potential to redefine the financial landscape, making India a global leader in digital payments. The role of UPI in Digital India has been transformative, propelling the nation towards a cashless economy and driving financial inclusion. With its seamless transactions, simplified payment experience, enhanced security, and interoperability, UPI has become a catalyst for the growth of digital payments. By leveraging UPI's advantages and harnessing its potential, India is poised to achieve greater financial empowerment and economic progress in the years to come.

## REFERENCES

1. <https://www.npci.org.in/>
2. <https://www.rbi.org.in/>
3. <https://www.digitalindia.gov.in/>
4. <https://www.aubank.in/blogs/role-upi-digital-india-advantages-impact>
5. <https://ijcrt.org/papers/IJCRT2405320.pdf>
6. <https://www.nic.in/blogs/digital-payments-driving-the-growth-of-digital-economy/>
7. <https://pib.gov.in/FeaturesDeatils.aspx?NoteId=151350&ModuleId+=+2>



# MALGUDI: THE QUINTESSENTIAL INDIAN TOWN IN R.K. NARAYAN'S LITERATURE

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## ABSTRACT

*This paper explores the fictional town of Malgudi, created by R.K. Narayan, examining its geographical features, cultural landscape, and thematic significance. Through a circumstantiated analysis of Narayan's works, this study intends to extrapolate how Malgudi serves as a microcosm of Indian life and a canvas for the R K Narayan's story telling artistry in his famous novels.*

**KEY WORDS:** *Malgudi, R.K Narayan Swami and Friends, Financial expert, fictional city, socio - cultural mobility, dynamics, caste, social class, religion, South Indian town, Sarayu, Mempi, tradition, rigidity, complexity.*

## INTRODUCTION

R.K. Narayan, one of India's foremost literary figures, has enchanted readers with his artistic creation of Malgudi, a fictional town that serves as the setting for many of his novels and short stories. It forms setting for most of Narayan's work. First novels, "Swami and Friends" and most of his short stories takes place here. R. K Narayan successfully portrayed Malgudi as a microcosm of India Malgudi is more than just a backdrop; it is a living, breathing character that embodies the essence of Indian society. Malgudi was created as mentioned in Malgudi Days, by Sir Fredrick Lawley, a fictional British officer in the 19th century by combining and developing a few villages. This paper delves into the intricacies of Malgudi, exploring its physical layout, social structure, and cultural ethos.

## Geographical and Physical Description fictional town Malgudi

Malgudi is depicted as a quintessential South Indian town. As it made clear by the author itself a fictional town but it is reachable and fulfilling all its acolytes alfactory-needies. Might be connote it may geographically locate between two states of Northern India, Karnataka and Tamil Nadu because it picturesque the fictional Sarayu River and fictional Mempi forest, on the border of the States of Mysore and Madras. Narayan's assertion that Malgudi is work of fiction has not deterred readers from speculating about its actual location being Mysore, with river on one side and a forest on the other, and buildings and lanes similar to those of Malgudi.

Malgudi is located on the banks of river Sarayu. Sarayu River: A serene river that serves as a gathering place for residents, offering a picturesque setting for social and personal reflection. In Swami and Friends, Swami, Mani and Rajan spend mostly of their evening times playing or chatting by the river. Swami and Friends also seems to have taken place during the swadeshi and boycott movement against British. In The Guide novel holy - man Raju fasts on the bank of the dry river Sarayu, praying for the rains to come. When Mahatma Gandhi visits Malgudi,

the meetings and speeches are held right on the banks of river Sarayu. Mempi Forest is also a important feature of the Malgudi town. Mempi forest is on the other side of Sarayu. The Mempi Forest - Located on the outskirts, this forest provides a backdrop for adventure and mystery. It houses many hills and caves. Animals to be found there include tigers, members of the deer family, langurs and water buffalos. portrays a complete serene beauty of the typical village setting in his novels where the reader will be engrossed in imagination and caught up there in the fictional town and come to the strong conclusion of such an "ideal village" each individual should enjoy in his life span.

Market Street is the central street of Malgudi, the location of several big shops including Bombay Anand Bhavan and Truth Printing Works. Kabir Street is the residence of the elite of Malgudi, while Lawley Extension is a new upcoming lane housing the rich and the influential. Elleman Street, home to the oil-mongers, is the last street and beyond it lies the river Sarayu. Other streets include Grove Street, Kalighat Lane and Vinayak Muduli Street. Between Elleman Street and the river lie Mallappa's Grove and the cremation ground. The Untouchables and sweepers live on the lower banks of the river. Buildings Palace Talkies was built in 1935 to replace the old Variety Hall. Albert Mission School and Albert Mission College are the more popular educational institutions. There are also the board school and the town elementary schools. Malgudi has a small railway station which in many episodes, is central to the storyline. The main hospital of Malgudi is Malgudi Medical Centre (MMC). The statue of Sir Fredrick, seated on a horse, forms another major landmark. Another important place is The Board less, a small restaurant without any board. Board less is a center of discussion for current events in Malgudi. Market Road The commercial heart of Malgudi, teeming with shops, street vendors, and various businesses. which replicated the influence of the British rule in India it clearly picturized in the novel Financial Expert and The Guide – where the protagonist is running behind the advancement then they return back with their own traditional root which realizes them to not live the life



in the intention of the money madness, but with the life the life of righteous one. Albert Mission School - A symbol of the town's colonial past and its educational aspirations. Modification of the education that is Gurukula to schools run by the missionaries which will provide education to all the four varnas.

### Conceptualization of the fictional town by other writers

Various critics compare Narayan's Malgudi with Thomas Hardy's Wessex or William Faulkner's Yoknapatawpha. Yoknapatawpha County is a fictional Mississippi county created by the American author William Faulkner, largely based on and inspired by Lafayette County, Mississippi, and its county seat of Oxford (which Faulkner renamed "Jefferson"). Faulkner often referred to Yoknapatawpha County as "my apocryphal county". It was a town created from his own experiences, his childhood, his upbringing. The people in it were people he met every day. He thus created a place which every Indian could relate to. A place, where, in the words of Graham Greene (from the introduction to *The Financial Expert*), you could go "into those loved and shabby streets and see with excitement and a certainty of pleasure a stranger approaching past the bank, the cinema, the hair cutting saloon, a stranger who will greet us, we know, with some unexpected and revealing phrase that will open the door to yet another human existence."

Malgudi replete with narrow streets, traditional houses, and bustling marketplaces. Key locations within Malgudi include it was clearly portrayed in the Novel *Swami and Friends* where the visibility of the town in a way it represents typical Indian remote villages and clear connection to the village life and the Swami's adventures. country which portrays the adventures life of the Swami and his friends will also create an imaginary concept of the village Malgudi and reader will sure quest for the presence of the such country in reality or in his/her own imaginary world.

### In contemporary culture fictional town

*Malgudi Days* a 1986 Indian television series directed by Kannada actor and director Shankar Nag, based on the eponymous works of R.K. Narayan was mostly shot near Agumbe in Shimoga District, Karnataka. Some episodes, however, were also shot at Bengaluru and Devarayanadurga in Tumakuru District, Karnataka.

The concept of Malgudi as an "idyllic spot located in South India" seems to have taken root in popular imagination. Some restaurants offering South Indian fare go by the name or extensions of "Malgudi." The Shyam Group operates Malgudi restaurants in Chennai, Bengaluru and Hyderabad. A restaurant named "Malgudi Junction" is located in Kolkata.

### Cultural and Social Fabric

Malgudi is a melting pot of cultures, traditions, and modern influences. The town's cultural life is vibrant, with festivals and communal activities playing a central role. Social institutions like temples, schools, and marketplaces are focal points for interaction and community building. Festivals and Celebrations

too describes the conflict and adjustment between the modernity, and the importance of family and community, the desire of social mobility the complexity and rigidity off the religion and social taboos. the social and cultural importance of the 'fictional town Malgudi' portrays several aspects of Indian culture, including caste, class, religion and family relationships too. Again, it symbolizes the Indian nationalism as well as the British colonialism within the one novel Malgudi comes alive during festivals such as Diwali and Pongal, highlighting the town's rich traditions and communal harmony.

**Social Dynamics:** The town's social fabric is woven with interactions among diverse characters, in the novel 'The Guide', 'The English Teacher' many stories revolve around the bonds that unite members of a family and a community and also characters often find strength and support in these relationships and they can also lead to tension and conflict too reflecting the complexity and unity of Indian society.

### Character which connected with the Malgudi Town

Narayan populates Malgudi with a variety of memorable characters, each contributing to the town's charm and depth. Some notable characters include:

**Swaminathan (Swami):** The young protagonist of "Swami and Friends," whose adventures capture the innocence and curiosity of childhood. a ten-year-old boy studying at Albert mission School, Malgudi.

**Nataraj:** The central character in "The Man-Eater of Malgudi," a mild-mannered printer whose life is turned upside down by a disruptive taxidermist. he is portrayed as broods, reflects and grows nostalgic. S R Ramteke regards Nataraj a timid cowardly person – submissive and "good for nothing fellow". A central character and owner of the printing press in the fictional town of Malgudi. Through Nataraj's experiences, the author explores themes of tradition, modernity and the conflict between progress and preservation.

**Margayya:** The ambitious financial expert in "The Financial Expert," whose journey explores themes of wealth and morality. The concept of social mobility is explored in the novel, Margayya being a main character is a man who aspires to be wealthy and move on in society. But cast and social class he found difficult to achieving his objectives in the life. he has to put effort to the complex web of Indian society

### Themes and Symbolism

Malgudi serves as a canvas for exploring various themes central to Narayan's works mesmerize the readers in India and around the world, providing a timeless depiction of the Indian culture and society. Narayan's stories portray Indian Society and culture in a unique and insightful manner and it engages reader with the complexities and contradictions of Indian life, reflect on larger issues of tradition, modernity, and cultural identity that continue to shape the country even today.

**Tradition vs. Modernity :** Many stories highlight the tension between maintaining traditional values and embracing modern





influences. All the characterization which blends with the tradition and modernity where return back to its originality or yearning for reaching the root, are the important feature struggle between the tradition and modernity in the novels of R K Narayan.

**Human Resilience and Adaptability:** Characters often face personal and social challenges, showcasing their resilience and adaptability. The portrayal of this aspects in his novels in Swamis yearning to prove his father he is courageous enough too, and in the Financial Expert Margayya even though in his routine life he lost the hope but still his plans ideas and thoughts which proves him to become a rich person in his village. The Guide novel provides man who enjoys all the happiness of the life later he moves pout of the worldly desires and lives to the welfare of the others here also reader may get the doubt of is protagonist really away from the worldly desires? In the novel “English teacher”, also portrays the sorrow and worries of a teacher who lost his wife and he broods over the missed-out love life.

The Extraordinary in the Mundane: Narayan celebrates the simplicity and depth of everyday life, finding the extraordinary in the mundane. by characterizing protagonist in one or the other way which makes the reader to complete and find happiness in reading it or re thinking for the suitable solution to the problems or issues discussed in the novels.

## CONCLUSION

Malgudi, with its rich descriptions and complex characters, stands as a testament to R.K. Narayan's literary genius. Through Malgudi, Narayan offers readers a timeless and intimate glimpse into the heart of India, making it a beloved and enduring setting in Indian literature. It allows the reader to brood over the such village in their life and live happily where the fictional Malgudi may visible in their life too.

## REFERENCES

1. Narayan, R.K. (1935). *“Swami and Friends”*. Indian Thought Publications.
2. Narayan, R.K. (1949). *“The Financial Expert”*. Indian Thought Publications.
3. Narayan, R.K. (1961). *“The Man-Eater of Malgudi”*. Indian Thought Publications.
4. Narayan, R.K. (1945). *“The English Teacher”*. Eyre & Spottiswoode. India
5. Narayan, R.K. (1958). *“The Guide”*. Viking Press.US



# DYNAMICS OF COST: AN ECONOMETRIC ANALYSIS OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

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## ABSTRACT

Banking activities has undergone a structural transformation in the last two decades. Apart from traditional banking activities there are other related financial services that the banks have now started to offer and various other investments that it has started to undertake. Such diversification has led to the dynamics of cost to change over time and has now been proved to be sensitive to other elements present in the balance sheet. In this paper, an attempt at understanding the cost dynamics is made in order to assess the possible factors that that have bearing on it. The analysis has been done with an econometric approach to facilitate a better understanding of the dynamic relation that cost of funds has with other variables. For that, a set of panel data has been considered in which altogether six banks, three public sector banks and three private sector banks, are studied for better assessment of the results, data is drawn on quarterly basis for the time period 2005Q1-2023Q2. On the given data set, Pooled OLS, Fixed and Random Effect Methods have been applied and the results have been compared using Hausman Test and the presence of time and individual effect has further been identified to evaluate the results obtained using different models. In order to assess the stability of the model, recursive CUSUM test has been used to draw a meaningful conclusion at the end of the process.

## INTRODUCTION

Banking as an activity can traditionally be said as “accepting for the purpose of lending”. In other words; banks accept deposits, pay interest on them while keeping certain portion of the same as reserve and then using the remaining portion to lend as loans, also banks charge interest on loans which is higher than the interest paid on deposit. But the workings of the banks have undergone major changes and a broader and encompassing definition has evolved out of it. The entire banking structure can be said to be a very vital organ of the economy. Banks have also been very important in the growth and development of the economy. Banking as an activity can be traced back to the time ever since human civilization moved from barter system to the currency system and people started accumulating wealth. In the entire history of the world, the first bank to be established was in Italy, even the word ‘Bank’ is derived from the Italian word ‘Benco’ which means Bench since Italians at that time used to carry out transactions sitting on a bench. In order to understand the evolution of banking from that point of time to what it is today we first need to understand the evolution of the currency system. Owing to the many demerits and shortcomings of the barter system, the need for a common currency was felt. And then even the currency changed forms and shapes many a times. Another factor that contributed to the flourishing of the banking system was the expansion and evolution of the economic activity. When trade among nations increased, the need for banking services also increased. It has taken years for the banks to have evolved and its activity to have diversified in such a way.

Understanding the intricacies of banking activities in respect to CAMEL approach and understanding the factors that have bearing on the cost of funds will only enable us to have a look at what are the factors that have significantly been contributing the cost being borne by banks. Banks in India have been undergoing major structural changes, their activities have diversified tremendously. And hence their cost, growing NPAs since last few years have been a clear indication that the banks need to re-evaluate their performance and understand its cost dynamics in order to be in the position to have control over them to a certain extent if not completely.

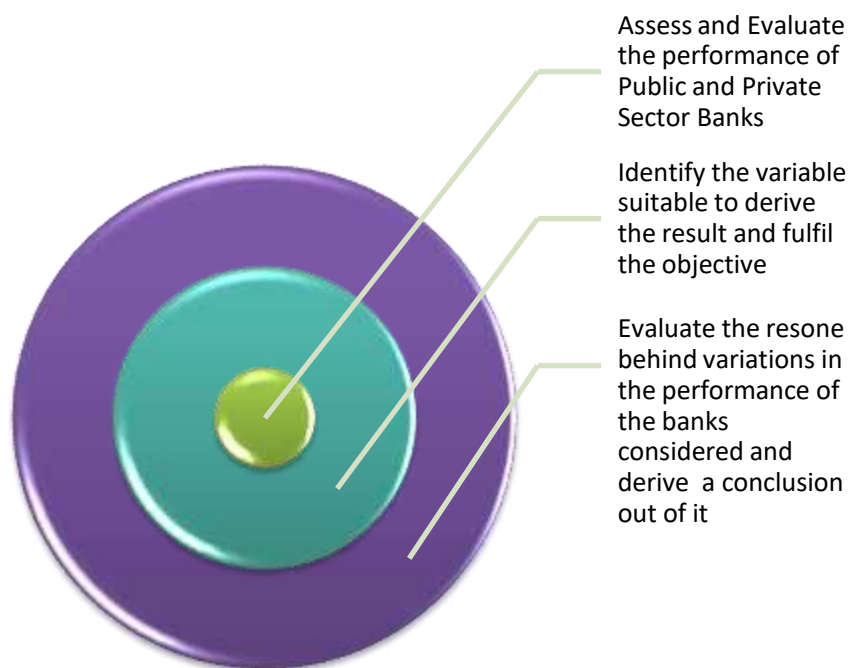
Since we know it well how important banking system is for the economy and its efficient and smooth functioning is very crucial for the economic growth and development. This study is being undertaken to assess the efficiency of the banking system using a varied range of statistical tools and techniques. The objectives for which the present study is being undertaken to assess and evaluate the performance of public as well as private sector banks. As is already discussed, commercial banks are divided into public sector banks and private sector banks. So considering the fact that both public as well as private sector banks have different goals and objectives despite the fact that both provide banking services but with different policy framework and institutional goals. So it is evident that their results using the same methodology will differ. At the same time, as it has been discussed prior that various regulatory and structural changes have taken place over time,



which have a crucial and a very significant impact on the performance of the banks. And to evaluate the reasons that behind the variations in the performance of public sector banks and private sector banks. There is always some scope of improvement and it by the end of the study we will better understand that why such variations are occurring. The results

that is supposed to be obtained by the end of the study is supposed to answer questions like what are the factors that affects the performance of the banking the most? What discrepancy can be seen in the performance of the banks considered? Why such variations are occurring? Etc.

Figure 1: Objective of the study



Source: Author's own creation

In order to fulfill the objective of the study, we need to define the scope of the study. This requires sketching out a framework following which the study has to take place. This will require the selection of the banks that would represent all the banks. Selection of variable that will bring out the appropriate picture of the banks considered. The extent to which the results obtained can be generalized to the entire banking structure. In this study, altogether six banks have been considered, out of them three are private sector banks, while the other three are public sector banks. Namely Punjab National Bank, State Bank of India, Bank of Baroda, Axis Bank, ICICI Bank and Federal Bank. A comprehensive analysis of these six banks using the Pooled OLS, Fixed Effect and Random Effect techniques is done further in the paper. While the results have been confirmed for their authenticity and applicability using the Hausman Test and the model's stability has been confirmed using the recursive CUSUM test.

REVIEW OF LITERATURE

Kumar and Sharma (2014) studied the financial performance of top eight best forming banks and has made use of econometric analysis to better evaluate the performances. A study constructed using CAMEL approach by G.L. Meena (2016), applying the

Stratified Random Sampling technique the entire research has been planned and designed accordingly to explore the financial performance of the given banks. Object of the study included assessing the performance of all the public as well as private sector banks and difference in their performance respectively. Return on assets has been taken as the dependent variable, while profit per employee, debt-equity ratio, total advances-to-total deposits ratio, net NPA's-to-total advances ratio, capital adequacy ratio, business per employee, return on net worth, etc. And concluded profit per employee, debt equity ratio, total advances to total deposit ratio, net NPA to total advances ratio have been dominant factor that has affected the performance of the banks considered in the study. Dr. Sanjay Rastogi and Vishali Singh (2017) have made longitudinal study that is in continuation of their previous study; they used the same set of data and same set of variables to do the same. Their analysis included four best performing banks for the given timeframe from 2011-12 to 2014-15, two public and two private sector banks respectively namely State Bank of India, Punjab National Bank, HDFC Bank and Axis Bank. With the help of CAMEL ratios, the study goes on to conclude that HDFC Bank has maintained its first rank from their last study while Punjab National Bank and State Bank of India improved leaving Axis Bank behind. While B. Lavanya and T.



Srinivas (2018) in their study emphasized on the financial growth of private sector banks and analyze their performance and efficiency. Using the Random sampling technique, the data has been collected for five private banks for the time frame of five years ranging from 2013-2017. And concluded that ICICI Bank performed better than the rest in terms of Capital adequacy ratio, management quality ratio and liquidity ratio while for HDFC and YES have better Asset Quality ratio than the rest. In their result, they gave ICICI top ranking followed by HDFC, Kotak Mahindra, Yes Bank and Axis Bank. A study by Deepak Kumar Raj (2022) aimed to assess the financial stability of the chosen banks which constituted of public as well as private sector banks namely; HDFC Bank, ICICI Bank, Axis Bank, State Bank of India, Bank of Baroda and Bank of India for the year 2018. The study sourced its data from various bulletins and statistics released by the Reserve Bank of India. The study, again using the CAMEL technique concluded that HDFC has performed better than the rest when it came to asset quality, management efficiency and earnings ability while its assets quality isn't as good as the rest. While Bank of India has been at the lowest in terms of

Capital Adequacy, earnings Ability and Liquidity. Ramya and Ranjith (2023) have made a comparative study of financial performance of private and public sector banks and found private banks to be doing better than the public sector banks and have further suggested areas where public banks needs to improve. A similar econometric approach for measuring the financial performance of the Indian Commercial banks have been made by Lal and Gupta (2023) they too have constructed models to evaluate which are the key indicators of financial wellbeing of banks in India. And suggested for improvements in the required areas.

## DATA AND METHODOLOGY

Data for this study has been collected from the Reserve Bank of India for all the six banks, the data collection is done considering the CAMEL Model, which is also the widely used method of data collection and overall analysis of banks.

The results are to be analyzed according to the given equation –

$$CoF_{it} = \beta_0 + \beta_1 RoE_{it} + \beta_2 StaffExp_{it} + \beta_3 ECI_{it} + \beta_4 CRAR_{it} + \varepsilon_{it}$$

Where;

**Table 1 - Variables and their explanation**

Variable	Proxy or definition	Expected sign (as can be assessed with the results obtained)
CoF	Cost of Funds	+/-
RoE	Return on equity	+/-
CRAR	Capital to risk Weighted Asset Ratio	+/-
StaffExp	Staff expenditure to total income	+/-
ECI	Efficiency Cost Income	+/-

Source: Author's own creation

The above mentioned equation will be analyzed respectively with the banks considered in the study. And the relationship among the variables varies from bank to bank.

## RESULTS AND DISCUSSION

In order to analyze the impact of other vital variables on the cost of funds incurred by banks, the set of panel data was first analyzed

using the Pooled OLS technique, but in order to understand the result well, the same was analyzed using the Fixed effect and Random effect techniques. Further in the process, time effect and individual effect in the results were analyzed and Hausman Test has been applied to understand which of the following results to go with.

**Table 2: Pooled OLS**

Pooled OLS Results				
Residuals:				
Min.	1st Qu.	Median	3rd Qu.	Max.
-2.598759	-0.674897	0.070336	0.786567	1.727717
Coefficients:				
	Estimate	Std. Error	t-value	Pr(> t )
(Intercept)	9.5063212	0.5990115	15.87	< 2.2e-16 ***
ROE	0.0235057	0.0071405	3.2919	0.001076 **
Staff Exp. To total income	-0.1903383	0.0159349	-11.9447	< 2.2e-16 ***
efficiency cost income`	0.0082472	0.0089167	0.9249	0.355516
CRAR standalone	-0.1251446	0.0228102	-5.4864	6.945e-08 ***





Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total Sum of Squares: 592.99
Residual Sum of Squares: 419.99
R-Squared: 0.29174
Adj. R-Squared: 0.28529
F-statistic: 45.2078 on 4 and 439 DF, p-value: < 2.22e-16

Source: Author's own calculation

**Table 3: Fixed Effect**

Oneway (individual) effect Within Model (Fixed effect)				
Residuals:				
Min.	1st Qu.	Median	3rd Qu.	Max.
-2.29896	-0.69044	0.16231	0.69588	1.8888
Coefficients:				
	Estimate	Std. Error	t-value	Pr(> t )
ROE	0.0353491	0.0071106	4.9713	9.59e-07 ***
Staff Exp. To total income	-0.2926492	0.0244087	-11.9895	< 2.2e-16 ***
efficiency cost income`	0.0221886	0.0092375	2.402	0.016724 *
CRAR standalone	-0.0819551	0.0262989	-3.1163	0.001953 **
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Total Sum of Squares: 553.62				
Residual Sum of Squares: 381.67				
R-Squared: 0.31059				
Adj. R-Squared: 0.29629				
F-statistic: 48.8809 on 4 and 434 DF, p-value: < 2.22e-16				

Source: Author's own calculation

**Table 4: Random Effect**

Oneway (individual) effect Random Effect Model (Swamy-Arora's transformation)				
Residuals:				
Min.	1st Qu.	Median	3rd Qu.	Max.
-2.592249	-0.639873	0.065528	0.793941	1.724169
Coefficients:				
	Estimate	Std. Error	z-value	Pr(> t )
(Intercept)	9.5247552	0.6039097	15.7718	< 2.2e-16 ***
ROE	0.0262645	0.0071352	3.681	0.0002323 ***
Staff Exp. To total income	-0.2056562	0.0173235	-11.8715	< 2.2e-16 ***
efficiency cost income`	0.0107131	0.009016	1.1882	0.2347382
CRAR standalone	-0.1243052	0.0234087	-5.3102	1.095e-07 ***
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				



Total Sum of Squares: 578.27
Residual Sum of Squares: 411.21
R-Squared: 0.28891
Adj. R-Squared: 0.28243
Chisq: 178.359 on 4 DF, p-value: < 2.22e-16

Effects:			
	var	std.dev	share
idiosyncratic	0.87943	0.937779	0.992
individual	0.007097	0.084244	0.008
theta: 0.2087			

Source: Author's own calculation

**Table 5: Test for individual effect**

F test for individual effects			
F = 8.7146	df1 = 5	df2 = 434	p-value = 6.888e-08
alternative hypothesis: significant effects			

Source: Author's own calculation

**Table 6: Hausman Test**

Hausman Test		
chisq = 34.577	df = 4	p-value = 5.675e-07
alternative hypothesis: one model is inconsistent		

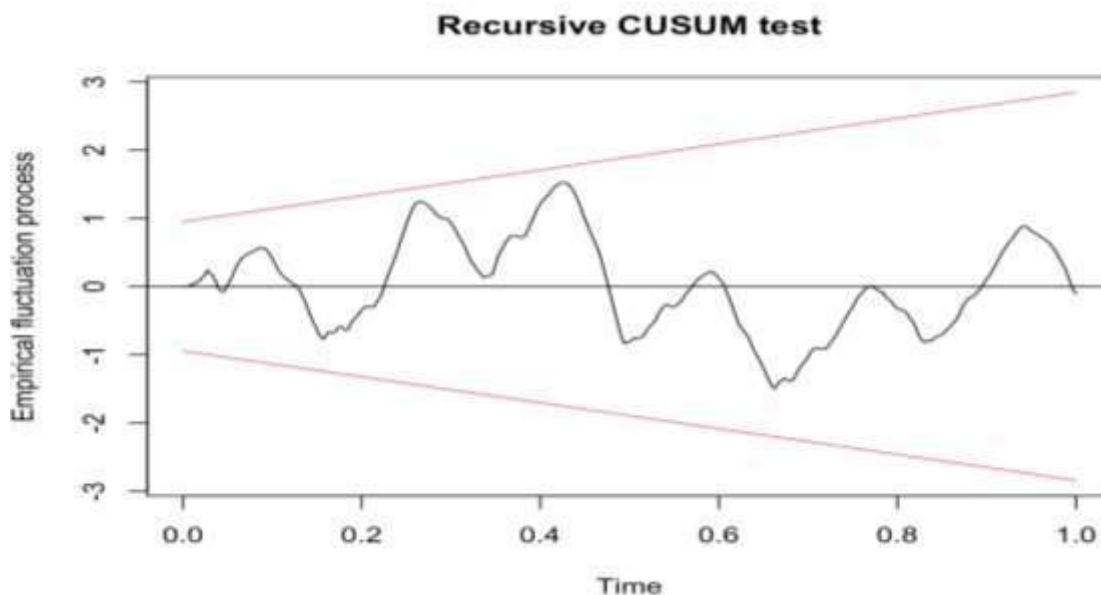
Source: Author's own calculation

As can be seen from the given results, that it the Fixed effect which shows rather stable results. This shows that Staff expenditure to total income and CRAR impact the cost of funds negatively, while Return on equity and efficiency cost income has a positive relation with cost of funds. This can be taken as a trade-off where in more of funds being spent as staff expenditure and for the maintenance of CRAR will in turn reduce the availability of funds to finance other banking activities. Both CRAR and staff expenditure to total income are a crucial point to be considered while understanding and evaluating decisions related to Cost to be incurred on funds. Return on Equity and efficiency cost income should be given due importance owing to the direction

they may seem to be following. Signifying in order to expect and anticipate better returns on equity and efficiency cost income more and more cost needs to be incurred. Now while making decisions so as to how to effectively manage cost of funds; one needs to understand unmindful reduction or even increasing the cost will not be beneficial. The way it reacts to other variables in the balance sheet of the banks is also a factor that needs due consideration. Now it is only with mindful use of funds at disposal that the financial positions of the banks of India can be improved. At the same time it is also important to adhere to the Basel Norms to ensure better health and financial wellbeing of the banks.



Figure 2: Recursive CUSUM Test



Source: Author's own calculation

The model's accuracy has been evaluated using recursive CUSUM Test and the model found to be stable to validate the results. Further the residuals for each of the six banks taken in this study have been evaluated to confirm the same.

## CONCLUSION

The banking activity has diversified tremendously, and so has the cost outlets pertaining to such activities. This analysis has been done in order to assess what relation does Cost of Funds have with other factors that can potentially impact the cost of funds. For that we first need to know what does cost of funds mean when it comes to the business of any bank. Cost of funds is basically the cost that any bank has to incur in order to acquire the much of funds that it can lend to the public as loan. Making loans and advances constitute a very important function of the bank, if the cost of advancing short-term and long term-loans is low, then the borrowers will also have to pay low on their borrowings in the form of interest. So to understand an appropriate level of cost to be incurred on funds is a vital element in enhancing the performance of banks. This study made use of panel data set comprising of six banks; in which 3 banks were public and the rest three were private. As shown in the result, the cost of funds does get affected due to various other elements in bank's balance sheet. The intricate relation of cost of funds with other elements namely, return on equity, CRAR, staff expenses to income and efficiency cost income shows that enhanced return on equity will also demand more of cost of funds. When evaluating the financial performance of any bank its cost of funds forms to be a basis for understanding its level and scope of activity while return on equity, efficiency cost income, CRAR and Staff expenses to total income is another element that indicates how effectively the cost

is being managed and what really should be the criteria to evaluate cost related decisions.

## REFERENCES

1. Meena, G. L. (2016). Financial analysis of select banks using CAMEL approach a study with reference to Indian banking industry. *International Journal of Research and Scientific Innovation (IJRSI)*, 3(10), 30-35.
2. Rastogi, S., & Singh, V. (2017). Analysis Of public and private sector banks performance using CAMELS model: A longitudinal study. *International Journal of Research in Economics and Social Sciences (IJRESS)*, 7(11), 33-38.
3. Lavanya, B., & Srinivas, T. (2018). Performance analysis using CAMEL model-a study of select private banks. *Journal of Emerging Technologies and Innovative Research*, 5(6), 214-223.
4. Raj, D. K. (2022). Evaluating performance of banks through CAMELS Model: A case study of select public and private banks in India. *EPRA International Journal of Economics, Business and Management Studies (EBMS)*, 9(5), 79-84.
5. Ramya, N., & Ranjith, M. S. (2023). Comparative Study on financial Performance of selected public and private sector banks using CAMEL model. *International Research journal of Modernization in.*, Volume:05/Issue:04/April-2023
6. Kumar, S., & Sharma, R. (2014). Performance analysis of top Indian banks through CAMEL approach. *International Journal of Advanced Research in Management and Social Sciences*, 3(7), 81-92.
7. Lal, T., & Gupta, (2023) A. Measuring Impact of CAMELS Model on Financial Performance of Indian Commercial Banks. *Asian Journal of Economics and Finance*, 5, 2: 199-139



# RELATIONSHIP BETWEEN LEISURE TIME BEHAVIOUR AND STRESS WITH ANTISOCIAL BEHAVIOUR AMONG URBAN YOUTH

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## ABSTRACT

The purpose of the study was to find out the relationship between leisure time behavior and stress with antisocial behavior among urban youth. To achieve the purpose 50 men urban youth were selected as subjects for the study by random method. The subjects stress factors were analyzed through standardized questionnaire and leisure time behavior and antisocial behavior were measured from personal diary. The obtained data were analyzed to with Pearson product-moment correlation. It was concluded that there was a better significant relationship between leisure time behavior and stress than Antisocial behavior and stress among urban youth.

**KEYWORDS:** Leisure time behavior, stress, antisocial behavior, urban youth.

## INTRODUCTION

The majority of an adolescents' waking time is spent engaged in leisure activities (Csikszentmihalyi et al., 1993). There are many possible ways that leisure time is consumed, ranging from highly structured (e.g. competitive sports teams) to relatively unstructured pursuits (e.g. watching television). Available evidence indicates that some forms of adolescent leisure activities are correlated with antisocial behavior (i.e. criminality, aggressive behavior, alcohol/drug use, delinquency, school dropout). However, the literature is conflicting with regards to the direction of association. Adolescent leisure pursuits have been linked to short-term and long-term decreased (e.g. Mahoney, 2000), increased (e.g. McCord, 1978), and trivial relations (Hirshi, 1969) to antisocial behavior. The goal of the present study is to identify and evaluate characteristics of leisure activities that may be associated with increases or decreases in adolescent antisocial behavior.

A number of studies have shown that adolescent activity involvement may decrease antisocial behavior and related outcomes. Rationales for why participation may reduce antisocial behavior and related outcomes include: structuring the youth's time (Brown, 1988; Osgood et al., 1996), providing links to competent adults and peers (Csikszentmihalyi et al., 1993; Fletcher et al., 1997), building existing skills and interests (Jones and Offord, 1989; Csikszentmihalyi, 1990; Mahoney, 2000), and creating opportunities within the social system

## STRESS FACTORS

### Academic stressors

Academic stress has been identified as the primary cause. Figures. Lee & Larson (2000) explain academic stress as an interaction between environmental stressors, student's appraisal and reactions for the same. It has now become a grave reality that is termed as a "career stopper" (Kadapatti & Vijayalaxmi,

2012). It therefore, becomes a significant cause of concern as it is symptomatic of rising mental health concerns in India (Nadamuri & Ch, 2011).

### Time Balance Stressors

The connection between time and stress is learning how to manage the time properly to be more productive to avoid feeling stressed. If an individual know how to manage his/her time correctly, in the long run, tasks seem to be easier and stress-free.

### Interpersonal Stressors

Interpersonal stressors as "stressful episodes between two or more people that involve quarrels, arguments, negative attitudes or behavior, an uncomfortable atmosphere during a conversation or activity, and concern about hurting others' feelings"

### Intrapersonal stressors

Intrapersonal stressors are those that act within the individual. They are all interactions that occur with the elderly, such as their knowledge, emotions (fear, frustration, anxiety) and variations of the organic system.

### Family stressors

Family stress can be defined as any stressor that concerns one or more members of the family (or the whole system) at a defined time, which impacts the emotional connection between family members, their mood, well-being, as well as the maintenance of the family relationship.

### Environmental stressors

Environmental stressors are things or events in our surroundings that cause stress, such as destructive weather events, noise, crowding, and war. Explore the definition, types, and examples of environmental stressors and learn how they





impact human beings.

**PURPOSE OF THE STUDY**

The purpose of the study was to find out the relationship between leisure time behavior and stress with antisocial behavior among urban youth.

**HYPOTHESES**

1. It was hypothesis that there would be a significant relationship between leisure time behavior and stress among urban youth.
2. It was hypothesized that there would be a significant relationship between antisocial behavior and stress among urban youth.

**DELIMITATIONS**

1. Only fifty urban youth were selected Chennai metro city
2. The age range between 18 to 25 years only.
3. Only leisure time behavior, Stress and Antisocial behavior selected as adependent variable.

**LIMITATIONS**

1. Physiological factors were not taken into consideration.
2. The difference that exist among the subject due to varied factors such as heredity, food habit, family type, weight and health factor were not be considered.

**REVIEW OF RELATED LITERATURE**

Leisure activities and adolescent antisocial behavior: The role of structure and social context **JOSEPH L. Mahoney And Haê Kan Stattin** 2023The goal of this study was to understand better how the structure and social context of adolescent leisure activities relates to antisocial behavior. A representative sample of 703 14-year-olds and their parents were assessed concerning

**RESULTS AND DISCUSSIONS**

**RESULTS ON RELATIONSHIP BETWEEN LEISURE TIME BEHAVIOUR ANDSTRESS ANTISOCIAL BEHAVIOUR AMONG URBAN YOUTH**

**TABLE-I**  
**‘r’ VALUES LEISURE TIME BEHAVIOUR AND STRESS**

Leisure time behavior vs Stress Factors	Stress Factors Leisure Time Behavior					
	Academic stressors	Time balance stressors	Interpersonal stressors	Intra personal stressors	Family stressors	Environmental stressors
	0.960	0.886	0.964	0.875	0.994	0.928

\*Significant at 0.05 level table ‘r’ value at 0.05 level of confidence 50 = 0.273

The above table – I shows indicates that the obtained ‘r’ value between stress factors was greater then the required table value. Hence the results proved that there was a relationship between

adolescent involvement in community-based leisure activities, peer and adult social relations, and antisocial behavior. Results showed that participation in highly structured leisure activities was linked to low levels of antisocial behavior, while participation in activities with low structure (i.e. a youth recreation center) was associated with high levels of antisocial behavior. Overall the results were similar for boys and girls; however, the combination of involvement in a low structured activity and the absence of any highly structured participation appeared especially problematic for boys' antisocial behavior. Participants of low structured activities were also characterized by deviant peer relations, poorparent child relations, and they received low support from their activity leader compared to adolescents engaged in more structured community activities. Findings are discussed in terms of their implication for prevention research.

**METHODOLOGY**

**SELECTION OF SUBJECT**

To achieve the purpose of study 50 urban youth were selected Chennai metro city

**SELECTION OF VARIABLES**

**INDEPENDENT VARIABLES**

1. Anti-social behavior
2. Leisure time behavior

**DEPENDENT VARIABLES**

1. Stress Factors

**STATISTICAL TECHNIQUE**

The Pearson Product Moment correlation statistical procedure was to be employed thelevel of significance was set at 0.05 level of confidence.

stress factors and Leisure time behavior among urban youth at 0.05 level ofsignificance.



**TABLE – II**  
**‘r’ VALUES ANTI SOCIAL BEHAVIOUR AND STRESS**

Antisocial behavior vs Stress Factors	Stress Factors Anti-Social Behavior					
	Academic stressors	Time balance stressors	Interpersonal stressors	Intra personal stressors	Family stressors	Environmental stressors
	-0.863	-0.853	-0.909	-0.766	-0.867	-0.654

\*Significant at 0.05 level table ‘r’ value at 0.05 level of confidence 50 = 0.273

The above table – II shows indicates that the obtained ‘r’ value between stress factors was greater then the required table value. Hence the results proved that there was negative relationship between stress factors and antisocial behavior among urban youth at 0.05 level of no significance.

### CONCLUSIONS

1. There was a significant relationship between leisure time behavior and stress among urban youth. It indicates that the urban youth more leisure time activities may have less stress
2. There was significant relationship between antisocial behavior and stress among urban youth. It indicates the urban youth with antisocial behavior may have high stress.

### REFERENCE

1. Prof.Akbar Husain, Dr. Nalima k.Gulez *Managing stress, FRIENDS PUBLICATION(INDIA).*
2. Dr.Daisy sheokand, *sports publication (2007).*
3. Jancy Rachel Daisy R (2012) *conducted a study to assess the level of stress questionnaire.Tamil Nadu Dr. M.G.R Medical University, Chennai.*
4. *Leisure activities and adolescent antisocial behavior: the role of structure and social context - PubMed (nih.gov).*



# AN OVERVIEW OF THE PRINCIPLES OF NEUTRACEUTICALS AND PATHYA KALPANA

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## ABSTRACT

The history of Ayurveda stretches back to the very origins of the universe. The term "brihatrayi," meaning "the trio of the old/mature," refers to the foundational texts that have shaped the Ayurvedic medical system. Key works such as the Charaka and Sushruta Samhitas have undergone various revisions, including Pratisamskara, Pathashuddhi, and Sampurana. A detailed examination of these ancient texts can reveal how Ayurvedic concepts and practices have evolved over time. The concept of Ahara and Ahara Kalpana, for example, has developed significantly. Sutrasthana, one of the texts in the Brihatrayi, contains most of the descriptions related to Ahara Kalpanas, which are categorized as Kritanna and include various types of culinary items (Ahara Varga). While the original authors only briefly covered some Kalpanas and their preparation methods, later commentators expanded on these descriptions. Successive scholars, from Charaka and Sushruta to Vagbhata, introduced modifications and integrations. Vagbhata, for instance, merged the teachings of Sushruta and Charaka and introduced new concepts for describing Ahara Kalpanas. Bhavaprakash further developed these ideas and added descriptions of new Ahara Kalpanas. Thus, studying the evolution of Ahara Kalpana provides insight into the comprehensive development of food preparation techniques and culinary skills for both therapeutic and preventative purposes.

**KEYWORDS:** Ahara Kalpana, Kritanna, Brihatrayi

## INTRODUCTION

Ayurveda, often referred to as the "science of life," places greater emphasis on disease prevention and health maintenance ("Swasthasya Swasthya Rakshanam") rather than just treating illnesses ("Atursya Vikaar Prashanam"). This ancient Indian health care system focuses on understanding both the individual and their health issues. In Ayurveda, optimal health is defined as a well-balanced metabolic state, promoting a long and healthy life, which can be understood as the "science of longevity" through proper diet and nutrition. In Ayurveda, Acharya Kashyapa regards diet (Aahara) as the highest form of medicine (mahabheshaja). Medicine will be ineffective for a patient who does not adhere to proper dietary guidelines (pathya). The significance of Aahara and Pathya in maintaining good health is highlighted because they help keep the seven bodily tissues (saptadhatu) and the three doshas (tridosha) in balance, which are essential for overall well-being. Ayurveda believes that factors such as voice, complexion, longevity, strength, happiness, physical growth, and mental intelligence are influenced by the type of food consumed. The primary aim of Aahara Kalpana is to emphasize the importance of diet in both health maintenance and the treatment of various conditions, including imbalances in doshas, dhatus, malas, and agni. Ahara, Nidra (sleep), and Brahmacharya (celibacy) are all crucial for preserving health and managing diseases.

In Ayurveda, Aahara (diet) and Vihaar (lifestyle practices such as exercise) are essential for maintaining Arogya (health). Arogya is defined as a state free from illness, which is a primary

concern for doctors. The daily practices within Swasthavritta (a regimen promoting physical and mental well-being) are extensively detailed.

Ayurveda emphasizes three core elements: Ausadh (medicine), Aahara (food), and Vihaar (healthy living). Among these, Aahara Kalpana is a vital aspect. Ayurveda provides comprehensive guidance on every detail related to diet, including ingredients and preparation methods. Food that is precisely balanced and prepared, known as Pathya (ideal food), is considered highly beneficial for maintaining good health.

The primary aim of all Ayurvedic treatments is to improve and restore Agni (digestive fire), a goal also achieved through Aahara Kalpana. This approach not only supports and maintains Agni but also contributes to overall health and addresses various conditions. Consequently, there are two main types of Aahara Kalpana to be considered in dietary preparations for both patients and healthy individuals: Pathya Kalpana, which is recommended for those with health issues, and Kritanna Varga (Aahara Kalpana), which is suggested for healthy people.

## Concept of Pathya Kalpana

Pathya Kalpana is a fundamental yet highly significant concept in Ayurveda, emphasizing practical and clinical application. It involves using various methods of processing (Samskara) to make diets more beneficial for health. The importance of understanding the "concept of Pathya Kalpana" is highlighted



by its benefits, such as easy availability, palatability, cost-effectiveness, good nutritional value, and versatility. Among other disease prevention strategies, nutraceuticals play a crucial

role. Preventing and delaying the onset of diseases has become an attractive and cost-effective approach in the medical field.

Diet form	Quantity	Prepared formulation	Final constitution prepared formulation	Actions
<u>Manda</u>	Rice ; 1 part Water ; 14 part	Untill all the rice particles are properly cooked	Only supernatant liquid	<u>Dipana Pachana</u> , <u>Vatanulomaka</u> , <u>Grahi</u> , <u>Kanphaghna</u> etc
<u>Peva</u>	Rice : 1 part Water ; 14 part	Untill all the rice particles are properly cooked.	Solid rice and liquid portion are taken in equal propoction	<u>Deepana Pachana</u> , <u>Vatanulomaka</u> , <u>Dhatupushtikarasi</u> etc
<u>Yavagu</u>	Rice ; 1 part Water : 6 part	Untill all the rice particles are properly cooked	Only solid rice part is taken.	<u>Grahi</u> , <u>Balva</u> , <u>Tarpana</u> , <u>Vatanashana</u> etc
<u>Vilepi</u>	Rice ; 1 part Water ; 4 part	Untill all the rice particles are properly cooked.	Moresolid portion with little liquid is taken.	<u>Deepana pachana</u> , <u>Hrdya</u> , <u>Vrusva</u> 34 etc
<u>Anna/odana</u>	Rice ; 1 part water ; 5 part	Untill all the rice particles are properly cooked	Only solid rice part is taken.	<u>Vrihna</u> , <u>Tarpana</u> , <u>atisara</u> etc
<u>Krusara</u>	Rice : 1 part <u>Mudga</u> ; ¼ part Water ; 6 part	Untill the rice and <u>Mudga</u> are properly cooked	Only solid rice and <u>Mudga</u> part is taken.	<u>Balva</u> , <u>Kapha</u> <u>Pittakara</u> , <u>Vatanashaka</u>

### Classification of Nutraceutical

Nutraceutical is broadly classified and vatried types of products that are encircled under the terms of nutraceutical.

1. Dietary supplements
2. Functional foods
3. Pharmaceutical
4. Medical foods

Dietary supplements are products that contain dietary nutrients derived from food sources and are designed to enhance the nutritional value of the diet. These include botanical products or herbs, such as Aloe Vera, Garlic, Ginger, and Turmeric, which can be found in various forms like tablets, capsules, soft gels, gel caps, liquids, or powders. Additionally, there is a range of nutraceutical products that overlap with these supplements, as detailed below.

Nutraceuticals offer significant potential for preventing chronic diseases and enhancing health, particularly through herbal

remedies. For instance, flaxseed oil and powder, which are rich in omega-3 fatty acids, possess properties such as analgesic, anti-inflammatory, and antipyretic effects. Probiotics are live microbial supplements designed to enhance or restore the balance of microorganisms in the body. Notable probiotics are commonly used to address issues such as lactose intolerance, acute diarrhea, and gastrointestinal side effects caused by antibiotics. Key types of probiotics include Lactobacillus bacteria and bifidobacteria. It's a vital component of the body that plays a key role in various biological functions. Additionally, including nutraceutical enzymes in the diet can help alleviate symptoms of hyperglycemia, digestive issues, obesity, and more.

**Functional:** The concept of functional foods was first introduced in Japan. These are foods that have been enhanced with specific components or ingredients to provide medical or physiological benefits beyond basic nutrition. When these foods are used to help prevent diseases, other than anemia, they are referred to as nutraceuticals. Foods that have added ingredients or nutrients are considered fortified foods.





Examples include milk fortified with Vitamin D and orange juice enriched with calcium.

**Pharmaceutical:** The term "pharmaceutical" is increasingly used in agricultural contexts, particularly in relation to the medical applications of genetically engineered crops or animals. Examples of energy-providing foods produced using biotechnology include bread, alcohol, fermented starch, yogurt, cheese, vinegar, and others.

**Medical foods:** Medical foods are specially formulated for internal consumption under the supervision of a physician, designed for the specific dietary management of certain diseases or conditions with unique nutritional needs. These foods are regulated by the FDA and can be prescribed under medical supervision.

## DISCUSSION

Consuming Shadrasayukta aahara (wholesome food with all six tastes) in the appropriate amounts, while considering the season and one's digestive capacity, provides satisfaction (tushti), nourishment (pushti), intellectual skills (buddhi), bodily firmness (dhruti), valor (paurusha), strength (bala), an appealing voice (swara), immunity (oja), and radiance (teja). Aahara Kalpana is emphasized throughout Ayurveda. The Swasthavrutta (daily living routines) promote maintaining good health, while Rutucharya (seasonal routines) and Dinacharya (daily rituals) incorporate the use of Aahara Kalpana. Those experiencing imbalances should consume foods that maintain their Dhatus (body tissues) in good condition and prevent further aggravation by the Doshas (provoked humors). Aahara Kalpana is a key aspect recommended throughout Ayurveda. The practice of Swasthavrutta (daily living routines) promotes maintaining good health, while Rutucharya (seasonal routines) and Dinacharya (daily rituals) incorporate the use of Aahara Kalpana. Patients should consume foods that maintain their Dhatus (body tissues) in good condition and prevent further aggravation by the Doshas (provoked humors). Therefore, patients must follow the principles of "healthy food consumption," or Pathya. In Panchakarma, Aahara Kalpana is also used as Samsarjana Krama to strengthen the Jatharagni (digestive fire), and rejuvenate the Annavaha Srotas (digestive system) and the Purishavaha Srotas (excretory system), restoring them to a healthy state from a weakened condition caused by the purification process.

## CONCLUSION

Ayurvedic texts contain extensive knowledge on dietetics, particularly through the concept of Pathya Kalpana, which emphasizes making food healthy, enjoyable, and appropriate. This approach is beneficial for both healthy individuals and those who are ill. Pathya Kalpana ensures that all essential nutrients are provided by incorporating the six tastes (shadras), thus maintaining the body's elemental balance (Panchabhautika). It is recommended to include Pathya Kalpana in our daily diet to align with Ayurvedic principles. Additionally, the field of nutraceuticals serves as a bridge between Ayurveda and modern medicine, highlighting the importance of collaborative research and mutual acceptance.

Nutraceuticals play a significant role in maintaining health and preventing nutritionally related acute and chronic diseases, thereby enhancing overall health, longevity, and quality of life. It is evident that Ayurveda and nutraceuticals complement each other, and their combined application can lead to widespread acceptance by society.

## REFERENCES

1. Ehrlich, S. D., (Willow bark), private practice specializing in complementary and alternative medicine. Phoenix, AZ. Review, VeriMed Healthcare Network, 2008
2. Mishra BS, Rupalalji Vaishya, Bhavaprakasha (2004) (Part-I). 11th ed. Varanasi: Chaukhambha Sanskrit Sansthan.
3. Murthy Shrikantha KR (2010) editor (1st edition, reprint). Sushruta Samhita of Sushruta; 2: Varanasi: Chaukhambha Orientalia, 425:443-457.
4. Rajendra Garg et. al., Pathya Aahara Kalpana: Review, International Journal of Ayurveda, Feb. 2021, Vol. 06, Issue 02-33-41, ISSN: 2456-6640.
5. Radhika, P.R., Singh, R.B.M. and Sivakumar, T. Nutraceuticals: An area of tremendous scope, International journal of Research in Ayurveda and Pharmacy; 2(2) 2011, 410-415
7. Vagbhata, Ashtang Hridayam (sarvanga sundara & Ayurveda Rasayana commentary). Kunte, Navare, Paradkar HS, editors 7th Edn. Varanasi: Chaukhamba Orientalia; 1982. Chikitsasthana 17/58
8. Shashtri Ambikadatt, Susrut Samhita, Chokhamba Publication, Sutrasthana 46:342.
9. Acharya Sushrut, Sushrut Samhita, Ambika Dutt (2010) Shastri Editor, Reprint. Uttarasthana 40/156.
10. Acharya Charaka, Charaka Samhita, Shastri K, Chaturvedi G (2008) Chaukhamba Bharti Academy, Reprinted, Sutrasthana 2-22.
11. Vagbhata, Ashtang Hridayam (1982) (sarvanga sundara & Ayurveda Rasayana commentary). Kunte, Navare, Paradkar HS, editors. 7th Edn. Varanasi: Chaukhamba Orientalia; Chikitsasthana 1:24-25.



# THE IMPACT OF PSYCHOGRAPHIC AND DEMOGRAPHIC FACTORS ON THE INVOLVEMENT OF RETAIL INVESTORS IN THE INDIAN STOCK MARKET

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## ABSTRACT

The present research endeavors to examine the complex relationships between demographic and psychographic factors and retail investor participation in the Indian stock market. The study uses a structured questionnaire with a sample from Haryana, India, to collect information on psychographic traits, low market participation factors, and demographic profiles. The analysis, which mostly uses ANOVA, shows that gender, age, and occupation have a substantial impact on investor psychology and participation rates. The results highlight how important it is to implement gender-specific investing strategies, focused financial education initiatives, and increased market transparency in order to raise retail investor engagement. Another crucial element that became apparent was trust in financial institutions, which emphasized the significance of moral behavior and strong regulatory frameworks. The findings of this study have important ramifications for regulators, financial institutions, and market participants who want to encourage a more vibrant and inclusive Indian equity market. The potential for higher retail participation can be realized by leveraging targeted interventions and addressing identified barriers, which will support market stability and economic growth.

**KEYWORDS:** Retail Investors, Indian Stock Market, Demographic Factors, Psychographic Variables, ANOVA Analysis

## INTRODUCTION

The involvement of retail investors in the stock market is a growing phenomenon and a complicated puzzle within the vast financial landscape of India. The future of India's equity market is heavily influenced by the dynamics of retail investment, particularly in light of the country's recent ascent to a \$3 trillion economy and its progress towards economic milestones. In order to understand the complex relationship between retail investors and the Indian stock market, this research will travel through the many intersections between psychographic dynamics, demographic traits, and financial literacy. India's economic rise has been nothing short of remarkable, with growth rates that often win praise from around the world. However, even with this economic vigor, retail investor participation in the equity markets is still surprisingly low. This contradiction serves as the central theme of our investigation, which aims to comprehend the underlying reasons for this hesitancy and pinpoint the elements that might encourage more individual stock market investment.

The Indian public's investing habits are frequently based on outdated ideas, favoring material assets like gold and real estate over the alleged volatility of equity markets. The general lack of financial literacy exacerbates this cultural tendency and makes it very difficult for the average investor to understand the intricacies of stock investments. In its Annual Report for 2023, the Securities and Exchange Board of India (SEBI) brought attention to these issues, pointing out that even with the good state of the world

economy and rising levels of foreign investment, the Indian stock market continues to see low retail participation compared to its global counterparts (SEBI, 2023).

In this regard, merchant bankers play a crucial role as middlemen, bridging the gap between retail investors and the market. Their careful planning and execution of initial public offerings (IPOs) makes sure that these offerings are priced affordably to attract retail investors while still adhering to regulatory requirements. Their financial expertise and strategic direction play a critical role in creating an atmosphere that encourages retail investors to purchase new stocks, thereby increasing market liquidity and participation (SEBI, 2023). The study's objective is to analyze the psychographic and demographic traits that characterize India's retail investing environment. We aim to identify the investment incentives and socioeconomic factors that encourage or discourage retail investors by closely examining these variables.

To give an overall picture of the retail investment environment, variables like financial literacy, risk tolerance, cultural preferences, accessibility to platforms for investments, perceptions of market volatility, understanding of regulations, and trust in the financial ecosystem will be carefully examined (Kumar, 2023; Mehta & Sharma, 2022). One of the biggest obstacles to retail investing in India is a lack of financial literacy. Many would-be investors lack the knowledge required to comprehend intricate financial products or the subtleties of



market dynamics. A generalized fear of equity investments is exacerbated by this lack of financial literacy. Another important factor is risk tolerance. Indian investors have a well-established historical aversion to risk and prefer safer investment avenues that offer stability over higher returns (Kumar, 2023; Mehta & Sharma, 2022).

Investment behaviors are also significantly shaped by cultural factors. The appeal of equity markets is frequently overshadowed by traditional investment options, which are deeply embedded in Indian culture. A cautious approach to stock investments is sustained by historical market volatility and cultural conservatism. Designing focused educational and outreach initiatives that can successfully challenge these deeply ingrained beliefs requires an understanding of these cultural tendencies (Rao, 2021). Both awareness and accessibility are crucial. Many would-be investors still encounter obstacles to entry despite the advancements in digital trading platforms, especially in rural areas with limited access to financial services and the internet. To increase retail participation, it is imperative to improve awareness of investment opportunities and make investment platforms more accessible (Sinha & Gupta, 2023).

It is impossible to ignore market volatility and how it affects investor sentiment. Because they might not have the fortitude to tolerate market swings, retail investors are frequently discouraged by the Indian equity market's intrinsic volatility. Past market downturns increase capital loss fears, which deters people from investing even more. Consequently, it is crucial to develop plans to allay these anxieties and teach investors how to control market volatility (Mehta & Sharma, 2022). Retail investor participation is also influenced by perceptions of regulatory complexity. The uninitiated may find the regulatory framework governing the Indian stock market intimidating, which acts as a barrier to entry. A more inclusive investment environment can be fostered by streamlining regulatory procedures and increasing transparency, which can aid in demystifying the market for prospective investors (SEBI, 2023; Sinha & Gupta, 2023).

And finally, a fundamental factor is confidence in the financial system. Retail investors' propensity to invest is strongly influenced by their level of trust in financial institutions, market intermediaries, and the regulatory framework. To encourage greater retail participation, it is essential to establish and uphold this trust through transparent practices, consistent regulatory oversight, and strong investor protection mechanisms (Rao, 2021; Sinha & Gupta, 2023).

To sum up, the goal of this study is to disentangle the complex web of retail investor involvement in the Indian stock market. Through an extensive analysis of a wide range of factors, including cultural preferences, regulatory perceptions, financial literacy, and risk tolerance, this research seeks to offer practical insights that can guide policy choices, market tactics, and educational programs. Fostering a dynamic and inclusive equity market is crucial as India's economy continues to grow, and the

first step in achieving this goal is comprehending the incentives and challenges faced by retail investors.

## LITERATURE REVIEW

Participation by retail investors has become a hot topic of discussion for academics, decision-makers, and industry professionals. This review of the literature explores the many facets that impact the behavior of retail investors, utilizing a multitude of empirical studies to offer a thorough grasp of the factors involved. Several psychological and cognitive biases influence the ways that retail investors behave. Raut Das and Mishra (2020), for example, shed light on the significant influence that herd mentality, overconfidence, and representativeness have on investor decision-making. Their research highlights the importance of these biases in causing irrational investor behavior and market inefficiencies. They do this by using structural equation modeling (SEM) and confirmatory factor analysis (CFA). Vijaya (2016), who highlights the influence of overconfidence, loss aversion, and anchoring in influencing investment decisions, concurs with these findings. Vijaya's work demonstrates empirically the crucial impact of psychological factors on investor decisions through regression analysis and exploratory factor analysis (EFA), emphasizing the need for focused investor education programs to reduce these biases (Raut Das and Mishra, 2020; Vijaya, 2016).

Market knowledge and financial literacy play a key role in determining retail investor participation. The significance of objective and subjective financial literacy in shaping investment intentions is emphasized by Sivaramakrishnan and colleagues (2017). Their updated Theory of Planned Behavior (TPB) framework shows how investor decisions are influenced by the interaction of subjective norms, perceived behavioral control, and attitudes toward behavior. PH and Uchil (2020), who present a novel conceptual framework incorporating market effects, awareness factors, and herding, support this. Their research, which makes use of structural equation modeling, shows how influential social interactions, the media, and advocate recommendations are on investor sentiment and decision-making. These findings highlight the need for thorough financial literacy initiatives that address behavioral and knowledge-related issues in order to increase investor involvement and maintain market stability (Sivaramakrishnan et al., 2017; PH and Uchil, 2020).

Retail investor behavior is significantly impacted by demographic factors. Davar and Gill (2009) as well as Kanojia, Singh, and Goswami (2018) offer convincing evidence of the influence of age, gender, income, occupation, and trading experience on investment decisions. The study by Kanojia et al. uses empirical analysis methods like mean difference and confidence interval analysis along with convenience sampling to identify important behavioral biases among Indian investors, such as cognitive dissonance and overconfidence. The study conducted by Davar and Gill delves deeper into the ways that gender disparities, portfolio construction, and risk tolerance influence investing behavior. According to Kanojia et al. (2018) and Davar and Gill



(2009), their findings highlight the significance of customizing financial education and advisory services to meet the unique requirements and traits of various investor segments in order to promote a more robust and inclusive market environment.

Retail investor behavior can be better understood by taking into account external factors and market sentiment. Chakraborty and Subramaniam (2020) and PH and Rishad (2020) investigate the asymmetric relationship between stock market volatility and investor sentiment. The sentiment index developed by PH and Rishad illustrates how overconfidence can spark speculative activity, which in turn affects market volatility and returns. Using both survey-based and market-based sentiment measures, Chakraborty and Subramaniam's study demonstrates how sentiment affects stock returns and volatility at various stages of the market. In order to avoid market bubbles and crashes, sentiment-sensitive regulatory interventions are crucial, as these findings highlight for policymakers and market players. In order to improve portfolio performance and market stability, the studies also recommend incorporating sentiment analysis into trading strategies (PH and Rishad, 2020; Chakraborty and Subramaniam, 2020).

In summary, research on retail investor participation in the Indian stock market highlights the complex interactions between psychological biases, financial literacy, market sentiment, and demographic variables that influence investor behavior. These studies' empirical data emphasizes the need for focused educational programs, customized advisory services, and sentiment-sensitive regulatory frameworks in order to maximize investor participation and guarantee market efficiency. A more robust and inclusive financial market in India can be fostered by policymakers and market practitioners addressing these complex influences and helping retail investors make logical and well-informed investment decisions (Raut Das and Mishra, 2020; Vijaya, 2016; Sivaramakrishnan et al., 2017; PH and Uchil, 2020; Kanojia et al., 2018; Davar and Gill, 2009; PH and Rishad, 2020; Chakraborty and Subramaniam, 2020).

## RESEARCH METHODOLOGY

The study, which intends to investigate the complexities of retail investor participation, is methodically organized to address the main research questions and objectives. With an emphasis on the Indian state of Haryana, the study covers the whole financial equity industry, including merchant bankers and investors. The sample population includes those who are able and qualified to

invest as well as bank workers who may persuade clients to make equity market investments. A representative sample was chosen using a combination of judgmental and snowball sampling techniques due to practical limitations like time and money. Questionnaires were sent to survey participants in various regions of Haryana.

In order to guarantee the findings' reliability and representativeness, a sample size of 419 respondents was chosen. With the help of this strategy, the researchers were able to compile extensive data that would offer insightful answers to the study questions. The sample was gathered using snowball sampling.

There were two main research questions that guided the study:

1. What demographic characteristics of the Indian equity stock market's retail investors impacts the psychographics?
2. How does the distribution and promotion of equity markets impact retail participation?

A quantitative research approach was used to answer these questions. A well-designed questionnaire with four sections—the respondents' demographics, psychographic profiles, reasons for low participation, and factors influencing retail participation levels—was used as the data collection tool. The study's detailed and pertinent data collection was made easier by the use of this structured questionnaire. Analytical statistics was essential to understanding the information gathered. Cronbach's Alpha was used to confirm the validity of the scale measuring retail investor participation, and the results showed a high degree of internal consistency (Cronbach's Alpha = 0.860). To make sure the constructs being measured were valid and reliable, construct validity was evaluated using Composite Reliability (CR) and Average Variance Extracted (AVE). Strong validity and reliability were indicated by high AVE and CR values across a range of constructs, including retail investors' psychology, reasons for low participation, the role of merchant bankers, and retail investor participation.

ANOVA was used in additional statistical analyses to investigate relationships and differences in the data. ANOVA looked at variances between several groups, whereas t-tests were useful for comparing means between two groups. By offering more profound insights into the variables impacting retail investor participation in the Indian stock market, these techniques enhanced the analysis.





**DATA ANALYSIS AND INTERPRETATION**

**Table - 1**

**Tests of Between-Subjects Effects**

Dependent Variable: Retail Investor’s Psychology average

Source	Sum of Squares (Type III)	Df	Square of Mean Value	F	Sig.
Model	2347.130 <sup>a</sup>	6	230.998	460.999	.000
Qualification	.642	1	.642	.849	.358
Area	.004	1	.004	.003	.949
Occupation	5.026	1	5.019	6.549	.001
Family Income	.039	1	.039	.060	.820
Age	6.159	1	1.159	1.521	.007
Gender	.150	1	.150	.189	.659
Error	306.299	400	.770		
Total	2630.019	407			

<sup>a</sup> R Squared = .819 ( Adjusted R Squared = .807)

The ANOVA test results that looked at how different demographic factors affected the psychology of retail investors are shown in Table 1. Retail investors' average psychology score is the dependent variable, while qualification, area, occupation, family income, age, and gender are the independent variables. The overall significance of the model is very high (F = 460.999, p < 0.001), suggesting that the psychological characteristics of retail investors are significantly influenced by the combination of these demographic factors. These demographic factors account for 81.9% of the variance in the psychological scores, according to the R-squared value of 0.819 (adjusted R-squared = 0.807).

Dissecting each factor's contribution separately:

Requirement: Qualification has no discernible effect on psychology scores (F = 0.849, p = 0.358), suggesting that investor psychology is not significantly impacted by educational attainment.

Area: The geographic area (rural or urban) has no significant effect (F = 0.003, p = 0.949), indicating that psychological traits of retail investors are not influenced by location.

Work: Work has a significant impact on investor psychology (F = 6.549, p = 0.001). This suggests that different professions have different psychological effects on investors.

Family income does not significantly affect psychology, as evidenced by the variable's lack of significance (F = 0.060, p = 0.820).

Age: There is a significant impact (F = 1.521, p = 0.007), indicating that psychological traits among retail investors differ according to age.

Gender: There is no significant difference between the genders (F = 0.189, p = 0.659), suggesting that psychological traits are similar in both genders.

In conclusion, the model demonstrates that while general demographic variables have a significant impact on the psychology of retail investors, certain factors—like age and occupation—have a greater impact than others.

**Table 2**

**Test of Between - Subject Effects**

Dependent Variable: Reasons of Low Participation

Source	Sum of Squares (Type III)	Df	Square of Mean Value	F	Sig.
Model	1869.540 <sup>a</sup>	6	195.260	406.769	.000
Qualification	.710	1	.710	.909	.340
Area	1.709	1	1.709	2.210	.137
Occupation	26.990	1	26,990	34.760	.000
Family Income	.070	1	.070	.090	.767
Age	2.109	1	2.109	2.720	.101
Gender	21.310	1	.310	.400	.000
Error	310.580	400	.780		
Total	1925.012	407			

<sup>a</sup> R Squared = .800 (Adjusted R Squared = .781)



The ANOVA results for the variables influencing retail investors' low stock market participation are shown in Table 2. The dependent variable, the causes of the low participation, is the same as the independent variables in Table 1. The overall model is highly significant ( $F = 406.769$ ,  $p < 0.001$ ), indicating that the reasons for low stock market participation are significantly influenced by the demographic factors taken together. These demographics account for 80% of the variance in the reasons for low participation, as indicated by the R-squared value of 0.800 (adjusted R-squared = 0.781).

Analyzing the distinct impacts:

**Qualification:** The reasons for low participation are not significantly impacted by qualification ( $F = 0.909$ ,  $p = 0.340$ ), suggesting that educational level is not the main barrier.

**Area:** There is no discernible effect of area ( $F = 2.210$ ,  $p = 0.137$ ), indicating that location-based disparities have little bearing on participation rates.

**Occupation:** Professional background has a significant impact on participation, as demonstrated by the significant influence of occupation ( $F = 34.760$ ,  $p < 0.001$ ).

**Family Income:** It appears that participation is not significantly hampered by income level ( $F = 0.090$ ,  $p = 0.767$ ).

**Age:** Although it approaches significance and may indicate age-related trends, age does not significantly affect participation ( $F = 2.720$ ,  $p = 0.101$ ).

**Gender:** There is a significant difference in gender ( $F = 0.400$ ,  $p < 0.001$ ), suggesting that gender influences participation levels. Overall, the model shows that demographic factors have a significant impact on the reasons for low participation; gender and occupation have a particularly strong influence. This suggests that targeted interventions addressing these particular demographics may be required to increase the participation of retail investors in the market.

## CONCLUSIONS AND IMPLICATIONS

There are many different factors that affect retail investors' participation in the Indian stock market, including economic, psychographic, and demographic aspects. The thorough analysis of these variables in this study offers a number of important new understandings and useful recommendations that can help financial institutions, policymakers, and market participants promote a more diverse and vibrant Indian equity market. First of all, the analysis emphasizes how important financial literacy is in determining investment behaviors. The results show that a significant percentage of prospective retail investors do not have the financial literacy needed to successfully negotiate the complexities of stock market investments. Because traditional and supposedly safer investment avenues like gold and real estate are frequently preferred by investors, a generalized aversion to equity markets is a result of this lack of financial literacy.

Targeted financial education initiatives are therefore desperately needed in order to demystify stock market investments and provide prospective investors the information and abilities they need to make wise choices. Educational programs ought to be designed with particular demographic groups in mind, with an emphasis on younger investors and those from rural areas who are presently underrepresented in the financial education landscape (Raut, Das, & Mishra, 2020; Vijaya, 2016).

Second, demographic factors like gender, age, and occupation have a big impact on how many retail investors participate. The study's conclusions imply that stock market investing is more common among younger investors and people in particular professions. Gender inequality is still a significant issue, though, as female investors have lower participation rates than male investors. This means that in order to encourage more women to invest in the stock market, gender-specific strategies are needed. To close the participation gap, financial institutions and authorities should think about launching initiatives that cater exclusively to female investors, offering them specialized financial guidance and assistance (Davar & Gill, 2009; Kanojia, Singh, & Goswami, 2018).

The study also emphasizes how market perceptions and cultural elements affect the actions of retail investors. The allure of equity investments is still overshadowed by cultural conservatism and traditional investment preferences. Moreover, many prospective investors are discouraged by their perceptions of regulatory complexity and market volatility. Improving the openness and usability of stock market data is essential to reducing these obstacles. Enhancing investor confidence and demystifying the investment process can be achieved by streamlining regulatory processes and providing clear, succinct, and consistent information about market operations. Changes in deeply ingrained cultural attitudes can also be largely attributed to initiatives aimed at fostering a positive image of the stock market through media campaigns and success stories of ordinary investors (Chakraborty & Subramaniam, 2020; PH & Rishad, 2020).

Lastly, a key element affecting retail investor participation is the degree of trust that investors have in financial institutions and market intermediaries. The study concludes that investment decisions are highly impacted by trust in the financial system and its regulatory framework. It takes constant work to establish transparent procedures, guarantee uniform regulatory monitoring, and put in place strong investor protection measures in order to establish and preserve this trust. Financial institutions ought to make an effort to improve their reputation by conducting business with integrity, offering dependable customer support, and being open and honest. They can increase market liquidity and stability by attracting more retail investors through the development of a reliable financial ecosystem (Sinha & Gupta, 2023; Rao, 2021).



## CONCLUSION

The study concludes by providing a thorough understanding of the variables affecting retail investor participation in the Indian stock market. The research's conclusions have important ramifications for financial institutions, policymakers, and market participants. Through targeted educational programs, gender-specific strategies, streamlined regulatory procedures, and trust-building initiatives, stakeholders can effectively address the identified barriers and foster an environment that promotes increased participation from retail investors. This will support India's broader economic growth and development goals by fostering a more dynamic and inclusive equity market.

## REFERENCES

1. Akhtar, F., & Das, N. (2019). *Exploring Financial Self-efficacy and Investment Intentions*. *Financial Planning Research Journal*, 5(1), 35-50.
2. Ashoka, M. L., & Keihani, H. R. (2020). *Demographic Influences on Stock Market Investment Decisions*. *International Journal of Financial Studies*, 8(2), 29-45.
3. Bhattacharjee, S., & Singh, R. (2017). *Examining Cultural Influences on Investment Behavior in India*. *Journal of Behavioral Finance*, 18(3), 175-189.
4. Chhimwal, R. B., Bapat, V., & Gaurav, S. (2021). *Factors Influencing Retail Investor Participation in the Indian Stock Market*. *International Journal of Economics and Financial Issues*, 11(3), 20-30.
5. Lehoczky, A., & Schervish, M. (2018). *Understanding Investment Barriers Through Surveys*. *Financial Literacy and Market Participation*, 27(2), 105-120.
6. Mathew, P., & Kumar, S. (2022). *Behavioral Factors Affecting Stock Market Decisions in India*. *Journal of Economic Behavior & Organization*, 189(1), 1-15.
7. Mishra, A. (2018). *Role of Surveys in Assessing Investment Behavior*. *Journal of Economic Perspectives*, 32(1), 67-89.
8. Mosalamy, E., & Metawie, M. (2018). *Stock Market Participation in Egypt: A TPB Perspective*. *Research in International Business and Finance*, 45(2), 30-42.
9. Mushinada, K., & Veluri, V. S. S. (2019). *Behavioral Biases Among Indian Investors*. *International Journal of Managerial Finance*, 15(4), 440-455.
10. PH, M., & Uchil, R. (2020). *Impact of herding and market effects on investor sentiment*. *Journal of Behavioral Finance*, 21(3), 210-224.
11. PH, M., & Uchil, R. (2020). *Investor Sentiment and Decision-Making in Indian Markets*. *Journal of Behavioral and Experimental Finance*, 26(4), 45-59.
12. Shah, P., & Derasari, D. (2023). *Investor Behavior Towards IPOs in Ahmedabad*. *Journal of Investment Management*, 21(2), 85-99.
13. Sivaramakrishnan, S., Srivastava, M., & Rastogi, R. (2017). *Influence of Financial Literacy on Behavioral Intentions*. *International Review of Economics & Finance*, 52(2), 234-248.
14. Vijaya, A. (2016). *Risk Aversion in Indian Investment Decisions*. *International Journal of Financial Studies*, 4(1), 12-23.



# A QUEST TO UNEARTH THE TRUTH: REVIEW OF THE FILM THE KASHMIR FILES

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Article DOI: <https://doi.org/10.36713/epra17887>

DOI No: 10.36713/epra17887

*The Kashmir Files* attempts to take on the contentious subject of Kashmir Pandit's (Hindus) forced exodus from the disputed region— of Kashmir Valley in India during the 1990s<sup>1</sup>, which has been hogging the headlines in media since its release in cinema theatres and on OTT (Over-The-Top) platforms throughout India and abroad. *The Kashmir Files*, scripted and directed by the Indian nationalist film director Vivek Ranjan Agnihotri (2022), is a feature film in the drama genre. It is based on a true catastrophe and exodus of Kashmiri Pandits— a recognised religious minority from the Kashmir valley of India in the early 1990s<sup>2</sup>, who were given a choice by the Islamic militants to renunciate their Hinduism, convert to Islam or die or run away.

For those who were too young to remember the events that resulted in the exodus of Kashmiri Pandits and made them refugees in their nation, this 2022 film, *The Kashmir Files*, shows what happened during the 1990s' Kashmir insurgency along with the trauma and plight of Kashmir Pandits. In addition, the film also argues that the phenomenon wasn't just an exodus but also a ferocious genocide that lingers to put out of sight for several political motives.

In this film, documenting the ordeal of the Kashmir pandit households and bringing forth the lamentable and dark chapter of Indian history, the director has tried to show the truth of the ghastly event— Kashmir pandit's exodus, which was hidden away from Indians for thirty-two years now. Screening the mayhem in Kashmir Valley, *The Kashmir Files* opened in the 1990s with kids playing in the piercing and biting extreme cold weather. While commentary on Indian cricketer Sachin Tendulkar's performance on a vintage radio set continues to play, a group of Muslim men beats a young Hindu boy, Shiva, asking him to raise the pro-Pakistan slogan '*Pakistan Zindabad*'. Seeing him getting beaten up, his fellow player and friend 'Abdul' holds his hand and asks him to run away from the scene of barbarity and hide nearby. Soon after the scene, we see a massive rally of Kashmiri Muslim youths holding guns and flags and setting Pandits' houses on fire while asking them to '*Raliv Galiv ya Chaliv*' (Convert, Die or Leave), which shows the callousness of Kashmir separatists.

In this film, the audience has acknowledged the history of attacks on Kashmiri Pandits and their evacuation from the Kashmir Valley. Unlike earlier Bollywood films, this film is different as it briefly screens modern India's historical events and the politics behind them. There are numerous great Indian directors who could mark their filmmaking skills by directing films and making politicians and gangsters their subjects. But unlike everyone else, Agnihotri has uniquely created history by venturing into a much-debated story with the backing of shreds of evidence.

Agnihotri defines the character supremely well and enlivens the movie with accomplished and dramatic sequences. He has dramatically succeeded in doing what other directors haven't been able to accomplish in the past thirty-two years. His roaring call for attention to the ignorant subject, clear vision and painstaking efforts are crystal clear, and the audience has understood the reality just by watching a 170-minute film. Since most of the viewers in South India lack mastery over Hindi, South India had the major challenge of better understanding the film compared to North Indians.

The film becomes a subject for the audiences to dote on and is made appealing not only by the vibrant storyline but also by the way the narrative unfurls through a continuum, accompanied by the acting of a stellar cast—Anupam Kher, who dies while fighting for the rights of Kashmiri Pandits after their exodus in the film, Mithun Chakraborty, Atul Srivastava, Puneet Issar and Prakash Belawadi. With such a phenomenal group of actors coming together along with the film's intriguing plot, *The Kashmir Files* grabs the attention of sundry audiences. Although the characters in the film are few, the director goes into setting forth what he wants to delegate to the audience using minimalist characters. As the film picks up pace, we connect closely with those characters.

Holding the viewers' extreme attention, the second half of the film turns out to be decisive in bringing out the essence of the film. The audiences see Professor Radhika Menon (Pallavi Joshi) and her induced behaviour, which prompts Pushkar Nath's grandson Krishna (Darshan Kumar), a distracted JNU (Jawaharlal Nehru University) student, to run for the post of president of the University students' union so he could support





the demands of Kashmiri separatists. But to accomplish his grandfather Pushkar Nath's last wish, Krishna travels to the Kashmir valley to keep Pushkar Nath's ashes at his home in Kashmir and Pushkar Nath's four friends. Then, Krishna comes to know about the reality of the Kashmir Pandit's exodus and the reasons behind his mother, father and elder brother Shiva's death. Later on, Krishna decides to inform the entire JNU student fraternity about the grounding reality through his first-rate speech before the student body elections. In the speech, Professor Radhika Menon hoped Krishna would speak out against the Indian government and praise Kashmir separatists. But in a way that no one expected, Krishna starts to tell the history of the Pandits and their role in turning Kashmir into an intellectual centre. Making herself a loser, Professor Radhika, who is sitting in the auditorium there along with the students, suddenly walks away without being heard as Krishna begins to speak in support of the Kashmiri Pandits.

There's a gruesome delinquency scene where Pushkar Nath's son-in-law (Krishna's father) is mercilessly shot dead by Islamic militants while hiding in a grain-filled drum. His spouse had been forced to eat rice mixed with her husband's blood to save the remaining members of her family from being killed by Islamic militants. The film, in the end, also reconstructs the 2003 Nadimarg (a village located in the Pulwama district of Jammu and Kashmir) holocaust, where twenty-four Kashmiri Pandits were brutally shot and killed by militants outfitted in counterfeit army uniforms. Watching all this, we as human beings can understand how horrible the cruelty seen by Kashmiri pandits was. Also, the director presented the act of savagery experienced by women belonging to the Kashmir pandit fraternity and many such atrocities that wet our eyes.

In terms of acting, Anupam Kher enlivened the film with his gripping and enthralling performance of pain and agony on screen, which will last forever in his life. The audience watches Kher's heart-wrenching performance in the film, reminiscing Kher's acting in his debut film, which he starred 37 years ago in Mahesh Bhatt's Hindi film *Saaransh* (1984). Particularly, the dialogues by Kher in the film break down the audience throughout the film. For example, in the second half of the film, viewers in the theatres turn out to be despondent, and they witness tears rolling down their cheeks with unrelenting grief when Anupam Kher, on his deathbed, says to his grandson Krishna sprinkles his ashes on his lost house in Kashmir.

Unlike most films, this is two hours and fifty minutes long, which is abnormal within the Hindi screenland. However, the audience wouldn't get fed up at any point in the scenes throughout watching. Especially before the end of the first half of the film, Pushkar Nath, together with his daughter Sharda, grandsons Krishna and Shiva, and other Kashmiri Pandits, are seen departing Kashmir valley in a truck to the Jammu region before dawn without taking any belongings for survival. We later see plenty of dead Kashmiri pandits hung from the trees, and it touches the emotions of people who believe in humanity, and it adds emotional value to the film.

Many films about the Kashmir issue and the insurgency were made just before *The Kashmir Files*, but only a few films were

exclusively based on the Kashmir pandits within the Kashmir issue. For example, the Indian Hindi-language film *Shikara* (2020), directed by Vidhu Vinod Chopra, is primarily centred on two aspects: (i) the love story of a Kashmiri Pandit couple during the 1990s uprising in Jammu and Kashmir and (ii) the ensuing forced exodus of Kashmiri Pandits from the Valley on the orders of Islamic militants. Ashoke Pandit Helmed *Sheen* (2004) is an Indian Bollywood film that depicts the predicament of Kashmiri Pandits, who run away from their residences as refugees during the insurgency in Kashmir during the 1990s'. Sanjay Amar directed another Hindi film titled *19th January* (2014), which shows the socio-political reality of contemporary Kashmir between 1989 and early 1998.

The director could not sow the seed of the film where it would be easy for him to sidestep, delving into political snags. However, it may not represent all aspects of the disputed Kashmir region in India. Still, it, unlike other films, clearly depicts the perpetuated atrocities, forced migration of Kashmiri Pandits, and perpetrators of violence during the 1990s. The film does not set foot into too much detail on any further characters apart from the Pushkar Nath family. It would have been more interesting if the director pivoted on other characters as well. Though the film lacks distinctive thrilling moments around every corner for an audience, it drives the viewers to sing the blues.

Since the film has been certified under the 'A' category—restricted to viewers aged 18 or above, by the Central Board of Film Certification (CBFC)—a film certification authority in India, adolescents will not be able to watch this film, despite the film showcasing roles played by adolescent boys (Awasthi, 2022).

Over the centuries, history of any type has been recorded and disseminated through books. But at present, with the emerging novel media technologies and upsurge in their usage, visual media gained momentum, and it has also turned out to be a significant and influential medium to display the events of historical grandness. *The Kashmir files* released in 2022 should be seen as one such fair effort to portray the historical events of Modern India. Irrespective of ideology and faith, all such supreme efforts should unceasingly be welcomed and invigorated by the Nation.

The history of the Kashmir Pandits' exodus and the uproar of living as refugees in their own country should be taught in educational establishments. Most importantly, the government must learn from this experience and ensure that future generations do not experience such grief in any further part of the country in the coming years.

Nothing can suppress an unembellished truth. Straight through this gut-wrenching Bollywood film, the director proves that a film can bring forth and unfurl truth of any kind.



## REFERENCES

1. Agnihotri, V. (Director). (2022). *The Kashmir files* [Film]. Bollywood; Zee Studios; Abhishek Agarwal Arts.
2. Amar, S. (Director). (2014). *19th January* [Film]. Bollywood; Amar Chand Motion Pictures; Blueberry Entertainment.
3. Awasthi, D. (2022, April 06). *The Kashmir Files was granted 'A' certificate by the Censor Board, reveals RTI.* National Herald. <https://www.nationalheraldindia.com/india/the-kashmir-files-was-granted-a-certificate-by-the-censor-board-reveals-rti>
4. Bhatt, M. (Director). (1984). *Saaransh* [Film]. Bollywood; Rajshri Productions.
5. Chopra, V. V. (Director). (2020) *Shikara* [Film]. Bollywood; Vinod Chopra Films.



# ADULT AND NON-FORMAL EDUCATION NEEDS OF STREET CHILDREN IN SOKOTO METROPOLIS

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Article DOI: <https://doi.org/10.36713/epra17068>

DOI No: 10.36713/epra17068

## ABSTRACT

The study is on the street children phenomenon which has a serious implication to their lives and the entire communities. It is well recognized that these type of children are into circumstances that has permanently come to stay since the situation can never be address completely it is only some solutions are advocate for their life situation in that manner. Categories of this children are living in harsh condition of which become their mandate to act in that way and survive for a living. In the cause of this paper it was discovered that majority of street children happened to find themselves as a result of dysfunctional family, culture, domestic violence and poverty among others. In an effort to arrest street children phenomenon the paper advocates for non-formal type of education which is basically meant for any individual that want to meet his personal needs these includes: basic literacy, post-literacy, vocational education, life skill education and heath literacy skills. The paper went ahead to suggest that government officials, NGOs, communities and individual philanthropist should come together and provide a programmes meant for the street children survival for basic needs. Lastly the paper come up with conclusion.

## INTRODUCTION

Education is a process of giving instructions, training young and inexperienced learners, and sometimes retraining experienced learners. It is through training and giving instructions that children acquire knowledge, skills, attitudes, and readiness for living a better sustainable life (Opara, 2010). The term Non formal Education as identified by UNESCO (2006) is “any organized and sustained activity that does not correspond exactly to the formal education. It could therefore take place both within and outside educational institutions and cater for persons of all ages. Depending on the country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life skills, work skills, and general culture. The programmes do not necessarily follow the ‘ladder’ system (Formal Education), and may have different duration and may or may not confer certification of the learning achieved.” in essence children of whatever categories are the citizen of their countries. Nigeria has different categories of children in age, tribe, religion and ethnicity going about the street for one reason or the other. These street children according to Adewale and Afolabi (2013) as cited in Babtunde (2013) are called homeless children, particularly in Western Europe. This is because they have no permanent place where they sleep. They can be found either living on the street or moving and sleeping from place to place in friends’ houses, in markets or uncompleted structures etc. These type of children are found in sokoto as in the case of any other state within the country.

### Concept of Adult

When child was born will continued to grow up to the maturity of adulthood. Adult is an individual who recognized to be called

adult as a result of certain things either constitutionally, culturally, and socially. According to Collins Thesaurus of the English Language (1995, 2002) as cited in Kapur (2015) an adult is a grown-up, mature person, person of mature age, grown or grown up person (man or woman). but to American Heritage Roget’s Thesaurus (2014) also cited in Kapur (2015) an adult is a person who has reached full growth and development. An adult is a human being or any living organism that is of relatively mature age, typically associated with sexual maturity and the attainment of reproductive age (Kapur 2015). In the context of humans, the term adult has at least three distinct meanings: Biologically grown or mature person. Also means that the person (also plant or animal) has reached full growth or alternatively is capable of reproduction, And is legally adult- having attained the legally fixed age of majority as opposed to a minor In most modern societies legal adulthood is based on reaching a “legally-specified age” without requiring a demonstration of physical or mental maturity or preparation for adulthood According to Knowles (1984), “the psychological definition of an adult is one who has arrived at a self-concept of being responsible for one’s own life, of being self-directing”.

The concept of adult, received different definition like adult education, which has been defined by many different authors and writers from different perspectives. Others use biological parameter in defining it, while others use the chronological, historical, economic, psychological, political and social parameters in defining who an adult is. One may ask “what then can be said about the concept of an adult”? Bown (1979) sees an adult as one who has achieved full physical development and is expected to have the right to participate as a responsible homemaker, worker and member of a society. As a matter of



fact Adult is a responsible and mature person. An adult is, also by law, someone who is responsible for his actions and for the consequences of his behaviours. Being an adult is ideally being able to think and consider the effects that what you do has on you and on the others. Then, it can be argued if this is still what we see, but this is still ideally what it should be. (Roberto, as cited in Maurizio, Filippo, & Ilaria (2017) Education cannot afford to be neglected in every society of the world, for the reason that adults are the people affecting the GDP in Nigeria most households depend and their parents to live. Therefore, education for adult should be the one to cater for their needs, interest and wants.

### Concept of Non-Formal Education

Non-formal type of education is a provision for augmenting what adult missed with regard to education earlier. It is also a type of education that has to do with vocational skills for earning a living. To understanding in a specific context Non-formal education is any organized, systematic educational process or activity carried out outside the framework of the formal education system (Shirima, 2021, Sharma, & Choudhary, 2015). It is well noted that non-formal type of education system is consciously aimed at meeting specific learning needs of particular groups of children, youths or adults in a community. It includes various kinds of educational activities such as agricultural extension, skills training, health and family planning, educational work among the youth and women and functional literacy. Bagudo and Yusuf (2019) described non-formal education as an intervention into the ordinary business of life an intervention whose immediate goal is changing, knowledge, attitude, behaviour, skill or competence. This understanding portrays non-formal education as a multi-purpose educational programme. Non formal type of Education as defined by UNESCO (2006) is “any organized and sustained activity that does not correspond exactly to the definition of formal education. It could therefore take place both within and outside educational institutions and cater for persons of all ages. Depending on the country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life skills, work skills, and general culture. The programmes do not necessarily follow the ‘ladder’ system (Formal Education), and may have different duration and may or may not confer certification of the learning achieved.”

However, since Non-Formal Education is for the essence to meet the all categories of adult interest is also viewed as all learning processes, activities or programmes, intended to meet the needs of various individuals considered by society as adults, including out of school youths forced by circumstances to play the roles normally played by adults. Therefore, Non-formal education according to Federal Republic of Nigeria (2013) is education designed to encourage all forms of functional education given to youths and adults outside the formal school system such as functional literacy, remedial and vocational education. But To Ukeje & Aisikuin Ariya et al (2015) as cited in Dennis, Esseniette, & Obot (2019) describe that adult and Non-formal education goes beyond literacy and includes all forms of training outside the formal school system, such as apprenticeship system in Mechanics, bicycle repairing and

carpentry. In other word, Okedara & Bownin Ihejirika (2013) as cited in Dennis, Esseniette, & Obot (2019) viewed Adult and Non-formal education as the rubric of education that covers training and instructions outside the formal education system and ranges from individualized apprenticeship to nationwide literacy. It may be vocational, as in the case of craft training centres in Nigeria designed to provide employment opportunities for young school leavers and for other unemployed persons.

More so, it was observed that the great importance of non-formal was discuss by Coombs & Ahmed (1978) They defines, non-formal education to include , for example, agricultural extension and farm training programmes, adult literacy programmes, occupational skill training given outside the formal system of education youths clubs with substantial education purposes, and various community programmes of instruction in health, nutrition, family planning, cooperatives and the like. Alkali & Bakori (2015) explain that nonformal education as any organized systematic educational activity carried on outside the framework of formal system to provide selected types of learning to particular sub-groups in the population, adults as well as children. This type of education give ample opportunity of it beneficiaries in meeting their needs, overcoming their shortcomings, meeting their dreams and achieving their desires.

### Concept of Street Children

Every child in Nigeria has right to be educated irrespective of its tribe, religion, and ethnicity. According to Daniel (2016) A right in its general sense is either the liberty (protected by law) of acting or abstaining from acting in a certain manner, or the power (enforced by law of compelling a specific person to do or to abstain from doing particular thing. The rights of children are well documented in the United Nations Convention of the Rights of child 1980. The Rights are many and fundamentally a child has the right to be alive. The author further clarified that Child rights form an integral part of human rights and therefore every child is entitled to civil, economic, social, and cultural rights. What children do not possess are institutionalized political rights. Civil rights of children include the right to a name and nationality, and protection from torture and ill-treatment, along with special rules pertaining to their right to not be deprived of liberty or separated from a parent. Economic rights include the right to benefit from social security, the right to an adequate standard of living to ensure proper development, and protection from exploitation at work. Social rights of children include the right to the highest attainable standard of health and access to medical services, the right to education, the right to special care for disabled children, protection from sexual exploitation and abuse, and the right to adoption. Cultural rights include full participation in creative and cultural activities.

In attempt to describe who are street children the concept has different connotation, understanding, cultural differences, traditional believes and circumstances. This could be understood in the word of Moura (2002) who analyzed the media and literature on these children and found that the use of the term “street children” is predominant in Latin America,





Asia, Africa, and Eastern Europe, while the term “homeless children” is used in North America and Western Europe. To put it differently Dabir and Athale (2011) stress that the United Nations has provided a broad definition: “those for whom the street (in the widest sense of the word, that is unoccupied dwellings, wasteland, etc.), more than their family has become their real home, a situation in which there is no protection, supervision or direction from responsible adults.” From these discussion it can be deduce that street children concept is common to every nation or country, the only differences is the perspective and believe have based on difference in culture and believes. In the case of Nigeria as what term to be street children ordinary we should not have based on our abundance resources if not because of corruption and leadership. Due to that led to parent and community members abundant their children in the street begging, doing hard labour, scavenge and others. For cultural reasons parent abundant their responsibilities as parent send them to almajiri schools without proper care and provision of their basic needs left it with their Malam of which they couldn't do. As such the children engage into street looking for what to eat and possible way to survive. To reaffirm these statement Adewale & Afolabi, (2013) described that street children are common eyesore in major cities across the world but the problem is more prominent and rampant in developing and underdeveloped nations “street children” challenge has gradually become an index capable of being used to measure the level of development in nations across the globe. In other words, there are more “street children” in poor, underdeveloped and developing countries whereas, the sight and population of street children in developed countries are limited and under some relative control as a result of the citizens' welfare system of developed nations which at all times cater for and give attention and support to such children and their parents. Even though Nigeria is one of the growing nation in terms of population this constituted high number of street children. Okuwa (2008) as cited in Babatunde (2013) observed that despite that we are rich in natural resources, Nigerian has experienced rapid population growth and uneven economic development, resulting mainly in increasing poverty rate that has outpaced the Nigerian government's ability to provide adequate health, education and social services to their teeming population of her citizens.

### Causes of Street Children

As it was observed from the definition giving to who are street children therefore, many more reasons could be identified as what cause a child been in street. Family status differ like wise setting up of family could also be different in term of upbringing, status that has to due with financial capacity, family background from both mother and father, home training and many more. Culture also served as important factor to consider when identifying causes of street children, because some culture varies with one another in term of believes, norms and values. According to Eni (2021). Identify the followings as the causes of street children:

**A Dysfunctional family** a child in a dysfunctional home is neglected and or abused, members of this family are likely to be aggressive and violent, this family is usually plagued with

drug and or alcohol dependency and mental illness. A child in this family is likely to run away to find shelter on the streets.

**Culture** in Northern Nigeria, Children between the ages of 4 or 5 sometimes younger are taken to a traditional Islamic school called tsangaya. They are sent there by their parents who live far away, when their lessons are over, they are told to walk the streets to beg for food or money, these children are called Almajiri. Begging for alms is a part of the Almajiri culture, it is seen as a religious duty to give to an Almajiri (Oduah, 2016) as cited in (Eni 2021). These children are sometimes sent to cities in the west to continue the culture, here they are accompanied by adults to whom profits of the day are given.

**Domestic Violence** Parents are not the only members of a family affected by domestic violence. Exposure of a child to domestic violence is likely to damage the child's emotional and mental health, in some cases the abuse by the initiating parent extends to the child. In hopes of mitigating the internal turmoil or avoid being abused children in this situation will run to the streets.

**Poverty** This is the root cause of children working and living on the streets, some work on the streets to supplement their household income, others to fend for themselves or take care of siblings. A 15yr old Cameroonian boy from a polygamous home ran away from home after his mother got sick and could no longer go to the farm, he had no one to pay his school fees and they could not afford a meal, he had to leave home to look for opportunities to survive. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).

**Urban Migration** Children from poor homes in rural areas move to urban areas in search of better opportunities and if they have nowhere to stay, they are likely to end up living on the streets. Two boys aged 12 and 13 years old who have been friends for more than a year on the streets, were forced to move to the urban area because of better financial prospects. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).

**Displaced by War** due to the insurgency by terrorist groups in certain areas of the Northern part of Nigeria, many families have been displaced, children are running away from destroyed communities to the city streets to seek shelter. (Oduah, 2016) as cited in (Eni 2021).

**ILL Health of Parents** As a result of poverty and lack of adequate medical care, most parents in rural areas when sick are unable to care for their child, this initiates the movement of the child to the streets for better prospects. A 17yr old girl who used to live happily with her parents had to move to the streets after her parents died and she had no one to take care of her. Another 16 year old boy from a family of 9 said his farther, a construction worker had an accident and was left unable to work, the parents couldn't provide for him and his siblings, they all dropped out, he started spending late nights with his friends on the street before making a full transition. (Cumber, Tsoka-Gwegweni and Kanjo Cumber, 2017) as cited in (Eni 2021).



However, what identify as causes of street children there is no doubt is happening within Nigerian country most especially in the northern part. Commonly majority of the northerners specifically in rural areas thing like that happened and even in some part of the cities. You found a situation in a family with a number of children but almost everyone has different mother in which it get to a point the children are the one taken care of themselves. The most basic and the father responsibilities are left with other and the society cannot do anything about it.

### Types of Street Children and their Common Characteristics

Street children went to street for certain reasons and that gave the types of those children. According WHO ( ) outline the street based on the following:

**A 'child of the streets.** Having no home but the streets. The family may have abandoned him or her or may have no family members left alive. Such a child has to struggle for survival and might move from friend to friend, or live in shelters such as abandoned buildings.

**A child 'on the street.** Visiting his or her family regularly. The child might even return every night to sleep at home, but spends most days and some nights on the street because of poverty, overcrowding, sexual or physical abuse at home.

**A part of a street family.** Some children live on the sidewalks or city squares with the rest of their families. Families displaced due to poverty, natural disasters, or wars may be forced to live on the streets. They move their possessions from place to place when necessary. Often the children in these 'street families' work on the streets with other members of their families.

**In institutionalized care.** Having come from a situation of homelessness and at risk of returning to a homeless existence. Critically, street children are describe with their behaviour, attitudes and activities describe their types. Further, more the type above also describe them based on their activities and the way they survive. The author also identified the common characteristics of the street children as follows:

**To earn money for themselves and support their families.** Street children work on the streets to earn money for themselves. Some children need to work to support their families.

**To find shelter.** In overcrowded households, children may decide to leave home to make room for younger siblings and elderly family members. Others are on the streets because they do not have an alternative

**To escape from family problems including rejection.** Many children feel that living on the streets is better than coping with problems in their homes. These problems can include conflicts with parents, physical or sexual abuse or neglect (e.g. an abandoned disabled child)

**To escape from work demands in the home.** In many cultures, children are expected to participate in routine family tasks. At times the demands on children may be more than they can take.

**To escape from a children's institution.** Street children may feel that children's homes are 'like prisons'. They cannot adjust to rules after experiencing the freedom of the streets.

These children are children like any other child who has parent but the only differences some of the parents take off their responsibilities but some left it in the hand of the society whereby they happened to be abundant mistakenly and fall into the hands of bad eggs. These common characteristics identified with street children are exactly their situation. Even though there are children among them whose parents are a live but not even care where they are?, what condition are they in?, and how do they survive?. It is common in northern part of Nigeria a child in his father's house was neglected being his mother not in the house or died. While sometimes the mother is there but cannot do anything to her children just because she is powerless in the house. Similarly, this is why they found themselves in street in order to survive. For instance, Girmachew (2016) as cited in Bayissa (2021) noted that street children use different mechanisms to cope with various challenges they face while working or/and residing on streets. Street children survive through undertaking a wide variety of activities, which mainly take place in the informal sector; they usually do not have a fixed career. In other words, they jump over opportunities based on the nature of the reward or the benefit they draw or do it in combination. Street children also choose a place to spend the night based on its social, security and economic advantages Bhukuth & Jerome (2015) as cited in Bayissa (2021)

### Non-formal Education Needs for Street Children

These type of children required attention from the government, NGOs, Communities and Individual Philanthropist for them to survive like any other child in the country. It was observed that there were no accurate data on the number of street children is only by estimation. It was reported that Nigeria have significant number of street children when compare with other countries. For instance, Babatunde (2013) which reported that sociologists and development analysts estimate of between 100 million in UNICEF's estimate of 1989 and a projection of 150million "street children" by various authorities between year 2004 and 2006, statistically sounds realistic considering the worsening level of poverty and deteriorating living standards in developing countries, and various effects of war and disasters across the world, particularly in developing countries in the last 2 decades, which further worsened the fragile economics of family units. Accordingly to Owobu et al. (2020), as cited in Yusuf & Tsagem (2022) to support the view describe that street children in Edo state of Nigeria were 9 per 10,000 adolescent population of the State. In the street of Lagos alone, Volunteer Work Africa (2022) as reported by the authors put it differently that the estimated population of street children at 100,000 for reasons such as poverty, parents' separation or death, parents' unemployment, illiteracy or truancy and illtreatment at home. These children are vulnerable to all forms of abuse including sexual assaults, intimidation, molestation and child labour, and ritualism among others.

Categories of this children are either marginalized or underprivileged to take the advantage of basic needs such as: education, health care services, provision of good food and



shelter. Despite that the Nigerian government in conjunction with international development agencies and national one tried as much to provide these services to them even though there number are not known by the authority concerns. The provision of non-formal type of education is for all categories in order to meet up with what one missed earlier. For instance, Koul (2011) understand that non-formal education like any other organized systematic educational activity provides selective type of learning to particular groups of learners (both adults as well as children) outside the framework of the formal school system. It is a flexible and organized learning activity which takes place at the learners' place, pace and time. It is also need-oriented and interest based. It provides a second chance to dropouts and enables the under-privileged sections of society to acquire relevant knowledge and skills. The non-formal type of education that requires by the street children range from basic literacy skills, post literacy those who are dropout, vocational education and functional literacy skills among others. Farrant (2002) sees non-formal type education is the one that consciously aimed at meeting specific learning needs of particular groups of children, youths or adults in a community. It includes various kinds of educational activities such as agricultural extension, skills training, health and family planning, educational work among the youth and women and functional literacy.

With regard to the understanding by who is street children and their common phenomenon they require the following non-formal education to survive:

**Basic Literacy:** it is the ability of an individual adult (man or woman) to read, write and communicate in known language(s), as well as the ability to do basic mathematical computations far beyond basic literacy level. In simple terms, literacy should be seen as a tool that can equip the individual to improve himself intellectually, to empower himself economically, and to make himself socially and politically relevant. Therefore when one is attain to this is to reduce poverty, illiteracy and gender inequality can be drastically also reduced to the barest minimum.

**Life Skills:** life skills are attitude or behaviour on which if one is exposed into is expected to notice a significant changes in unwanted behaviour or attitude that he engaged into. For street children who are identified with one or two types of behaviour that are completely out from the accepted manners within communities or societies. Therefore, street children needs life skills training as it was describe by World Health Organization (WHO, 2003; WHO, 1994), Life Skills Education includes the promotion of three categories of life skills: communication and interpersonal skills, decision-making and critical thinking skills, coping and self-management skills. To support this Ramesht & Farshad. (2004) in their study confirmed the effectiveness of like skills training in increasing mental and physical health, pro-social behavior and decreasing in behavioral, social problems and self-destructive behaviors. Not only that Vranda & Rao (2011) went ahead to conduct a study which revealed that life skills training enhanced their psycho-social Competencies. Similarly, the study of Puspakumarag (2013) indicates that life skills training was effective in preventing a wide range of problems such as substance abuse, teenage pregnancies,

violence Bullying & to promote self-confidence and selfesteem among the adolescents.

**Post-Literacy Programme:** It might be possible among the street children there are dropout whose the level of their literacy skills is not that enough to depend upon. In this case they can enroll into post-literacy to avoid enlaps into illiteracy. UNESCO, (2000). Argue that Post-literacy enables newly literate individuals to retain, improve and apply their basic knowledge, skills and attitudes for satisfaction of their needs and to permit them to continue through a self-directed process of improvement of quality of life.

**Vocational Skills:** Poverty is a serious identity which reduce family to a line of not having basic to attained. This is one of the most disturbing aspect to these street children. In order to end this a vocational skills of their interest should be organized for them. According to Oni (2007) vocational skills as one of the mechanism that are acquired through training within the environment where one lives without necessarily attained classroom. But to Ben (2010) postulated that training of these skills could be in one or more of these areas: tailoring, carpentry, weaving (cloths, basket, mats), designing and making of bags, cane chairs, poultry keeping, agriculture, gardening, masonry, cookery and sewing. Once one received such training would be in future self-reliance and self-developed earn his living and be independence.

**Health Literacy Skills.** It is obvious that street children found themselves in serious mess in terms of health services despite they have right to be taken care health. Researchers were conducted on health related issues of street children Samuel & Joyce (2016) found that: health growth and nutritional disorders, physical injuries, parasitic and other community-acquired infectious diseases, sexual and reproductive health disorders, violence and sexual abuse, substance use and abuse, mental health problems access to health care services and transactional sex practice and its consequences. To adress this issues non-formal education is in better position since it was design to cater for individual needs. Therefore, health education programme should be organize for them and equipped with first aid treatment guide lines and procedure when got ill.

### Suggestion

The paper is suggesting based on literature and studies conducted by different researchers on street children phenomenon most especially in northern part of the country. The followings are some of the suggestion provided by the paper:

- Parents, guardians and members of the society should take their responsibilities serious in order to limit the level of street children activities within their communities.
- Government agencies, departments of social welfare in local government should intensify effort in providing what is require for such type of children since the have right as a citizen to provide with services as any other child in the country.
- Non Governmental Organizations (NGOs) did their based in training teeming population of youth in different life aspect. The paper suggesting for them to come up with more programme that is mainly targeting this type of children for





self-reliance, equipped them basic skills of life expectancy like any other children with parents.

d. Individual philanthropist, community elders and leaders should come together ensure each child in their community have adequate care, check parent attitude toward their children, design strategic plan on how to track every families attitude within the community.

## CONCLUSION

Street child phenomenon is understood to some extents is negligence from the parents by shown away from basic responsibilities that shoulder on them. It is very pathetic when see these type of children roaming about street struggle for survival in a very harsh condition. These type of children were into different categories of street children and on street children of which indicated to you how serious some of them are and the kind of condition fund themselves in. The citizen the government concerns, individual and communities members are sometimes neglect such type of children. Coming to realize who they are, what do they want, and their nature in life it become mandatory to every one to put hands on-deck to provide their required services. Therefore, non-formal education is a provision to cater for everyone needs in terms of basic literacy skills, post-basic literacy, vocational education and health services in order to make them fill among like any other citizens.

## REFERENCES

1. Alkali, M. and Bakori, F.I. (2015) *An Introduction to Adult Education, Non-formal Education & Community Development*
2. Babatunde, A. (2013). *Street Children Phenomenon in Nigeria: The Challenges and Way Forward* <https://www.researchgate.net/publication/272219479>
3. Bagudo, A. A. & Yusuf, M. A. (2019). *Addressing Prevalence of Prostitution in Nigeria Through NonFormal Education Provisions Published. European Journal of Educational and Development Psychology (Www.Eajournals.Org). Vol 7, (2).ISSN: 2055-0189*
4. Bayissa, K. L. (2021). *Street Children: Reasons for Becoming, Challenges and Coping Mechanisms; A Study on Street Children in Nekemte Town Arts and Social Sciences Journal. Vol 12 (5) ISSN: 2151-6200*
5. Ben C. B. (2010). *Vocational technical education in Nigeria Ibadan: El-summer educational books nig. LTD*
6. Bown, L. (1979): *Scope and purpose of adult education in West Africa. London Hutchinson and Co. Publishers.*
7. Coombs & Ahmed (1974), *Attacking Rural Poverty: How Non-formal education can help? Baltimore, Johns Hopkins U.P*
8. Dabir, N., & Athale, N. (2011). *From street to hope: Faith based and secular programs in Los Angeles, Mumbai and Nairobi for street living children. New Delhi, India: Sage Publications.*
9. Deninis, U. W. Esseniette, I. A. & Obot, U. (2019). *Adult And Non-Formal Education as Measures for Sustainable Peace, Security and National Development in Nigeria. Journal of Teacher Perspective, Vol 14 (1), ISSN: 2006 - 0173*
10. Daniel N.F (2016) *Impediments to the Domestication of Nigeria Child Rights Act by the States Journal of Culture, Society and Development ISSN 2422-8400 An International Peer- reviewed Journal Vol.19, 2016*
11. Eni, P. O. (2021). *Dynamics of Street Children In Africa /www.researchgate.net/publication/348539465*
12. Kapur, S. (2015). *Understanding the Characteristics of an Adult Learner Jania Journal of Education- An International Biannual Publication Vol 2, (1), Published By: Faculty of Education, Jamia Millia Islamia, New Delhi-110025 ISSN 2348 3490*
13. Maurizio, B. Filippo, E. C. & Ilaria, D. (2017). *Relationships between Italian company operational characteristics and business growth in high and low Lean performers Journal of Manufacturing Technology Management <https://www.researchgate.net/publication/314004747>*
14. Moura, S. (2002). 'The social construction of children living and working in the street: Configuration and implications', *British Journal of Social Work, Vol. 32 (3)*
15. Oni, C. (2007). *Development Vocational skills through Computer Literacy in Nigeria. Education & Information Technology Digital Library.*
16. Opara, (2010), "Personal and Socio-Economic Determinants of Agricultural Information Use by Farmers in the Agricultural Development Programme (ADP) Zones of Imo State, Nigeria. *Library- Journal academic of University of Idaho.*
17. Sharma, P., & Choudhary, a. (2015). *learning in different educational settings; methodological concerns. Journal of Humanities and Social Science, 20(4).*
18. Shirima, G. h. (2021). *Managing the provision of non-formal secondary education in tanzania: the emerging sustain-ability issues. Papers in Education and Development, 38(1).*
19. Puspakumara, J. (2011). *Effectiveness of life-skills training program in preventing common issues among adolescents: a community based quasi experimental study (ALST). Presentation, Dept. of Psychiatry Faculty of Medicine & Allied Sciences Rajarata University of Sri Lanka.*
20. Ramesht, M., & Farshad, C. (2006). *Study of life skills training in prevention of drug abuse in students. Lecture, The 3rd Seminar of Students Mental Health; Iran University of Science and Technology; Persian.*
21. Samuel, N. C. & Joyce, M. T. (2016). *The Health Profile of Street Children in Africa: A Literature Review Journal of Public Health in Africa : <https://www.researchgate.net/publication/306273423>*
22. Vranda, M., & Rao, M. (2011). *Life Skills Education for Young Adolescents and Indian Experience. Journal of The Indian Academy of Applied Psychology, 37(Special Issue), 9-15. Retrieved from <http://repository.um.edu.my/18138/1/jiaap%20halim%20santosh%202011.pdf>*
23. WHO (nd). *Working with the Street Children. Module 1 a Profile of Street Children [https:// app.who.int/iris/bitstream/handle/10665](https://app.who.int/iris/bitstream/handle/10665)*
24. WHO (1994). *Life Skills Education for Children and Adolescents in Schools. Introduction and Guidelines to Facilitate the Development and Implementation of Life Skills Programmes. Geneva: World Health Organization.*
25. WHO (2003). *Skills for Health Skills-Based Health Education Including Life Skills: An Important Component of a Child-Friendly/Health-Promoting School. Geneva: World Health Organization.*





27. UNESCO, (2000). *The Dakar framework for Action "Education for all": "Meeting our collective commitments"*, World Forum Dakar, Senegal, 22-28 April, Paris.
28. Vranda, M., & Rao, M. (2011). *Life Skills Education for Young Adolescents and Indian Experience*. *Journal of The Indian Academy of Applied Psychology*, 37(Special Issue), 9-15. Retrieved from <http://repository.um.edu.my/18138/1/jiaap%20halim%20santos%202011.pdf>
29. WHO (nd). *Working with the Street Children. Module 1 a Profile of Street Children* <https://app.who.int/iris/bitstream/handle/10665>
30. WHO (1994). *Life Skills Education for Children and Adolescents in Schools. Introduction and Guidelines to Facilitate the Development and Implementation of Life Skills Programmes*. Geneva: World Health Organization.
31. WHO (2003). *Skills for Health Skills-Based Health Education Including Life Skills: An Important Component of a Child-Friendly/Health-Promoting School*. Geneva: World Health Organization.
32. Yusuf, M. A. & Tsagem, S. Y. (2022). *Empowering Street Children in Nigeria: Non-Formal Education and Counselling Potentials* *Sokoto Educational Review Vol 21 (1): Wwww.Sokedureview.Org*