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NATURE OF TEACHERS MOTIVATION TECHNIQUES ADOPTED BY DIFFERENT CATEGORIES OF PRIVATE SCHOOLS

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ABSTRACT

Teachers' motivation and successful retention of teachers for a longer period is purely depends on the intrinsic, extrinsic and altruistic motivation factors. This research article aims to analyse nature of teachers' motivation technique adopted by different categories of schools (based on the ownership pattern) in Coimbatore city. Convenience sampling technique was applied for collection of data from the targeted sample group of teachers i.e., 100 teachers from each category of private schools. Researcher succeed in collecting 390 filled questionnaires. Data analysis indicates that the private trust schools and privately owned educational institution (entrepreneurs) attempts to keep their teachers motivate through provision of right value of monetary benefits (salary and other perks). And this motivation factor slightly varies and lower in the specific community owned schools and the schools that are run by the minority communities. At the next level, with slight differences in the percentage values, it was observed that all categories of school aim to reduce the stress level of teachers and ensure that they work in a relaxed environment. At the third level all schools functioning in Coimbatore city ensure that their school has pleasant environment and enough equipped in terms of infrastructure. The private schools functioning in Coimbatore city are suggested to focus on offering the teachers training cum upskilling opportunities, that not only support them to offer their service effortlessly cum effectively, it also supports them to plan for their career progress and move-upward in their career. All categories of the private school managements are suggested to be fairness and be approachable to the teachers.

KEY WORDS: Private Schools, Teachers, Motivation, Retention

INTRODUCTION

Individuals' attraction towards teaching career is diminishing, teaching is no more any attractive career for the educated young youth of the nation. This issue is not peculiar to India, but prevailing across the world countries as many of the developed (UK and USA) and developing countries faces the issue of shortage in teachers' attraction and retentions. It is estimated there is need for 8 lakh teachers in the coming next 3 years. Shortage of teachers in the private schools greatly restrict the schools in enrolment of new students and more students, that directly influences the school earning and sustainability (www.fsg.org, 2021).

Good and knowledgeable teachers become a prime tool in individual students' and only well motivated teacher can become a tool in students' performance. Teachers' motivation and successful retention of teachers for a longer period is purely depends on the intrinsic, extrinsic and altruistic motivation factors. Quality of education imparted through schools from base for the effective the performance of the students, which is completely dependent on the teacher who works in that school and contribute a lot for the betterment of the students. Effective motivation creates a feel of job motivation and it in turn influences the performances and retention of teachers in a specific school (Tehseen and Ulhadi, 2015). In short,

motivation to be a teacher differs from one individual's perspective and desire from others. Motivation theory could be applied to explain a person's motivation to become teachers and the factors that motivate them to continue their teaching services (Shikalepo,2020). As the results, teachers' retention is highly challenging task for the private school managers. Offering right type of motivation and adoption of changes in the schools' management practices are the single and most importance solution available for the private schools to retain and keep them satisfied.

FOCUSED AIM OF THE STUDY

Private school administrators constitute their own HRM policies and it differs from one school to other. Some school adopt teachers friendly and supportive work culture and try to maintain healthy relationship between the school leader (principal), senior colleagues and junior colleagues. On the contrary, some school work environments are found to very harsh and less teacher friendly. It strictly influences the teachers' retention practices adopted by the private schools i.e., either "hire and fire" or "Hire Quality Teachers, Enhance their Skills and Retain them till their retirement". As it is well understood that teachers' motivation is a key element that will resolve the issue of teachers' shortage and in curtailing their turnover to a larger extent. Teachers' motivation is closely



related to their psychological satisfaction with the school and its administrators (Han and Yin, 2016).

OBJECTIVE OF THE ARTICLE

This research article aims to analyse nature of teachers' motivation technique adopted by different categories of schools (based on the ownership pattern) in Coimbatore city.

HYPOTHESIS

H1: Teachers' motivation techniques adopted differ from one category of the school to other (based on its ownership pattern).

LITERATURE DISCUSSION

Researcher was able to collect selective reviews on the concept of teachers' motivation in private schools are collected and documented in this sub-section.

Nearly 3.3 million teachers are working in Private schools in both rural and urban regions in India (Chudgar and Sakamoto, 2021). Government and Government aided school practices standardised methods in recruiting full-time and part-time teachers, whereas the private schools fail to adopt a standardised practice of teachers' recruitment (Ramachandran et al., 2018). Corporation school teachers enjoys good working condition, infrastructure facilities and highly valued salary packages that motivate them to work effectively Arunadevi and Sunitha (2018). School faces issues in both recruiting and retaining quality and experienced teachers. Schools faces issues that even a well experienced teachers leave their job /turnover for various reasons in the recent times (Sen and Mehta, 2023). Factors that influence teachers' recruitment are potential teacher's ability to teach, being social, ability to use the resources available, nature of intrinsic values they have etc Swetha (2021). There exist differences in school teachers' recruitment practices from one regional state to other (Chomal and Raj (2022). At the same time teachers age, their educational qualification, their designation in the school, teaching experience, school location, type of school, classroom climate and the level of job satisfaction released by them influences their competency level (Rajathi and Begam, 2012).

Teachers working in Private schools are found to be less pleased and satisfied with their job compared to the Government and Government aided schools in the study regions (Arumugasamy and Ren, 2013). School managements attitude towards teachers, regional location of the school and teachers' qualification are the factors that motivates, effective work environment, and support the schools in retaining the teachers (Sekhar et al., 2014, Das and Baruah, 2015). The teachers' motivation level differed from one school type to other i.e., based on their

gender, school location, school management type, professional service experience and amount of monthly income earned by them (Rajammal,2021).

Through the literature assessment it has been well understood that teachers' motivation level differed from one school type to other, so far, no study has been conducted that discusses on the teachers' motivation in different categories of schools owned by the private entities. Prevailing dearth of the researcher provided a wider scope for authoring this article.

METHODOLOGY AND DESIGN

Construction of the article was supported by qualitative (literature analysis) and quantitative (empirical) analysis. The primary data needed for the study was collected through conduct of direct discussion and distributing questionnaires among the private school teachers. The secondary data were collected from the previous studies conducted on researcher on the topic journal publications, magazines, articles and past scholars research work. For fixing of right samples the researcher had chosen two type of sampling techniques in this study i.e., one for the categorisation of private schools functioning in Coimbatore city, that was clustered based-randomly classified as trust, private education institution, particular community and minority institution. Convenience sampling technique was applied for collection of data from the targeted sample group of teachers i.e., 100 teachers from each category of private schools, 400 samples. Researcher succeed in collecting 390 filled questionnaires.

DISCUSSION AND RESULTS

Private school functioning in Coimbatore region primarily focused to recruit teachers those who possess adequate teaching qualification, strong in multi-tasking equipped with right teaching techniques, subjects' expertise and being well organised. The sample schools are found to be more academic progress oriented and they focus to achieve good results in the higher and higher secondary board examination i.e., fair well attitude. The 390 samples collected were distributed as 66.41 per cent of the private school women teachers and 33.59 per cent men. Precisely 41.54 per cent of the sample teachers are aged between 31-40 years and 27.44 per cent were aged between 41-50 years. The data indicated that majority of the teachers participated in the survey are matured and experienced too. Majority i.e., 51.28 per cent of the school teachers had completed UG degree with B.Ed., and 16.92 per cent of the teachers has PG degree with B.Ed., qualification. Exactly, 49.67 per cent of the teachers have accumulated teaching experience of 6-10 years and 37.97 per cent of school teacher salary package values between Rs. 1,80,000-Rs. 2,40,000 per annum.



TABLE: 1
DIFFERENCES BETWEEN OWNERSHIP OF SCHOOL AND MOTIVATION OF TEACHERS
 (Value in Percentage)

Variables	Trust	Private Educational Institution	Particular Community	Minority Institution
Provision of Right Monetary Benefits	90.42	90.30	89.96	89.80
Fairness and Management Accessibility	77.80	76.62	76.82	76.74
Teachers Training and Skills Upgradation	77.66	77.10	77.20	77.10
Scope for Career Progress	81.52	80.20	80.12	79.84
Scope for Stress Reduction and Relaxation	82.22	82.04	81.98	81.84
Job Delegation	80.52	78.74	78.80	78.74
HR Policy	78.82	78.40	78.86	78.66
Institutional Culture and Environment	79.78	79.00	78.80	78.90
School Environment and Infrastructure	82.22	82.10	82.20	82.30
Fixing Accountability and Recognition	80.36	79.74	79.80	79.66
Recruitment and Retention Policy	79.98	79.38	79.38	79.28

Source: Computed from Primary Data

To draw a uniformity in the data analysis the coded data were converted into percentage values, that supported in assessing the score of each motivation factors and its differences prevails in each category of the school. Data analysis indicates that 90.42 per cent of the private trust schools and privately owned (90.30 per cent) educational institution (entrepreneurs) attempts to keep their teachers motivate through provision of right value of monetary benefits (salary and other perks). And this motivation factor slightly varies and lower in the specific community owned schools and the schools that are run by the

minority communities. At the next level, with slight differences in the percentage values, it was observed that all categories of school aim to reduce the stress level of teachers and ensure that they work in a relaxed environment. At the third level all schools functioning in Coimbatore city ensure that their school has pleasant environment and enough equipped in terms of infrastructure. The least score, were placed for the schools focus on teachers training cum upskilling them and the fairness and inapproachable behaviour of school management.

TABLE: 1
MEASURE OF DISPERSION AND ONE-WAY ANOVA TEST OWNERSHIP OF SCHOOL VS. MOTIVATION OF TEACHERS

Variables	Trust		Private Organisation		Particular Community		Minority Institution		F Value	Sig
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Provision of Right Monetary Benefits	4.521	0.833	4.515	0.808	4.498	0.822	4.490	0.816	10.030	.003
Fairness and Management Accessibility	3.890	0.600	3.831	0.606	3.841	0.601	3.837	0.604	10.186	.006
Teachers Training and Skills Upgradation	3.883	0.546	3.855	0.547	3.860	0.551	3.855	0.547	10.057	.002
Scope for Career Progress	4.076	0.672	4.010	0.677	4.006	0.681	3.992	0.679	10.280	.040
Scope for Stress Reduction and Relaxation	4.111	0.720	4.102	0.745	4.099	0.746	4.092	0.743	9.011	.008
Job Delegation	4.026	0.649	3.937	0.678	3.940	0.674	3.937	0.678	8.400	.003
HR Policy	3.941	0.617	3.920	0.588	3.943	0.611	3.933	0.612	10.030	.003
Institutional Culture and Environment	3.989	0.566	3.950	0.584	3.940	0.583	3.945	0.586	11.137	.038
School Environment and Infrastructure	4.111	0.690	4.105	0.712	4.110	0.713	4.115	0.710	12.003	.000
Fixing Accountability and Recognition	4.018	0.575	3.987	0.577	3.990	0.572	3.983	0.579	7.073	.004
Recruitment and Retention Policy	3.999	0.728	3.969	0.714	3.969	0.714	3.964	0.719	6.047	.006

Level of Significance: 5 per cent



Following the descriptive data analysis, a cross section of data analysis and statistical analysis were conducted to elucidate the prevailing differences in the teachers' motivation techniques adopted in different categories of schools based on their ownership base. The computed ANOVA test values: 10.030, 10.186, 10.057, 10.280, 9.011, 8.400, 10.030, 11.137, 12.003, 7.073 and 6.047 were found to be within the significance level at five per cent. Henceforth, the hypothesis framed is accepted and it has been concluded that teachers' motivation techniques adopted differ from one category of the school to other (based on its ownership pattern).

CONCLUSION

It is the moral responsibility of the school to recruit right and well-qualified teachers on the one hand and on the other hand the school management have to adopt strategic motivation practices to retain the teachers satisfied and continue their service for long-term (i.e., their retirement). The private schools functioning in Coimbatore city are suggested to focus on offering the teachers training cum upskilling opportunities, that not only support them to offer their service effortlessly cum effectively, it also supports them to plan for their career progress and move-upward in their career. All categories of the private school managements are suggested to be fairness and be approachable to the teachers i.e., in listening to their needs, grievances and addressing them on time, will develop a confidences and trust on the school administrators that make them feel secured, recognised and well-treated by the school administration that develop a feel of satisfaction, motivated and that in turn influences them to serve with dedicated and loyal, not thinking about leaving their job in between their service tenure.

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CULTURE TOURISM IN GAZIANTEP AND ITS SURROUNDING AREA

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ABSTRACT

This study named "Culture Tourism in Gaziantep and its immediate environment", contains historical and cultural attractions that create the basis of culture tourism in Gaziantep and the presentation possibilities to the tourist with respect to gradually developing understanding of tourism. Therefore, as an alternative tourism type, culture tourism, is a kind of tourism experienced on cultural resources, and its main motivation is to see and know new places, to learn new things and the most important is that, it creates a need for gaining new experiences to participate in cultural facilities. In this study, available cultural and historical attractions in Gaziantep province in South-Eastern Anatolia region are emphasised. In this respect, historical and cultural heritage attractions, in Gaziantep province, which still continue to exist and belong to Hittite, Med, Assyria, Persian, Iskender, Seleskos, Roman, Byzantine, Islamic-Arabic and Islamic-Turkish culture are explained. Moreover, attractions are categorized under 5 different main subject areas such as historically, prehistorically, archeologically, military and religion. Later, the tourism capacity of the examination area is emphasised and in the last part of the study general suggestions on the improvement and organization of cultural tourism are given.

KEY WORDS: Gaziantep, Tourism, Culture Tourism, Tourists, Attractions

1. INTRODUCTION

The research area was chosen to be Gaziantep city and its environs. The research identifies the boundary of the city as encompassing cultural structures within the settlement that can be incorporated into cultural tours of Gaziantep city in Gaziantep province, as well as individual buildings in the surrounding vicinity. Gaziantep was selected as the research

subject to raise awareness about the insufficient protection of culturally significant assets in the region. One additional rationale for selecting Gaziantep as the focus of the study is the dearth of research on cultural tourism in the region. Gaziantep is situated in the Gaziantep Region, which is part of the Middle Euphrates Section within the Southeastern Anatolia Region. The research area spans from 38° east to 36° west and from 37° north to 36° south.

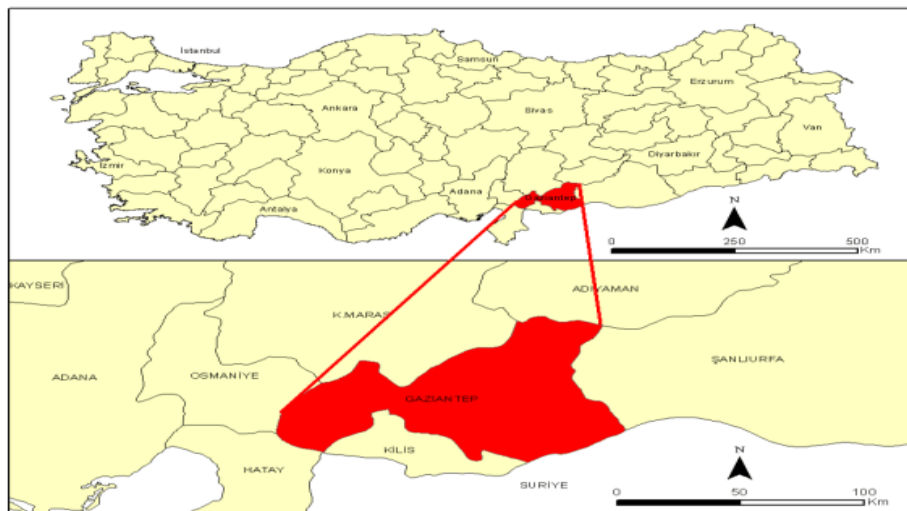


Figure 1. Location of Gaziantep Source

The study "Cultural Tourism in Gaziantep and its Surroundings" examines the tourism attractions of Gaziantep province, which has significantly contributed to Turkey's

tourism industry over the past decade. The analysis is conducted using geographical principles and research methods. The research subject comprises a total of 3 chapters. The initial



section of the analysis focuses on the examination of the cultural heritage within and surrounding Gaziantep. These categories encompass prehistoric, archaeological, historical, military, and religious heritage. The second section focuses on the spatial configurations within cultural tourism regions. This section focuses on the examination of restoration in cultural heritage sites and buildings, landscaping for the purpose of tourism, and the functional transformation of buildings and cultural heritage within museums. The third chapter focuses on the evolution of Cultural Tourism in Gaziantep and its environs. The conclusion section of the research paper presents identified issues and corresponding solutions.

2. A BRIEF HISTORY OF CULTURAL LAYERS IN THE STUDY AREA

Due to its strategic location at the crossroads of Mesopotamia, Anatolia, and Egypt, Gaziantep has consistently served as a cultural and commercial hub throughout history. It has also played a significant role as a historical settlement, being situated at the convergence of major routes connecting Maraş, Aleppo, Urfa, and the Mediterranean.

2.1. Gaziantep's Settlement History During Prehistoric Periods

Gaziantep's history can be traced back to 5600 BC, making it one of the most ancient settlements in the world, as documented by historical sources. Gaziantep has traversed the Chalcolithic, Palaeolithic, and Neolithic epochs in terms of historical periods. It possesses a profoundly ancient and culturally abundant history that encompasses the civilizations of Mesopotamia, Eti, Mitanni, Persian, Assyrian, Alexander, Selekos, Roman, Byzantine, Islamic-Arab, and Turkish Islamic, following the Bronze Age. During the Turkish-Islamic eras, various dynasties such as the Umayyads, Abbasids, Seljuks, Artukoğulları, Fatimids, Ayyubids, Dulkadiroğulları, and the Ottoman Empire had a significant influence in governing Gaziantep. Turanian, Semitic, and Indo-European tribes migrated to the region from the east, west, and south. Nevertheless, historical records indicate that a group of indigenous inhabitants known as the "Halaf" resided in the area prior to the aforementioned events.

Prior to the Republican era, the city was referred to as Ayıntap (Ayıntab). Based on certain documents, Gaziantep is regarded as the most ancient city in the world. It is widely acknowledged that human habitation in this area dates back to the Palaeolithic era. The city is surrounded by numerous natural and man-made caves made of stone. The findings from the 1956 excavations at Şehzade Höyük in Turlu village indicate that the cultural history of the region can be traced back 9000 years to the Mesopotamian civilization. Moreover, archaeological digs conducted at Coba Höyük, Zincirli Höyük, Tilmen Höyük, Gedikli Höyük, and Şehzade (Turlu) Höyük, along with investigations carried out at Yesemek, Metmenge, and Dülük (Doliche), provide insight into the historical context of the Gaziantep region.

The Old Stone Period, also known as the Paleolithic Age, encompasses the most extensive period in human history. It

holds significant historical significance as it marks the advent of the first humans and their progression towards becoming civilised through the creation of the earliest man-made tools. Surface studies and excavations in the Gaziantep region have revealed that the history of the area can be traced back to the Old Stone Age. A multitude of artefacts from the Palaeolithic era were discovered in Gaziantep and its vicinity. The initial research in the vicinity of Gaziantep commenced in 1946 in the Metmenge area of Dülük village, located in the heart of Gaziantep. The arrowhead discovered in this region has been identified as the oldest arrowhead found in Anatolia during that time period. Thirteen cultural layers were discovered in a location known as "Şarklı Cave" in the Keber hill of the Dülük region. The bottom layer here represents the ancient stone era. The Eosan limestone formations in this region harbour flint nodules utilised by ancient civilizations. The banks of the Euphrates River and the Sacir River provided favourable conditions for the initial human settlement, in addition to their abundance of raw material resources.

Anatolia experienced the Neolithic Period from 7250 to 5500 BC. Archaeological excavations conducted at Sakçagözü in the Gaziantep region have provided evidence that the Neolithic Period spanned from 6500 to 6200 BC. Painted, coarse-paste pottery samples were discovered in Sakçagözü after 6000 BC. The Neolithic Age in the Yunus region spanned from 7800 BC to 6500 BC.

The Gaziantep region is home to numerous settlement centres that are associated with the Chalcolithic Period. Research was conducted at various centres, including Sakçagözü, Tilmen, Gedikli, and Karkamış, in order to gather information about this time period. The settlement in the Gaziantep region, referred to as Sakçagözü or Coba, is a representation of the Chalcolithic Period. At Sakçagözü, four strata from the Chalcolithic Period were discovered, with a dating range of 5500-4500 BC.

Archaeological excavations at Gedikli, Tilmen Höyük, Sakçagözü, and Zincirli have uncovered artefacts from the Early Bronze Age, indicating a more developed settlement in the Gaziantep region compared to the Chalcolithic Period. Archaeological excavations initiated in 1964 have uncovered evidence indicating that Gedikli has been inhabited continuously since the Early Bronze Age. The excavations uncovered architectural remains consisting of stone foundations, mudbrick superstructures, and compacted soil bases. Graves and artefacts that indicate the burial rituals of the same era were also discovered at Gedikli Höyük. Three distinct forms of burials were documented at this location: Simple burials, cists, and chamber graves. Tilmen Höyük is another settlement in the Gaziantep region that has been excavated by the EBA. The excavations at this location commenced in 1956. The graves originating from the Early Bronze Age hold significant prominence within the excavations conducted in the region. A tomb located in the inner courtyard of Tilmen Höyük palace, dating back to the first half of 2000 BC, was constructed using moderately-sized stones and topped with a basalt slab. Human skeletal remains were discovered at both the eastern and western extremities. The burial site also



contained a significant quantity of beads, bronze bracelets, a footed vessel in the shape of a bell, three bronze pins, and two bowls. The discoveries at Tilmen Höyük suggest that it was a highly populated settlement during the approximate period of 3000 BC. In addition to Tilmen Höyük and Gedikli, evidence of the Early Bronze Age lifestyle has also been discovered at Zincirli and Sakçagözü. Nevertheless, artefacts from the period are rare in these two regions.

2.2. Settlement History of Gaziantep in Historical Times

The chronological epochs that commenced with the advent of written language exhibit variation across different geographical areas. Mesopotamia and Egypt achieved historical significance prior to other regions. The historical era of Gaziantep region, which began in 1800 BC, is commonly referred to as the Hittite Period. Significant cultural hubs emerged in the Gaziantep region during the Hittite Period. Among these, the most significant sites include Karkamış, Zincirli, and Sakçagözü. During excavations conducted in Şehzade (Turlu) Mound, located between Gaziantep and Nizip on the banks of the Nizip Stream, archaeological evidence of the Telhalaf culture, originating and flourishing in Mesopotamia, was discovered in 1961. In addition to the Hittites, the Assyrians, Medes, and Persians also exerted their authority in and around Gaziantep. Furthermore, the regions of the Hellenistic period were also under the dominion of Alexander, Seleucids, Roman, and Byzantine empires. Cities such as Doliche (Dülük), Kilize (Kilis), Korus, and Belkıs experienced rapid development, particularly within the secure environment established by Roman sovereignty. Saint John, also known as Johannes, was one of the twelve apostles of Jesus. He actively propagated Christianity by focusing his efforts on the region called Rum Kale. Gaziantep is home to numerous Roman historical artefacts. The tombs, in the shape of stationary sarcophagi, are located on Dülükbaba hill in Dülük village of Gaziantep and Halilbaş village of Yavuzeli district. These tombs date back to the Roman period and are accessed by descending 10-15 steps.

2.3. Urban development from the 19th century onwards

Gaziantep experienced substantial growth in the 19th century as a result of the influence of trade. The indicators of the city's new economic growth are the proliferation of commercial edifices in the historic commercial hub. Novel inns and shops were constructed within the former commercial hub or in vacant areas nearby. Throughout the 19th century, the inner city retained significant areas of open spaces and gardens. During the 1960s, it was widely acknowledged that the location where the Kemikli Bedesten, also known as the Arasta District, would later be built, was unoccupied. In 1965, Nakıp Hanı, Kemikli Bedesten, Tuz Hanı, and other commercial establishments were constructed in this vicinity. The Kadir Pasha Bedesten, constructed by the Armenian community during the rule of Sultan Abdülleziz between 1854 and 1857, along with the adjacent Aziziye Inn (now known as Millet Inn), was unfortunately destroyed during the War of Independence. (Gaziantep Culture Inventory, 2005: 11).

3. CULTURAL HERITAGE ITEMS IN THE STUDY AREA

3.1. Prehistoric Tourism

Of all the spatial manifestations of cultural advancement, the ancient cities from the Classical Age are the primary focus of tourism. The term used to describe this in the context of cultural tourism is "archaeological tourism". The abundance of ruins in ancient cities, particularly from the Roman Period, and the ongoing discovery of new structures by archaeologists, serve as a compelling draw for individuals to visit these ruins. The meticulous display of the artefacts in spacious museum galleries, coupled with comprehensive documentation, facilitates the acquisition of significant insights into this historical era. Nevertheless, these cities only represent a brief phase in the cultural evolution of civilization. The duration of human existence on earth, as determined by scientific research, exceeds 2.8 million years. Throughout the majority of this period, humans resided in caves. However, in the 12,000s BC, they emerged from the caves and founded settlements that still exist today as mounds. The current era, known as the Stone Age, is scientifically categorised into three periods: Palaeolithic (Old Stone Age), Mesolithic (Middle and Chipped Stone Age), and Neolithic (Polished Stone Age). This classification is based on the materials used to make tools, which were primarily stone. The focal points of Stone Age existence that captivate individuals' interest encompass the dwellings of these individuals, the weaponry employed, domestic implements, sacred artefacts, and cave art. The caves and villages serve as the dwellings for these individuals, constituting the primary habitats of the original inhabitants and their immediate environment. The cultural tourism associated with visiting locations from this era is commonly referred to as "Prehistoric Tourism" or more intriguingly, "Stone Age Tourism". The Stone Age can be divided into two distinct periods based on human settlement and economic activity. During the Palaeolithic and Mesolithic eras, humans resided in caves, engaging in gathering and hunting. However, in the Neolithic period, they abandoned cave dwellings and formed settlements, incorporating agriculture and animal husbandry into their economic pursuits. In light of the impact on tourist destinations, Stone Age Tourism can be categorised into two distinct types: "Old Stone Age Tourism" (also known as Palaeolithic tourism) and "Polished Stone Age Tourism" (also referred to as Neolithic Tourism).

3.2. Palaeolithic Tourism

The Palaeolithic Age, spanning over 2 million years, holds the record for being the longest period in the history of civilization. Nevertheless, this era of civilization is paradoxically characterised by a scarcity of cultural artefacts. The primary cultural artefacts of the Palaeolithic era are the caves utilised as dwellings, tools, rock art, and fossil remnants. The primary location of the Palaeolithic Period is within caves. The primary evidence substantiating human habitation in such locations consists of the implements employed by individuals and the pictorial depictions adorning the walls. Nevertheless, the cave floors, which served as habitation sites during this era, remained beneath subsequent layers of culture. The evidence of the Palaeolithic Period can only be observed in the excavated



caves within the context of tourism (Doğaner, 2013: 20). Gaziantep and its environs are highly studied and possess a wealth of Palaeolithic discoveries. Oğuzeli, Metmenge, Sakçagözü, Nizip, Karkamış, and Dülük are the sites that have received the highest level of research activity in this region. The Acheulean biface tool, commonly known as a hand axe, was discovered in 1894 in Birecik, located east of Gaziantep, in the alluvium of the Euphrates. This finding holds significance as it represents the earliest evidence of the Palaeolithic Period in Anatolia. The village of Dülük, situated 12 km northwest of Gaziantep, is the most abundant Palaeolithic site. The fields both within and surrounding the village are abundant with numerous flints, chipped stone tools, as well as biface tools. Furthermore, the caves and rock shelters located in and around the village hold significant importance in relation to Palaeolithic settlements. Thirteen cultural layers were discovered at Keber Hill in the Dülük region, specifically in a location known as "Şarklı Cave". Artefacts from the Palaeolithic era were discovered in the deepest stratum. The limestone formations from the Eocene era in this area contain flint nodules that were utilised by ancient civilizations (www.antepress.com). Flint artefacts were discovered in the vicinity of the cave known as Dülük, situated at the entrance of Dülük village. Flint artefacts were discovered in the fields located north and west of the cave known as Dülük 2, which is situated adjacent to the Şarklı Cave to the east of Dülük village. Extensive research has been conducted by numerous scholars on Dülük village and its environs, leading to the discovery of Lower and Middle Palaeolithic cultures in this region (Ministry of Culture and Tourism, 2012: 257). In 1938, Muine Atasayan and in 1946, İ. Kılıç and Enver Bostancı gathered Chellean bifaces and Clactonien flakes and debitage from the Dülük village. In 1945, H. Bossert, conducting a survey in the area, discovered a meticulously crafted biface tool from the Lower Palaeolithic era above the village of Dülük. This discovery represented the most significant finding of biface tools in Anatolia up to that point. Enver Yaşar Bostancı conducted the most extensive and enduring surveys in and around the village of Dülük during the years 1954, 1970, 1971, and subsequent years. Bostancı conducted surface surveys and excavations in two rock shelters, namely the Dülük village rock shelter, as well as three caves known as Şarklı Cave, Büyük Cave, and Biçme Cave (blog.milliyet.com.tr). Furthermore, extensive research was conducted not only in Dülük village but also in the vicinity of Gaziantep. Archaeological artefacts from the Lower Palaeolithic Age were discovered in 1945 at Çakmaksulu locality near the Gaziantep-Narlı railway line, specifically in Incesu Village in the centre of Gaziantep. In addition, Erguvanlı discovered two additional biface tools of Chellean or Acheulean variety at Metmenge, which is located in the central region of Gaziantep. The discovered items are stored at the ITU Geological Engineering Faculty. 31 stone tools, 3 cores, and 1 hand axe were discovered during the excavations conducted in the Uzay, Kaleiçi, and Yanalak caves located in the northern valley of Gökstüncük village. Upon analysis of the stone tools, a total of 13 flakes, 7 blades, 2 Levallois flakes, and 1 Levallois blade were discovered. Most of the gathered tools are crude. Lower and Middle Palaeolithic cultures are indicated by the presence of Levallois elements and one hand

axe (Ministry of Culture and Tourism, 2012:259). Palaeolithic chipped stone tools were collected in various locations during different years. In 1950, they were found near the Oğuzeli district. In 1954, they were discovered near the Kartal village in the Sakçagözü district. In 1961, they were found near the Almalı village in the Oğuzeli district, as well as in Mercihamış village in the Karkamış (Barak) district, and in the Sakçagözü and Nizip districts (blog.milliyet.com.tr). The abundance of archaeological findings from the Palaeolithic Period in the Gaziantep region has been further unveiled through recent, methodical surveys. The significance of the 1995 survey conducted by Andrew Garrand in Sakçagözü lies in its findings. This survey focused on the Turkish section of the Levant Rift Valley, which spans from Northern Israel to the Southern Taurus Mountains and the Anti-Taurus Mountains. The purpose was to examine the region and identify Palaeolithic and Neolithic sites in the Sakçagözü area. The Emirler Valley, situated in the northeastern region of Sakçagözü, is abundant in flint resources, as well as caves and rock shelters. Additionally, the valley floor features a sizable ancient lake basin. Artefacts from the Lower Palaeolithic Period were discovered at two open-air settlements by Flint. Thirteen sites, consisting of eleven caves and rock shelters, as well as two open-air sites, yielded Middle Palaeolithic artefacts (blog.milliyet.com.tr). The latest research on the Palaeolithic Period in the region was conducted by Assoc. Prof. Dr. Harun Taşkiran in 1999 and 2000 in the vicinity of Karkamış Dam Lake, following a brief preliminary investigation in 1988. There were a total of 35 open-air discoveries from the Palaeolithic Period in the Barak region on the west bank of the Euphrates River. The Dızırtaş site is significant due to its abundant collection of biface tools. The website is blog.milliyet.com.tr. To summarise, Gaziantep and its surrounding areas possess abundant resources of suitable climate and environmental conditions during the Palaeolithic Period, as well as a wealth of flint raw materials and various types of settlements such as open air, cave, and rock shelter settlements. Based on the excavations and surveys conducted so far, it is evident that this region was densely populated by Palaeolithic individuals throughout the lower, middle, and upper Palaeolithic eras.

3.3. Neolithic Tourism

The Stone Age marked a pivotal period in the cultural evolution of human beings, with the most significant and rapid transformation taking place towards its conclusion, spanning over a span of 2 million years. During the period around 12,000 B.C., when the climate was favourable, humans emerged from caves and constructed dwellings using materials such as stone, mudbrick, and thatch. These houses were built near bodies of water such as lakes, rivers, and seas. Additionally, they transitioned from a hunter-gatherer lifestyle to cultivating crops from seeds, domesticating animals, and establishing the basis for modern village life (Doğaner, 2013: 21-22). The Neolithic Age, lasting for 6000 years, is widely regarded as the most significant epoch in the development of human civilization. During this period, individuals who previously relied solely on hunting and gathering began to domesticate various plant and animal species, and subsequently, they adopted agricultural practises and animal



rearing. During this era, humans constructed dwellings using stone foundations, mudbrick walls, and flat roofs. In addition to utilising stone tools, they fashioned arrow and spearheads from obsidian and created pottery using clay (Doğaner, 2013: 21-22). The Neolithic villages, which still exist today as mounds, acquired a hill-like appearance through the accumulation of successive layers of settlement. Archaeological excavations conducted in Sakçagözü, located in the Gaziantep region, have uncovered Neolithic settlements that can be traced back to the period between 6500 and 6200 BC. Archaeologists discovered a limited quantity of painted, rough-textured ceramic fragments originating from 6000 BC at this location.

The Neolithic Age in the Yunus region spanned from 7800 BC to 6500 BC, as determined by gaziantep.en.gg. Gaziantep and its surrounding areas are abundant with numerous Neolithic mounds. Tilmen Höyük is situated on the eastern side of the İslâhiye district, approximately 10 kilometres away, adjacent to the Karasu Stream. It is among the largest of over fifty mounds located in and around İslâhiye, measuring 21 metres in height. The finds from the mound show the connection and mutual relationship between the ancient Mesopotamian and Syrian cultures and the ancient Anatolian cultures. 16 Photo 5. Tilmen Mound Spatial Arrangement-1 (2014) Tilmen Mound was first identified in 1958 and archaeological excavations continued intermittently until 1972. As a result of the archaeological excavations, monumental structures were excavated from the mound (www.gaziantepturizm.gov.tr). As a result of the excavations, it was understood that the history of this place started in 4000 BC and it was a big city in 3000 BC. It lived its most glorious period in the XVIII-XV centuries BC. Tilmen Höyük was a highly impressive city in Anatolia, ranking among the most splendid cities after Hattusa. The Coba Mound, situated in the Sakçagözü Plain, is an extension of the İslâhiye Plain. It measures 140x90 metres and has a height of 12 metres. The mound is encompassed by arable farmlands that are readily tilled and nourished by flowing streams (Üngör, 2011: 144-45). The excavation of Sakçagözü (Coba) Höyük was conducted by John Garstang from 1907 to 1912, and later by Seton Lloyd in 1949. A subsequent excavation took place in 1949 at this mound, known as "Jobba Huyuk" by Garstang. The excavation was conducted by Taylor and Seton-Williams, under the supervision of Waechter on behalf of the British Archaeological Institute (www.arkeolojiturk.com). The excavations at Coba Höyük resulted in the discovery of 12 layers. (Üngör, 2011: 144-45).

Zincirli Höyük, known in ancient times as Sam'al, is an archaeological excavation site situated 10 kilometres to the north of the İslâhiye district. The excavation of Zincirli took place over a century ago, specifically between 1888 and 1902, under the supervision of Dr. Felix Von Luschan from the German Oriental Society (Archaeology of Turkey, 2008: 268). The discovered artefacts are displayed at the Istanbul Archaeological Museums and the Berlin Museum. Scientific studies conducted in Zincirli, a prominent city during the Late Hittite Age, have revealed a continuous settlement from the Early Bronze Age to the Roman Period. According to Lehmann, the initial establishment of Zincirli is believed to

have occurred approximately in 2500 BC. This settlement was a fortified village spanning 8 hectares during the Early and Middle Bronze Age until 1500 BC. According to Üngör (2011: 141), it is known that the settlement at the village level persisted until 900 BC, during the Late Bronze and Early Iron Ages. At Zincirli, the German team discovered stone inscriptions in Aramaic, Phoenician, and Akkadian languages, as well as remarkable stone reliefs depicting gods, kings, and animals in the styles of Late Hittite and Phoenician art. Zincirli emerged as the focal point of a modest autonomous kingdom following the collapse of the Hittite Empire circa 1200 BC. Nevertheless, the city fell under the control of the Assyrian Empire in the 8th century BC and was subsequently devastated by the Assyrians around 650 BC. The fortification wall, along with its foundations, three substantial gateways, and a hundred towers from the final phase of occupation, has been discovered by German archaeologists. The German excavation team conducted excavation work on the citadel located within the city. The citadel possesses its own city wall and entrance gate (Archaeology of Turkey, 2008:268).

3.4. Archaeological Tourism

The historical settlement centres in the Gaziantep region were founded along the Egypt-Syria highway that connected Anatolia to the Amanos Mountains, as well as the road route from Mesopotamia that passed through the Euphrates and extended towards the Taurus Mountains in the direction of Gaziantep Dülük, Narlı Plain, and further connecting to Anatolia. Another settlement belt comprises the cities that have been established along the course of the Euphrates River. Furthermore, the path of Alleben Stream in Oğuzeli-Barak Plain and Yavuzeli-Araban Plain also forms a distinct settlement zone. Following the invasion of Anatolia (Hittites) by external tribes in 1200 BC, the region experiences a 400-year period of detachment from advanced civilization. During this era, the region was governed by the Late Hittite kingdoms and the remnants of the Hittite civilization. Between 500 and 330 BC, the region, which was still under the control of the Assyrians and Persians, became part of the Hellenic Union through Alexander the Great's military campaign in the east. During the Hellenistic Period, the inhabitants of this region transitioned from living on mounds to settling in flat areas and began the process of building contemporary cities. During the Hellenistic Period, the region experienced a significant increase in cultural and economic prosperity, which was evident in the daily lives of its inhabitants. This period is characterised by a plethora of sculptures made from gold, silver, bronze, marble, stone, terracotta, as well as various vessels. Additionally, there are numerous seal impressions, tombstones, and inscribed stones. The Kargamesh Archaeological Site contains artefacts that will provide valuable insights into its historical significance, particularly in relation to its strategic location. Kargamesh was established alongside the Euphrates River and has been continuously inhabited since the Neolithic Era up until the present time. It served as a significant hub of artistic and cultural activities during ancient times. Tilmen Höyük, situated 10 km east of the İslâhiye district, is a significant settlement site that was occupied from the Bronze Age to the Roman Period. The Yesemek Open Air Museum, situated in



the Karatepe village of İslâhiye district, was a designated sculpture workshop during the 2nd and 1st millennia BC. The location of Ancient Dülük City encompasses elements of cave dwellings, mounds, and contemporary urban living. Dülük, a revered site since its establishment until the conclusion of the Roman Era, served as a significant hub for the veneration of Teşup and Baal. Zeugma, an ancient city situated in the present-day Nizip district within the confines of Belkis village, was established in 300 BC by the Seleucid Dynasty. This dynasty was led by one of Alexander the Great's generals, and the city was initially named Seleucid Euphrates. Subsequently, it was handed over to the Kingdom of Commagene. Under Roman rule, the city's name was changed to Zeugma. Within the Araban district of Gaziantep, there are three grave monuments from the Roman Period. These monuments are named Elif Grave Monument, Hisar Grave Monument, and Hasanoğlu Grave Monument. They are located in the villages of Elif, Hisar, and Hasanoğlu. These three monuments, situated at the intersection of two significant roads parallel to the Euphrates River, are believed to have been constructed during the Roman Period to cater to affluent, noble, and influential administrators or high-ranking military personnel in the region. The Roman Watchtower is situated around 25 km northeast of Dülük Village, on the road that links Sarayamağara and Büyükkarakuyu villages. The remains of the Saray Cave Ancient Watchtower, also known as the Roman Watchtower, can be found there. The Septimus Severus Bridge, also known as the Broken Bridge, was dedicated to the Roman Emperor Septimus Severus, who reigned from 192 to 211 AD.

3.5. Ancient Cities

3.5.1. Zeugma Ancient City

The Zeugma Ancient City holds immense historical, archaeological, artistic, and strategic significance. It is a valuable treasure that has recently been uncovered from the depths of history. The city was established in 300 BC by Seleucus Nikator I, the ruler of the Seleucid Empire, in a

location 10 kilometres to the east of the Nizip district. The city, known as Zeugma, derived its name from its role as a bridge or passage place, and it was greatly influenced by the Latin culture during the Roman rule. Zeugma, situated on the easternmost frontier of the Roman Empire, held significant strategic value. Due to this rationale, the IVth Scythica Legion, comprising a total of 6000 soldiers, was deployed in the city as a frontier outpost (Southeastern Anatolia Guide, 2007:158). Due to its strategic position along trade routes, this city attracted influential military leaders, officers, advisors, and their families from the upper echelons of Roman society. Their presence resulted in a significant increase in commercial activity within the city. The city's strategic location as a major transit point attracted affluent merchants, resulting in a significant flow of financial transactions (Republic of Turkey Ministry of Tourism: Gaziantep, 2002: 42). The opulent and magnificent existence of Zeugma suffered a severe setback in 256 when it was ravaged and annihilated by the Sassanids. Subsequently, the city experienced a gradual decline in population and no further information was reported after the last entry in the church records in 1048 (Southeastern Anatolia Guide, 2007: 158). The archaeological excavation conducted has brought the ancient city of Zeugma, a portion of which is currently submerged beneath the Birecik Dam Lake, to the attention of contemporary society. The museums in the region have acquired a valuable collection of sculpture artefacts from the surface and from the partial excavation of the city. As a result, the Gaziantep Archaeological Museum now houses the world's largest archive of seal prints (bullas), along with hundreds of intricate mosaics, bronze figurines, coins, and numerous other artefacts. Furthermore, he also facilitated the global promotion of Gaziantep. The artefacts are currently stored in the storage facilities of the Gaziantep Museum, with a portion of them being displayed in the museum itself. This centre yields a variety of artefacts such as glass bottles, coins, figurines, 22 seal prints, inscribed stones, bronze and silver ornaments, oil lamps, and terracotta pots (Photo 1).



Photo 1. Extraordinary Roman Mosaics in Zeugma (<https://www.archaeology.org>)

3.5.2. Karkamış Ruins

Karkamış, an ancient city of significant importance in Near Eastern archaeology, is situated on the western bank of the Euphrates, along the Turkey-Syria border. In 2000 BC, the city was situated at a significant intersection of the roads connecting Anatolia, Mesopotamia, and Egypt (Gaziantep and Tourism, 2013: 17). Aside from prehistoric artefacts, the hill where the castle stands also yielded two prominent settlements dating back to the Early and Late Hittite periods. Karkamış, characterised by a rectangular layout comprising three distinct sections - the Outer City, Inner City, and Castle - was primarily composed of administrative and religious structures at its

centre. The buildings are adorned with black basalt and white limestone orthostats embellished with reliefs in the Hittite-Assyrian style (Southeast Anatolia Guide, 2007: 158). The majority of the reliefs discovered are attributed to the Late Hittite Period. These reliefs provide insight into the lifestyle, attire, and culture of the early 1st millennium BC. They depict soldiers, priests, individuals carrying different animals, princes wielding long and straight swords, chariots, hybrid creatures, and guardian animals participating in a procession to honour the Goddess Kupapa and her name (Photo 2). The majority of the Carchemish reliefs are presently exhibited at the Museum of Anatolian Civilisations in Ankara.



Photo 2. Karkamış Rocky Ruins of Archaeopark Home to Ancient Empires (www.kulturportali.gov.tr)

3.5.3. Yesemek Open Air Museum

The site is situated on the Karatepe ridges to the southeast of Yesemek village, approximately 22 kilometres southeast of Islâhiye. From 1375 to 1335 BC, the sculpture workshop of the Hittite period held the distinction of being the largest sculpture and quarrying workshop in the Near East (Photo 3). It produced and distributed sculptures and reliefs to significant cities and castles within the empire. The Sam'al (Zincirli) Kingdom managed the operation during the Late Hittite Period, specifically from 1375 to 1335 BC, and they hired local Hurrians for the job. Following the destruction of the Sam'al

Kingdom by the Assyrians, both the quarry and the sculpture workshop ceased operations, and the workers abandoned the region (Ministry of Tourism Gaziantep, 2002: 88). The basalt blocks obtained from the quarry were initially processed in a preliminary form, and the finer details were then added at the location where they were to be shipped. Hence, preventive measures were implemented to mitigate potential damages that could arise during transportation. Only one of the sculptures, which was created on-site and subsequently completed and installed, was discovered in Zincirli (Southeastern Anatolia Guide, 2007: 156).



Photo 3. Yesemek Open Air Museum (www.tripadvisor.com.tr)

3.6. Castles

3.6.1. Gaziantep Castle

The castle, situated on a mound by the Alleben Stream, with a view of the city, originates from the Chalcolithic Period, approximately 6000 years ago. During the IInd and IIIrd centuries AD, there existed a small city known as "Theba" in this location. The city's name, believed to have derived from this term, was pronounced as "Ayıntab" by Arabs, "Antaph" by Armenians, and "Hamtaph" by Latins. The castle was initially constructed as a watchtower or outpost comprising multiple towers in the Roman Period between the 2nd and 4th centuries

AD (Gaziantep-Halep Promotion Guide, 2008: 20). During the period of 527-565 AD, the Byzantine emperor Justinian I, who was renowned for his architectural prowess, enhanced the defensive capabilities of the castle by extending the moat and constructing 12 bastions and body walls. This was achieved by constructing galleries at ground level and vaulted galleries. The castle in its current condition has a circumference of 1200 metres and is shaped like an asymmetrical circle with a diameter of 100 metres. Suleiman the Magnificent later restored it (Gaziantep Provincial Directorate of Culture and Tourism; Gaziantep, 2014: 13)



Photo 4. Gaziantep Castle (architecturaldigest.com)



3.6.2. Rumkale

Rumkale is situated in the village of Kasaba, within the confines of the Yavuzeli district. The historical site is situated atop an elevated terrain adorned with towering cliffs, positioned on the western bank of the Euphrates River, at the confluence of the Euphrates River and Merziman Stream (Ministry of Tourism: Gaziantep, 2002: 60). Rumkale is thought to be the ancient fortress known as "Shitamrat", which was seized by the Assyrian ruler Salmanassar III in 855 BC because of its advantageous position. While the historical details of Rumkale remain uncertain, it is believed to have been constructed around 840 BC, specifically during the Late Hittite Period. Over the course of history, the region has been ruled by various powers including the Assyrians, Medians, Persians, Hellenistic Greeks, Romans, and Arabs. Later, Christians gained control of the

region during the Crusades (Turkish Ministry of Tourism: Gaziantep, 2002: 60). The architectural remains surviving today are of Late Roman and Medieval character (Turkish Ministry of Tourism: Gaziantep, 2002: 60). One of the most notable historical structures is a sizable cylindrical ventilation well, accompanied by a system that descends below the level of the Euphrates River. This system follows a spiral path starting from the rim of the well. Johannes (Yohenna), an apostle of Jesus Christ, resided in and around Rumkale during the Roman Period with the purpose of propagating Christianity (Turkish Ministry of Tourism: Gaziantep, 2002: 60). Yohenna is reported to have secluded himself in Rumkale, where he diligently transcribed and safeguarded the Bible manuscripts. Subsequently, the manuscripts were illicitly transported to Beirut.



Photo 4. Rumkale (Castle) <https://www.maliden.com>

4. DEVELOPMENT OF CULTURAL TOURISM

As a result of the establishment of Bayazhan City Museum, the construction of the cultural road encircling the castle, street sanitization efforts, and facade improvements, the duration of visitors' stays in Gaziantep has increased. Visitors can now explore Bakircilar Bazaar, Almacı Bazaar, War Museum, Gaziantep Castle, and Panorama Museum. This has led to an increase in day trips from cities like Adana, Maraş, Urfa, Istanbul, Ankara, and Izmir. Presently, organised excursions to Gaziantep are arranged from various locations throughout Turkey. The intermittent decline in public order in the region has a detrimental impact on the organised tours. Gaziantep experiences a higher influx of tourists during the months of April, May, September, October, and November. Tours are less frequent during the summer months due to the higher temperatures. Furthermore, due to Gaziantep's status as an industrial and commercial hub, individuals visit the city for business transactions on weekends and throughout the summer and winter seasons. Tourism is also supported by the tours arranged by Gaziantep Chamber of Industry and Commerce. Tours to Gaziantep were initially arranged from Istanbul in 1996-1997. As of now, American soldiers stationed at the Incirlik American Base have been arriving in Gaziantep. Gaziantep experiences a higher influx of tourists during the months of April, May, September, October, and November. Summer's higher temperatures result in reduced tour frequency.

Furthermore, due to Gaziantep's status as an industrial and commercial hub, individuals visit the city for the purpose of conducting trade both on weekends and weekdays, throughout the summer and winter seasons. Tours arranged by the Gaziantep Chamber of Industry and Commerce also make a valuable contribution to the tourism sector. Tours to Gaziantep were initially arranged from Istanbul in 1996-1997. As of now, American soldiers stationed at the Incirlik American Base have been arriving in Gaziantep. Since 2000, agencies from Istanbul have been organising tours under the name of GAP tours for those interested in visiting Zeugma before it was flooded. Within this particular context, tours began to disseminate throughout Gaziantep and the entire surrounding area. The exhibition of the Zeugma mosaics at the Gaziantep Archaeological Museum in 2005 led to a rise in tourism from Istanbul, Ankara, and Izmir. Furthermore, the inauguration of Gaziantep's largest zoo in 2001 has led to a substantial surge in tourist numbers in Turkey. The year 2004 held significant importance for Gaziantep. The Cultural Inventory is prepared as a result of elections and with the support of the local administration and the Çekül Foundation. The foundation, established in 1990, focuses on five main areas: nature, culture, education, organisation, and promotion. In 2004, a meeting took place between Metin Sözen, President of Çekül, and the city officially joined the Union of Historic Cities (TKB). Through this membership, the restoration of three buildings in



the Gaziantep Culture Road Project was successfully accomplished as part of the "Utilising European Funds for Historical Heritage" initiative. The promotional activities conducted in Bey Quarter, along with the city council meetings, play a crucial role in promoting Gaziantep's cultural heritage. In 2005, Gaziantep Metropolitan Municipality became the pioneering municipality to establish a facility known as the "Conservation Implementation and Inspection Bureau-KUDEP". The "200 Joint 200 Works" programme commences in the same year. The growth of tourism in Gaziantep can be attributed to the collaborative efforts of the public, local, civil, and private sectors. An all-encompassing approach is being employed to develop tourism. Renovation efforts commence in the castle, Bakırcılar Bazaar, and historical neighbourhoods of Gaziantep. Maps depicting the Culture Road project have been created. The repair of the buildings on the Culture Road is given priority by the Regional Directorate of Foundations and the Special Provincial Administration. The Gaziantep branch of the Chamber of Architects actively participated in the Culture Road Project. The restoration efforts in Gaziantep prioritised the preservation of the city's historical fabric, ensuring the integrity of its architectural heritage. The buildings were collectively restored rather than individually. The Bakırcılar Bazaar Street Rehabilitation Works were conducted while maintaining the authentic essence of the bazaar. Following the restoration of Bakırcılar Bazaar, modifications were implemented within and in the vicinity of Gaziantep Castle. The Naib Bath, Kır Kahvesi, and Kale Boutique Hotel, located in the vicinity of the castle, underwent restoration and were developed for tourism purposes. This restoration project was funded by grants from the European Union. Bakırcılar Bazaar is linked to Gaziantep Castle, and a 5.5 km Cultural Road has been constructed leading up to Şire Inn. The historical Antep houses are being renovated in the Bey Quarter, which is regarded as an extension of this road. The initiation of the Project for Restoring the Lower Euphrates River Basin to Tourism took place in 2007. Consequently, restoration efforts were also commenced in Rum Kale. The establishment of Gaziantep Archaeological Museum dates back to 1944. The Medusa Glass Artefacts Museum was established in Gaziantep in 2008. The museum displays glass artefacts that are 1000 years old. The Bayazhan City Museum was inaugurated in 2009. The inauguration of the Zeugma Mosaic Museum in 2011 resulted in a twofold increase in tourist arrivals to Gaziantep. Gaziantep was awarded at the Istanbul TKB Awards Exhibition in 2007. The Hıdır Street Rehabilitation Works were executed by leveraging the opportunities provided by the TDB. The Kepkep Street Rehabilitation Works were conducted in 2009. Gaziantep was awarded the "Bakırcılar Bazaar Street Sanitisation Project and its Implementation" in 2007 for its outstanding work. The "Culture Road Project" was the recipient of the prestigious Metin Sözen Conservation Grand Prize in 2008. The Bey Quarter Street Rehabilitation Project, Bayazhan Restoration, and City Museum were awarded a continuity award in 2009. In 2004, significant measures were implemented to safeguard cultural assets in Gaziantep. The development of Gaziantep's cultural tourism has been expedited by various initiatives, including the arrangement of the castle and its surroundings, the

opening of Kır Kahvesi, Naib Bath, and Kale Boutique Hotel for tourism. Additionally, the Bakırcılar Bazaar Street Sanitisation Works, Culture Road Project, Bey Quarter Street Sanitisation Work, restoration of the inns, and the opening of Zeugma Mosaic Museum in 2011 have contributed to this acceleration.

5. RESULTS AND CONCLUSION

Gaziantep, situated in the Southeastern Anatolia Region, possesses significant tourism potential, particularly due to its rich historical and cultural assets. This research area is rich in prehistoric mounds and caves. It has also served as a hub for several civilizations, including the Hittite, Roman, Byzantine, and Ottoman civilizations. Throughout history, it has been home to numerous cultural sites such as castles, churches, monasteries, and mosques associated with these civilizations. Today, while the majority of these artefacts remain in existence, a few have either vanished entirely or are awaiting restoration. Gaziantep possesses significant global and national potential, particularly due to its prehistoric mounds and cave settlements. It also boasts crucial resources for faith tourism, military tourism, archaeological tourism, and historical tourism. Rumkale, situated in the research region, holds significant religious and historical importance for Christians. It is revered as a sacred site because it is believed that Johannes, one of Jesus Christ's apostles, transcribed copies of the Bible in a chamber hewn from the rock. Simultaneously, the presence of the Church of St Nerses the Poet and the Barşavma Monastery within the castle enhances the significance of Rumkale. Dülük, located in the research area, serves as the cult centre for the beliefs of Teşup, Zeus, and Jupiter Dolikhenos. Within this area, there exists a temple dedicated to Teşup, the deity associated with the sky and storms, dating back to the Hittite Empire Period. Simultaneously, the faith in Mitras was also prevalent in Dülük. The world's largest subterranean Mitras temple is situated on the southern slopes of Keber Hill in Dülük. In addition to the aforementioned religious sites, the city centre is also home to various churches, mosques from the Turkish-Islamic era, and tombs located in both the city centre and its surrounding districts. These landmarks collectively highlight the city's significant potential for faith tourism. Military tourism holds significant potential within the research field. The Panorama Museum, War Museum, Atatürk Memorial Museum, Martyrdom and Martyrs' Monument, Şahinbey, Karayılan and Şehitkâmil monuments, all of which commemorate the heroes who lost their lives in the defence of Antep, are the city's most significant attractions for military tourism. Furthermore, Republic Square, Freedom Square, and Democracy Square hold significant importance in the context of Military Tourism due to their association with Independence Day celebrations in Gaziantep. The research area of Zeugma Ancient City, Yesemek Open Air Museum, Ancient Dülük City, Kargamış Ruins, Antep Castle and Rumkale, Septimus Severus Bridge, monumental tombs, and museums exhibit archaeological artefacts, all of which contribute to the value of Archaeological Tourism. Due to its historical succession of Hittite, Med, Assyrian, Persian, Alexander, Seleucid, Roman, Byzantine, Islamic-Arab, and Islamic-Turkish rule, the region possesses a wealth of historical tourism resources. The city



exhibits a diverse range of cultural artefacts from civilizations such as Hittite, Byzantine, and Roman. It is adorned with numerous inns, baths, mosques, bedestens, castles, and fountains that date back to the Islamic-Arab and Islamic-Turkish eras. To optimise the potential mentioned above in the research field, certain factors need to be considered. Specifically, the tourism infrastructure in the region should be structured to effectively address the demands of tourists. Once again, it is imperative to conduct a thorough investigation and ascertain diverse marketing strategies to foster the growth of tourism in the region. To accomplish this, it is crucial to establish a compelling image and brand that effectively promotes the research area. Additionally, it is essential to identify the specific tourism market to target and develop comprehensive advertising and promotion initiatives. Furthermore, the city's current cultural and historical assets should be restructured in accordance with evolving tourism perspectives, imbuing them with the qualities of tourist offerings.

To enhance the recognition of Gaziantep, it is imperative to create diverse websites in both local and foreign languages that provide detailed descriptions of its historical and cultural assets. Tour operators in Gaziantep should arrange a variety of tours to explore the city's rich history, which has been influenced by civilizations such as the Hittite, Roman, and Byzantine. There are numerous cultural and historical sites in the city that are associated with these civilizations. The archaeological remnants within the research area ought to be meticulously restored to their original condition and subsequently made accessible for tourism purposes. Brochures and advertising posters ought to be produced, and both national and international publicity should be generated for globally significant sites such as the ancient Dülük City, Zeugma Mosaics, Runkale, Kargamış Ruins, Yesemek Sculpture Workshop Open Air Museum, and Tilmen Höyük. Furthermore, it is crucial that the current infrastructure and lodging facilities in the research area adhere to traditional design and are available in ample quantity. Simultaneously, it is crucial to prominently display the requisite signage indicating the whereabouts of historical and archaeological sites in the city centre, as it will facilitate tourists' convenient navigation to their desired destinations. Furthermore, the provision of essential guidance services to visitors in protected areas and museums is a highly significant component. Foreign tourists particularly value the presence of guides who can speak their language, as it significantly contributes to their overall satisfaction with the tourist experience.

If a deliberate and comprehensive tourism policy is implemented in Gaziantep, it has the potential to become a significant tourism hub in Turkey and the region. This is due to the abundance of ancient cities, ruins, mounds, museums, and historical and cultural treasures from various civilizations such as Hittite, Byzantine, Roman, Arab-Islamic, and Turkish-Islamic. Therefore, by safeguarding and transmitting cultural heritage to future generations, the research area has the potential to generate substantial revenue for our country.

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LAND USE CHARACTERISTICS ON THE COASTS OF IZMIT BAY

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ABSTRACT

The 21st century draws attention as a century in which environmental destruction continues, on the one hand, and efforts are made to prevent these destructions with holistic and sustainable approaches. Rapid and unplanned population growth, industrialization, informatics and industry 4.0 revolution, carbon emissions, ecosystem destruction, environmental pollution, global climate changes continue unabated. On the other hand, many institutions and organizations, especially the United Nations, are taking steps and setting goals to slow down this trend. The shores of Izmit Bay were examined in this study in terms of holistic and sustainable spatial use. In this field, where demands and usage needs are high but resources and potential are limited, it is clear that optimal and correct use is imperative, considering the future and future generations and environments. In the study, land use characteristics were determined and evaluations were made in terms of sustainable holistic basin management. Correct and sustainable use, as the most basic application subject of Geographical Science, which deals with the interaction between natural and human elements in a place, has been evaluated from a multidisciplinary perspective.

KEY WORDS: *Izmit Gulf, Spatial, Land Use, Sustainability, Planning, Management*

INTRODUCTION

Industrialization in the last two centuries and parallel rapid and unplanned population growth have caused a dominant change, especially in places with high geographical potential. Although this change is positive for welfare and development in the short term, it has caused and continues to cause irreparable and irreversible destruction on the "Earth", our living space. Species extinction, biodiversity destruction, carbon emissions and effects on climate are the first things that come to mind. However, the Earth, which is 4.6 billion years old, has its own sustainable Ecosystem and maintains it with uninterrupted cycles. In the last 10 thousand years, humans, who increased their influence first with hunters and gatherers, then with agriculture and sedentary life, became a much more dominant factor after the industrial revolution, damaging these cycles and therefore the entire earth system. These destructions continued with the voices of the academic circles initially coming to the fore, and then coming to the agenda of the ruling elites, and decisions regarding sustainability were taken and implemented at the UN level (Akova, Kahraman, 2021). In this regard, studies on the concepts of spatial use and sustainable holistic planning have gained momentum.

Izmit Bay, one of the most industrially dense locations in our country, is a location that should be studied from this perspective. Therefore, the main purpose of the study is to reveal the entire geographical potential of the basin in question, to describe and classify the spatial uses in the light of data, to identify correct and incorrect uses and to make suggestions in this direction (Akova, S., 2019; Akova, S., Bayartan, M., Akova, İ., 2013).

For the study, all human and physical data were compiled, digitalized in GIS and turned into a visual document. With numerous scientific and technical field studies carried out in different seasons and years, on-site observations and determinations were made through spatial use and change monitoring. Thus, spatial use characteristics in the coastal zone of Izmit Bay were determined and mapped, and evaluations were made in terms of holistic space management.

Izmit Bay is within the scope of the Marmara Sea surrounding it. The coasts constitute the coastal belt of this basin belonging to the Marmara Sea. In terms of geographical regions, the study area lies in the Marmara Region, within the borders of its Çatalca-Kocaeli and Southern Marmara Sections (Figure 1).

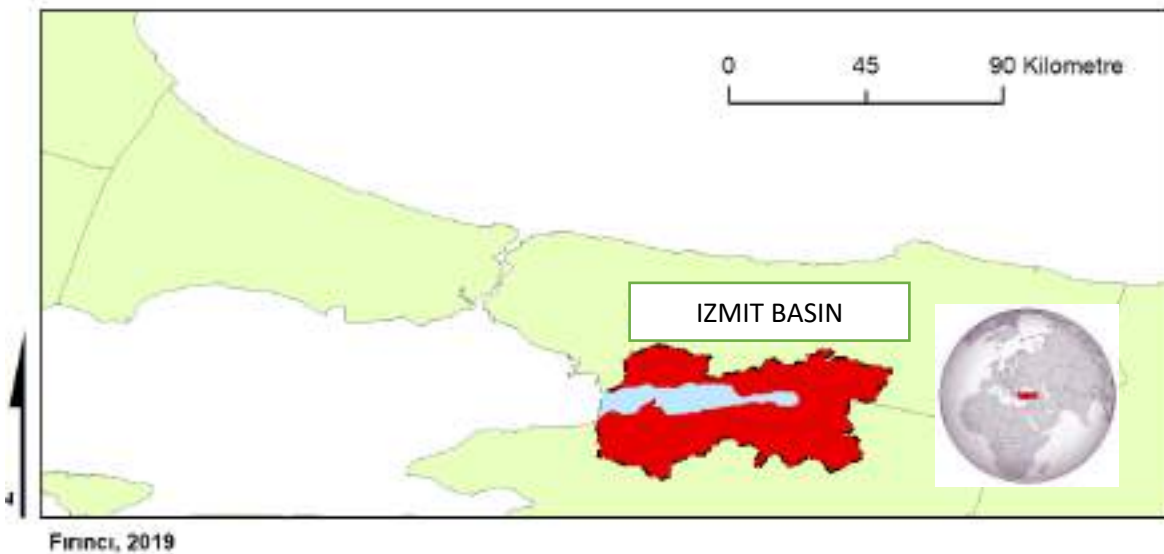


Figure 1. Location Map of the Study Area

Although the study area remains mostly within the borders of Kocaeli Province in terms of administrative units, it also extends to the borders of Yalova, Sakarya and Bursa Provinces. According to the districts, the study area is Darıca, Çayırova, Gebze, Dilovası, Körfez, Derince, İzmit, Kartepe, Başiskele, Gölcük and Karamürsel of Kocaeli Province; It falls within the borders of Yalova's Altınova and Çiftlikköy, Sakarya's Pamukova and Bursa's İznik districts.

According to the Geographic Coordinate system, it lies between 29° 20'- 30° 14' eastern longitudes and 40° 30'- 40° 54' northern latitudes. According to the UTM projection coordinate system, it is located between the 4531150, 902 north, 4485943, 459 south ordinate axes of the north 35 zone and the 696423.944 east - 771440.661 west apse axes.

The Izmit Bay Basin extends to the water division line between the Marmara Sea and the Black Sea on the Kocaeli Plateau in the north. In the south, it continues along the Samanlı Mountains to the water line separating the İznik Lake and Gemlik Bay basins from the İzmit Gulf. While the Darıca-Çiftlikköy line, bordered by the Marmara Sea offshore of the gulf, constitutes its western border; It continues to the east to the water section of the Sapanca Lake Basin.

The Gulf of İzmit, which is the sea area east of the line drawn between the Yelkenkaya Lighthouse in Darıca and Çatal Burnu,

formed by the drowning in the water rises during the Flanders Transgression of a graben area that forms the western line of the North Anatolian Fault Zone, together with the Gemlik Gulf in the east of the Marmara Sea. It is one of the important Gulf regions.

General Characteristics of the Coastal Zone

Today, 11 districts connected to Kocaeli and Yalova in the Gulf of İzmit have coastal areas. In coastal use, residential areas have a large share of 31% with 31.12 km², so the most coastal use is reserved for settlements (Figure 2).

The second largest usage type consists of agricultural areas with 12.06 km², which has a share of 12%, and industrial areas, with 12.05 km², which also has a share of 12%. While agricultural areas generally start slightly behind the coastline, industrial areas are often integrated with the coastline as industrial activities are carried out in an integrated manner with coastal ports. It is also seen that large industrial facilities form an integrity with their ports.

The military areas on the Gulf coast, with a size of 9.03 km², have a share of 9% and include partly settlements and partly green and wooded areas. Coastal usage areas include 6% secondary business centers, 5% forests, 5% central business areas, 3% public areas and 3% tourism areas. Other coastal usage areas are fragmented and occupy narrow areas.

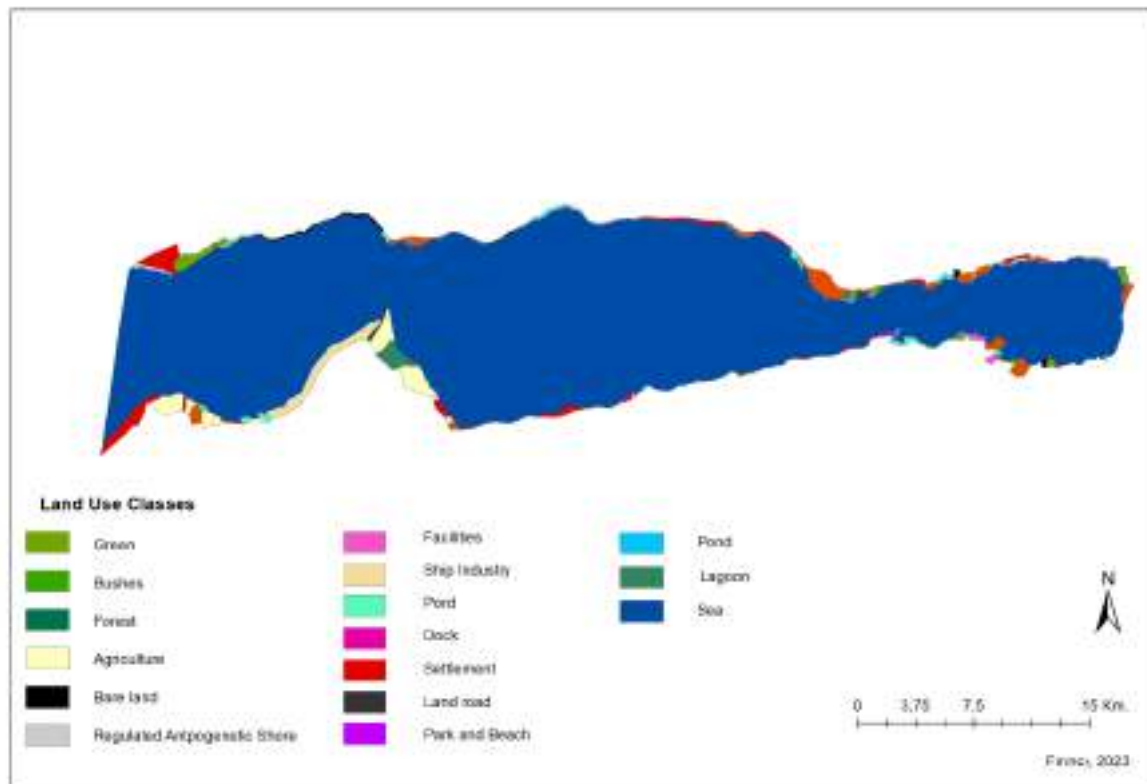


Figure 2: Coastal Land Use Classes of the Study Area

Agricultural areas on the shores of the Gulf of Izmit are located mostly in the districts of Karamürsel, Altınova and Çiftlikköy, located in the south of the gulf. When we look at the types of use on the southern shores of the bay, we see that residential areas come first with 31%, followed by agricultural areas with 22%, industrial facilities with 16% and military areas with 15%.

On the eastern shores of the Gulf of Izmit, it is seen that the majority of business and trade center areas constitute the majority with 72%, followed by recently built tourism and recreation areas such as Seka Park with 17%. Residential areas on the northern shores of the Gulf have a significant share of 38%. Therefore, the northern coasts are the part with the highest proportion of residential areas. In terms of coastal use on the northern coasts, residential areas are followed by industrial facilities with 19%. Compared to the eastern and southern coasts, it is seen that the areas allocated to industrial facilities have the highest share in coastal use on the northern coasts. A similar situation also applies to forest areas. While forest areas have a large share of 13% on the northern coasts, this ratio is 0% on the eastern coasts and a small share of 3% on the southern coasts. There is a relationship between coastal geomorphology and coastal use under the influence of human activities on the coasts of Izmit Bay. As a result of this relationship, changes occur in natural coastal elements. Many of these changes are changes that occur in the coastal area and coastline with coastal filling works (Uzun and Garipağaoğlu, 2014).

In the study conducted by Uzun (2021) on human-induced geomorphological changes on the shores of the Gulf of Izmit, an accumulation area of 6.15 km² and an erosion area of 0.53 km² were detected on the shores of the Gulf of Izmit between the 1950s and 2020. Analyses conducted in the study showed that 90% of the change areas were caused by direct human-induced impacts, 7% were indirect human impacts, and 3% were the result of natural conditions. While the coastal length of the Gulf of Izmit was 131 km in 1950, this length reached 190 km in 2023. There has been a 45% increase in the total coast length. It is seen that this increase is 38% on the northern coasts and 58% on the southern coasts. On the other hand, there was a 20% decrease on the eastern coasts. The fact that 90% of the linear and areal changes experienced on the coasts are caused by humans has led to the observation of anthropogenic geomorphology units both on the coasts and behind the coasts. For this reason, anthropogenic geomorphological changes occurring behind the coast have also indirectly and directly affected the coasts and caused changes in coastal geomorphology in certain areas (Uzun, 2015, 2021).

Land Use in the Northern Marmara Coasts

Izmit Gulf starts from the Darıca coast in the north. At the extreme point here are the Public Beach and Darıca National Park (Photo 1).



Photo 1: Darıca Nation Park and Coastal Zone

Next is Şehit Er Gökhan Hüseyinoğlu beach. Darıca Hobbit Village attracts attention as a beautiful excursion and souvenir area (Photo 2).



Photo 2: Darıca Hobbit Village and Houses

Eskihisar Castle is one of the important historical ruins in the region. There is Eskihisar ferry pier in front of the castle, and

from here there are regular car ferry services to Topçular on the opposite shore. (Photo 3).



Photo 3: Eskihisar Castle

Gebze coasts begin in the east. Gebze Industrial Zones and piers are located here. When we pass to Dilovası, the Osmangazi Bridge, which connects the pier and the Gulf to the opposite shore, welcomes us. In Dilovası, there are important institutions such as the informatics valley, Gebze University, TÜBİTAK

and many industrial enterprises. Dilovası OSB and Assan Aluminum factory are important industrial establishments here. (Photo 4).



Photo 4: Osman Gazi Bridge

Continuing east, we pass to the coasts of Tavşancıl and Hereke. The coastal areas here, from Şirinyalı, Kirazlıyalı and Körfez district, are steep and rugged. The low population density has resulted in the natural protection of the coasts here.

Transportation here is provided by viaducts and tunnels. NUH Cement Facilities on the coast is the main industrial enterprise. (Photo 5).



Photo 5: NUH Cement Facilities

Körfez and Derince districts are located on a wide and flat coastal area. Located on the shores of Körfez district, TÜPRAŞ is one of the important industrial organizations of Turkey. Evyaport Port Facilities, Gübretaş Yarımcı Factory, Rota Port,

Yarımcı Beach Park, district center, Tosfed Körfez Race Track and Tütünciftlik beach and park attract attention as other usage areas. (Photo 6).



Photo 6: TUPRAS Facilities

After the gulf, towards the east, Derince district is located. Derince has regular residential areas. There is a parking area

and shopping market called Wonderland beach on the shore (Photo 7).



Photo 7: Derince Wonderland Beach Smurfs Village

Derince port and Safi Pord are important port establishments in the region. The facilities where Derince Çene water comes out

and is distributed are also located in this location, along with the Çene stream and the recreation area (Photo 8).



Fotoğraf 8: Derince Safi Pord

TEM highway divides Derince in two in the west-east direction. There is D100 Highway and YHT high-speed train line on the coastal road. This line continues along the coast after Gebze and reaches Izmit. Kocaeli Derince Ice Sports Complex, just north of D100, attracts attention. Izmit Coasts are organized as SEKA

PARK. For many years, the area where the SEKA Paper Factory was located was turned into a museum, and the coastline was arranged as a park area and green areas and opened to the public. There are many social facilities, restaurants and entertainment venues here (Photo 9).



Photo 9: SEKA PARK

Izmit is where the Gulf named after it ends. The shores where the bay ends have been filled with artificial fill and landscaped, creating recreational areas. Izmit is the most densely populated city in the region. After the 1999 earthquake, the city grew rapidly and spread from the coast to the north to the mountainous region. Kocaeli University and the Faculty of Medicine, located in Umuttepe, have been effective in the growth of the city in this direction. Izmit West and East industrial zone was established in the area created by the drying of the swamps on the southern side of the Izmit Bay. On the shore here, there are Kocaeli Fairground, OUTLET CENTER

shopping mall, 41 BURADA AVM, Emek Hotel, Automobile market and public picnic and walking tracks.

Land Use in the Southern Marmara Coasts

The southern shores continue with the Başiskele district (Photo 10). Başiskele takes its name from the military area. The supply port for the marine vessels of the Gölcük navy is located here and there is a military zone on the shore. A public picnic and parking area has been created on the Başiskele beach, outside the military zone.



Photo 10: A Section from Başiskele Beach

On the coast, touristic 5-star hotels and industrial establishments are located side by side. Yıldız Entegre Port, Hayat Kimya Bingo Factory and Port, Beyçelik, Limas Port,

Başiskele Sanayi, İzmit Customs Directorate, Auto Port port operations, Çimtaş, İzmit Free Zone, Ford Automobile Factory are the main businesses here (Photo 11).



Photo 11: FORD OTOSAN Facilities

The southern part continues with the shores of Gölcük. The Military Region within the scope of Gölcük Navy and Military ports and supply centers constitutes an important part of the

Gölcük coast. The important public areas here are Değirmendere and Halidere coast. (Photo 12).



Photo 12: Gölcük Shipyard

Continuing towards the west, Karamürsel district is located. The coastal area here contains plains more suitable for settlement. Karamürsel coast consists of public landscaped shores. Afterwards, we move on to the Herzegovina Delta, which is an important agricultural area. However, Karamürsel Industry, Ship Industry, Ship Maintenance Ports and the southern leg of the Osmangazi Bridge are located on this fertile agricultural land. It can be seen that Altınova district center, which spreads over a wide area to the west, is also established

in the Herzegovina delta. In the remaining parts of these occupations, there are only the last shelters of agricultural areas. There is also a beach on the shore and chemical factories next to it. Greenhouse cultivation is quite common in the Hersek Delta and its continuation, Tavşanlı. Greenhouse products, arboriculture, and floriculture are important activities here. There is Topçular ferry pier on the coast of Tavşanlı (Photo 13, 14).



Photo 13: Hersek Delta and Orchards



Photo 14: Hersek Lagoon

İzmit Bay ends at Taşköprü location after Altınova in the direction of Yalova. Yalova industry is located on the small delta here. Fatnel Shipyard, AG Girişim joint treatment facilities, Benoplastic mold and packaging industry, Akkim

Chemical industry, Aksa Akrilik chemical industry, Yumtek food production facilities and Dov Aksa Facilities attract attention as the main enterprises (Photo 15).



Photo 15: AKSA Acrylic Industry



RESULT AND CONCLUSIONS

As stated, the study area is a location with rapidly increasing population dynamics following a widespread industrialization process. Port, industry, trade and university functions attract attention in the cities in the field. The housing demand of the rapidly increasing population in this area with a strong economy has led to unplanned and unplanned construction.

Industry and environmental pollution stand out as the main pressures on the natural potential and species diversity in the basin. Apart from these, land filling on the natural biotopes in the field, excessive material purchase, garbage storage, daily picnics, coastal repair, transportation, urban and agricultural land uses attract attention as other elements of destruction. As a result of misuse, negative situations such as land division in the field, erosion, deterioration of the natural structure, changing the water bed and reclamation of streams, disruption of water flow due to the transition to a closed canal system, and visual pollution due to excessive construction in some places have been experienced.

Industrialization and urbanization are inevitable. However, urban and industrial spaces should be arranged accordingly in line with the principles of living in harmony with nature. Industrial establishments should construct and implement treatment facilities that meet the discharge standards given in the Water Pollution Control Regulation as soon as possible. The principle that the polluter must pay should also be implemented in the short term.

At the same time, elements such as nitrogen and phosphorus from the fertilizers used in this area, where agricultural activities are carried out intensively, mix with the clean water system. Correct and limited use of fertilizers and pesticides should be ensured by soil analysis. Thus, nitrogen and phosphorus inflow to water resources in the basin can be reduced.

The algae bloom and mucilage problem in the Marmara Sea is at an advanced level due to the wastes in the waters discharged into the sea. It is clear that the high concentrations of pollutants in this area had an impact on the occurrence of this disaster. 21 coastal beaches, 6 of which are blue flag, located on the shores of the Marmara Sea, which have reached the level of hypertrophic pollution, should be urgently re-planned and protected in harmony with the environment. The easiest way to improve the water quality in the Marmara Sea is to prevent polluting sources reaching the sea. For this, first of all, the concentrations of microplastics and other pollutants in seawater should be reduced to low levels.

A holistic environmental plan must be implemented on the site by completing at least a 1/50,000 scale Environmental Plan.

In today's world where agriculture is vital, potential erosion areas should be determined with erosion risk models in order to minimize soil losses in productive agricultural areas. Erosion should be minimized by land use characteristics.

Wetlands are also being dried through projects carried out under the name of swamp drying. For this purpose, water is absorbed by water-loving woody plants that do not belong to the wetland. Ecological balance is damaged by both drying the wetland and using wrong methods. Again, the gain of land area by filling the sea also attracts attention in the field. Opening these areas to settlement and turning them into population gathering areas brings with it risks. In a possible earthquake, ground liquefaction will occur and great destruction will occur in these locations. These possibilities should be prevented through planning.

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THE MODERATING EFFECT OF PARENTING STYLES TOWARDS THE RELATIONSHIP OF SELF-ESTEEM AND FRIENDSHIP QUALITY ON JUVENILE DELINQUENCY IN ANGELES CITY

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ABSTRACT

This study investigates the relationship between self-esteem, friendship quality, and adolescent criminality in the Philippines, a country with a high rate of delinquency. The research, conducted on 198 adolescents aged 15-17 in Angeles City, found that authoritative parenting promotes positive friendships and self-esteem, while permissive and authoritarian parenting styles lead to less desirable outcomes. The study emphasizes the need for interventions tailored to the cultural context of the Philippines to promote positive adolescent development and reduce criminal behavior. Future research should use longitudinal and mixed-methods approaches to gather diverse and representative samples. Understanding the interplay between parenting styles, self-esteem, friendship quality, and adolescent misbehavior is crucial for developing effective therapies.

KEYWORDS: juvenile delinquency; parenting styles; self-esteem; friendship quality; angeles city; philippines

I. INTRODUCTION

Juvenile delinquency is a global issue affecting millions of young people. In 2018, the Philippine National Police Directorate for Intelligence and Investigative Management reported 11,324 documented cases of juvenile involvement in criminal activity [1]. This rise in juvenile delinquency has prompted researchers to investigate contributing factors. Keizer et al. (2019)[2] found that self-esteem, parenting approaches, and the quality of friendships are associated with juvenile delinquency. It's worth noting that juvenile delinquency is a concern in many countries, including the Philippines, where the Office of Juvenile Justice and Delinquency Prevention estimated 424,300 juvenile arrests in 2020 [3]. In Europe, there are issues with juvenile justice systems lacking effective measures for rehabilitation [4].

The term "parenting style" refers to how parents interact with their children, including how they raise, teach, and instruct them [5]. It affects the child's personality, behavior, and world perspective. It is essential to acknowledge that parenting styles are not static and that parents may vary between types depending on the circumstances, their age, and their needs at that stage of development. The authoritative parenting style is distinguished by the parent's warmth and attentiveness, as well as explicit and consistent rules and expectations [6]. Authoritarian parents are strict and demanding, often using harsh punishments to enforce their rules. They prioritize obedience and discipline over empathy

and understanding. The permissive parenting style involves a high level of warmth and affection from the parent but little to no control or discipline [7]. Permissive parents allow their children to make decisions, often without guidance or consequences. Children raised in a permissive household may struggle with self-control, have difficulty following rules and authority, and have a sense of entitlement.

An individual's all-encompassing evaluation of their worth or value is what is meant by the term "self-esteem." Mineev et al. (2018)[8] elaborated that self-esteem is a personal and subjective assessment of one's capabilities, achievements, and qualities regarding how one sees oneself. In contrast, those with low self-esteem are more likely to struggle with feelings of insecurity, self-doubt, and self-criticism [9]. Morris Rosenberg makes one of the most used scales in measuring self-esteem. He defined self-esteem as "an attitude toward the self that is either favorable or unfavorable, which, in turn, is a function of the extent to which the individual perceives himself as being competent to cope with the fundamental challenges of life and of his ability to achieve the goals he values" [10]. Self-competence is an essential aspect of self-esteem. It refers to a person's belief in their ability to perform tasks and achieve goals. It is often related to their sense of mastery and effectiveness in various aspects of life [11]. Self-liking is the cornerstone of a positive self concept and is vital for general health and happiness [12]. Suppose a person has a high level of self-liking. In that case, they can have positive feelings about



themselves, recognize and value the aspects that make them unique, and be compassionate and kind to themselves.

The qualities and facets of a friendship that contribute to its robustness, physical and mental well-being, and overall positivity are referred to as its "friendship quality" [13]. The study by Omuris (2019)[14] elaborated on factors that may measure friendship. It involves various factors, like honesty, mutual trust, respect, communication, empathy, support, and having similar interests or values. When two people have a strong sense of connection and intimacy, they can open up to one another and feel safe discussing their innermost thoughts and emotions [15]. This is the hallmark of a solid and lasting friendship. Because it paves the way for open and honest conversation, the resolution of conflicts, and the solution of problems, effective communication is also an essential component of the quality of a friendship. Conflict is a significant characteristic of children's friendships, correlated with the continued existence of the bond and its potential to end. Closeness, on the other hand, is the idea that friendship provides acceptance, validation, and attachment. Symbolic interactionists emphasize the importance of morality and reflected appraisal in friendships. Help and Aid refer to the process of providing assistance to a disruptive child. Security is a crucial aspect of friendship, as young adults consider the perception of friendships being stable and capable of continuing despite issues and conflict. They believe their friends can be trusted and rely upon, and the friendship will be strong enough to endure any disagreements or negative events. The modern approach to finding out factors that strengthen a friendship or identify friendship qualities is conducted by recent studies. In 1994, Bukowski et al. [16] characterized friendship qualities in four dimensions. These dimensions include companionship, conflict, closeness, help, and security.

International researchers have examined how self-esteem, parenting approaches, friendship quality, and adolescent misbehavior are related, but this relationship can vary based on social and cultural contexts. Therefore, it's crucial to investigate these connections within the Philippines to develop culturally and socially appropriate interventions.

Low self-esteem is linked to criminal behavior, and certain parenting styles, like authoritarian parenting, are associated with criminal behavior among Filipino teenagers. Friendship quality has been linked to better developmental outcomes, while negative peer pressure can lead to criminal behavior. However, there's limited research on the link between these elements and juvenile delinquency. Some studies have shown a positive 4 correlation between criminal thinking styles, criminal social identity, and authoritarian and permissive parenting styles, but a negative correlation with authoritative parenting [17]. Self-esteem also plays a role in juvenile delinquency, with some studies showing a small but significant negative effect. For instance, Ong et al. (2019)[18] found a substantial relationship between self-stigma and self-esteem, while Xiang et al. (2018)[19] found that children

with authoritarian parents have lower self-esteem and a greater propensity to join delinquent groups. Climent-Galarza et al. (2022)[20] investigated how parental socialization impacts a child's likelihood of engaging in delinquent behavior. Garcia et al. (2020)[21] found that adolescents with indulgent and authoritarian parents had a lower risk of alcohol use and addiction, and Masud et al. (2019)[22] found that authoritative parenting styles reduce adolescent aggression.

Peer relationships can also contribute to delinquent behavior, especially when individuals receive social support from delinquent peers [23]. Cho and Galehan (2020)[24] confirmed these findings. Research has shown that adolescents with inadequate friendship qualities, experiences of victimization from bullying and child abuse, and poor friendship quality are more likely to engage in delinquent behavior. Alienation from the mother is a significant predictor of subsequent criminality, and peer interactions, particularly with delinquent peers, are highly connected to later delinquent behavior [25]. Additionally, Buchanan et al. (2020)[26] found that the pandemic has impacted the relationship between friendship, self-esteem, and parenting styles concerning juvenile delinquency. Self-esteem is also a dominant factor among sex offenders committing crimes [27]. Parenting style and peer attachment relationships play a role in the likelihood of delinquent behavior [6]. Moreover, a combination of social support from family and friends can mitigate the adverse impact of sibling victimization on mental health, self-esteem, and delinquent behavior [28].

A. General Objective

The research will explore how parenting strategies influence the connection between self esteem, friendship quality, and delinquent behavior in young people. It will also examine how self-esteem and friendship quality relate to juvenile delinquency. Additionally, the study will look into whether different parenting styles, like authoritarian, authoritative, and permissive, affect the relationship between self-esteem and friendship quality, as well as their impact on juvenile delinquency.

B. Specific Objectives

- a) How may the parenting styles of respondents be described in terms of:
 - a. authoritarian;
 - b. authoritative; and
 - c. permissive?
- b) How may the friendship quality be described in terms of:
 - a.companionship;
 - b. conflict;
 - c. closeness;
 - d. help; and
 - e. security?
- c) How may the respondent's self-esteem be described in terms of:



- a. self-competence;
- b. self-confidence?

d) Does parenting styles moderate the relationship between self-esteem and friendship quality?

e) Does parenting styles moderate the relationship of self-esteem and friendship quality on juvenile delinquency?

II. METHODS

The research study involves a series of meticulous steps to ensure accurate and meaningful data collection. The researchers initiate the study with a formal request letter, demonstrating their commitment to ethical standards. The subject professor's involvement in validating a questionnaire checklist is crucial for ensuring the survey questions are reliable, valid, and aligned with the research objectives. This collaborative approach reflects the collaborative nature of research, where experienced individuals contribute their expertise. The study methodology in Angeles City, Pampanga, demonstrates a systematic approach to data collection, as surveys provide insights into complex social phenomena. The geographical location of the study may have implications for the study results. Informed consent is a critical ethical consideration, ensuring participants are aware of the purpose and potential implications of their involvement. Operational definitions of terminologies used in the study help eliminate ambiguity and enhance the reliability and validity of the collected data. Requesting sincerity from participants emphasizes the importance of honest and accurate responses, as insincere or inaccurate responses can lead to skewed results. The primary objective of the research is to investigate the potential mediating impact of parenting styles on self-esteem and friendship quality, which is important for various fields like psychology, education, and social sciences. After completing the survey, the researchers gathered and tabulated participants' responses for analysis. This process involves statistical techniques and data interpretation, helping answer research questions and contribute to the broader academic and practical discourse. The researchers' systematic and ethical approach emphasizes collaboration, transparency, and the ultimate goal of contributing to knowledge in the field.

C. Study Design

Exploratory research is a method used to understand the link between parenting styles, self-esteem, friendship quality, and juvenile delinquency. It helps in identifying variables, data collection methods, and analysis techniques [29]. Through a quantitative study, this approach can delve into the experiences of adolescents with various parenting styles, their self-worth perceptions, and friendship quality, shedding light on potential moderating effects of parenting styles on self-esteem and friendship quality.

Exploratory research proves valuable in grasping the connection between parenting styles, self-esteem, friendship quality, and juvenile delinquency. It also offers insights into possible mediating effects and points out areas for further research and intervention [30].

D. Study Participants

Sample size

The study will take place in Angeles City, Pampanga, with 198 teenagers aged 15-17 from 33 barangays. We'll gather data using a survey that looks at self-esteem, parenting styles, friendship quality, and juvenile delinquency behavior. We'll analyze the data using a descriptive approach and multiple regression analysis. The sample size is sufficient, coming from various schools in the city, making it representative. This broad sample and data collection approach enable us to apply our findings to other groups of people.

E. Inclusion and Exclusion Criteria

Inclusion Criteria

To be eligible for the study on how parenting styles affect the link between self-esteem, friendship quality, and juvenile delinquency, participants must be 15-17 years old, either male or female, and living with their parents. They should also be capable of giving accurate answers about their parents' parenting styles, their own self-esteem, and the quality of their friendships with peers.

Exclusion Criteria

To be excluded from the study on how parenting styles affect the connection between self-esteem, friendship quality, and juvenile delinquency, individuals must be minors without parents. They should also reside within the boundaries of Angeles City and be residents of the particular barangays selected by the researchers.

F. Data Collection Procedure

The research study involves a series of meticulous steps to ensure accurate and meaningful data collection. The researchers initiate the study with a formal request letter, demonstrating their commitment to ethical standards. The subject professor's involvement in validating a questionnaire checklist is crucial for ensuring the survey questions are reliable, valid, and aligned with the research objectives. This collaborative approach reflects the collaborative nature of research, where experienced individuals contribute their expertise. The study methodology in Angeles City, Pampanga, demonstrates a systematic approach to data collection, as surveys provide insights into complex social phenomena. The geographical location of the study may have implications for the study results. Informed consent is a critical ethical consideration, ensuring participants are aware of the purpose and potential implications of their involvement. Operational definitions of terminologies used in the study help eliminate ambiguity and enhance the reliability and validity of the collected data. Requesting sincerity from participants emphasizes the importance of honest and accurate responses, as insincere or inaccurate responses can lead to skewed results. The primary objective of the research is to investigate the potential mediating impact of parenting styles on self-esteem and friendship quality, which is important for various fields like psychology, education, and social sciences. After completing the survey, the researchers gathered and tabulated participants' responses for analysis. This



process involves statistical techniques and data interpretation, helping answer research questions and contribute to the broader academic and practical discourse. The researchers' systematic and ethical approach emphasizes collaboration, transparency, and the ultimate goal of contributing to knowledge in the field.

G. Data Gathering Tool

The Friendship Qualities Scale was developed by Bukowski, Hoza, and Bolvin in 1994. It is a theoretically supported, multidimensional measurement tool for evaluating the quality of relationships between young children and their best friends based on five conceptually significant characteristics of the friendship relationship. These aspects include proximity, conflict, help or aid, camaraderie, and security. These measures were shown to represent different but related domains of friendship by a confirmatory factor analysis, which was used to assess the factor structure of this instrument. According to reliability assessments, a high level of internal consistency was found in each dimension. By seeing more excellent ratings for (a) mutual friends compared to non-mutual friends and (b) stable friends compared to non-stable friends, it was possible to confirm the scale's validity. Theoretical and practical concerns relating to these findings are examined in measuring friendship quality.

According to Rosenberg's Self-Esteem Scale (1965) [10], the item response theory was used to examine This tool will be answerable by four options: strongly agree, agree, disagree, and strongly disagree. A commonly used self-report tool for assessing individual self-esteem. Contrary to other prior studies that isolated separate self-confidence and self-depreciation factors, factor analysis found a single shared factor. For graded item answers, the data were fitted to a unidimensional model. Compared to a model that allowed the discriminations to be estimated freely, one that required the ten items to have equal discrimination was used. The unconstrained model, which considers that the ten items on the Rosenberg Self-Esteem Scale do not all discriminate identically and have various relationships to one another's levels of self-esteem, was found to fit the data by the test of significance. The functional pattern of the items was analyzed in relation to their content, and findings are provided with implications for validating and creating future personality measures. It was used by Baumeister et al. (2003) [31], which further provides validity for the questionnaire of Rosenberg (1965).

By using the Perceived Parenting Style Scale, Divya and Manikandan (2013) [32] assess how children perceive their parents' behavior. According to three aspects, including authoritarian, authoritative, and permissive, it gauges the subject's perceived parenting style. It includes 30 items, each eliciting a response on a Likert scale of 1 to 4. According to Delbert Elliot (1985) [33], the National Youth Survey (NYS) Series Parents and teenagers were questioned about the occasions and actions of the previous year for this series to better comprehend both typical and unusual sorts of youth behavior. The demographic and

socioeconomic status of respondents, disruptive events in the home, neighborhood issues, parental aspirations for their children, labeling, the integration of family and peer contexts, parental discipline, parental involvement in the community, drug and alcohol use, victimization, pregnancy, depression, use of outpatient services, partner and respondent violence toward one another, and sexual activity were all the subjects of the data collection. Sex, ethnicity, birth date, age, marital status, and employment of the youngsters, as well as details on the parents' marital status and employment, are all considered demographic characteristics.

H. Validity and Reliability

The Friendship Qualities Scale (FQS) was developed by Bukowski, Hoza, and Bolvin (1994) [16] to assess the friendship qualities of children. It involves generating a pool of items related to friendship qualities, assessing their relevance and clarity through expert ratings, piloting with a sample of children, revising and testing with a larger sample, and refining the scale based on participant feedback. Content reliability is crucial in questionnaire development, as it ensures that the items accurately measure the concept they are intended to measure and are understandable and appropriate for the target population. The Friendship Qualities Scale (FQS) was developed to evaluate the qualities of children and adolescents' thriving friendships, consisting of 10 items measuring qualities like trustworthiness and loyalty. Content validation was crucial for its reliability, involving consultation with experts, pilot testing, item analysis, and revisions, ultimately confirming its validity as a measure of friendship qualities. The Rosenberg Self-Esteem Scale (RSES) is a 10-item self-report inventory developed in 1965 to measure global self-esteem. The content reliability process for the RSES involves piloting the items, examining the scale's correlation with other measures of self-esteem, establishing test-retest reliability, and norming the scale on the studied population.

The Rosenberg Self-Esteem Scale (RSES), created in 1965, is a widely used self-report tool to assess self-esteem. Content validation for RSES includes expert review, clarity assessment, reliability measurement, validity assessment through comparisons with other self-esteem measures, and testing across diverse populations. Divya and Manikandan (2013) [32] present the Perceived Parenting Style Scale, which consists of 36 distinct items categorized into three subscales: Authoritarian, Authoritative, and Permissive. A study found that the scale had good internal consistency and test-retest reliability. The Perceived Parenting Style Scale (PPSS) measures individuals' perceptions of their parents' parenting styles. It demonstrated high validity through factor analysis and correlations with other parenting style measures. Researchers like Suhair, Fakhr, Nyoike, and Valke have utilized the PPSS in their studies. The Delbert Elliot 1985 National Youth Survey (NYS) [33] was comprehensive, developed based on an extensive review of relevant literature, expert feedback, pilot testing with a small sample of participants, and evaluating responses for internal consistency. This process



helped ensure that the data collected was accurate and reliable. The Delbert Elliot 1985 National Youth Survey (NYS)[33] Series involves a five step process for survey development: literature review, content review, field testing, pilot study, and result analysis, ensuring the survey's accuracy, reliability, and effectiveness.

I. Ethical Considerations

Conducting research on how parenting styles mediate the relationship between self-esteem, friendship quality, and juvenile delinquency is essential for ethical reasons. It should be done while prioritizing participants' safety, privacy, and rights [34]. The potential impact of this research on participants is significant and has broad implications [35]. Ethical considerations like informed consent and privacy are crucial, as they uphold participants' autonomy and dignity. Parents should be informed and give consent for their child's participation, and data should be kept confidential and anonymous [36]. Data should also be securely stored, with limited access [37]. Children in this study are persons between the age of 15-17 years old. They must be properly informed of their rights in this study and shall be given an informed consent and assent form to be answered by the respondent and parent, respectively.

Ethical principles extend to the publication of research results. Data and findings should be reported responsibly and without sensationalism [34]. Researchers should disclose potential risks to participants and protect their identities. Moreover, the ethical implications of the research should be considered, as they may influence public policy and how juvenile delinquency is addressed [36].

J. Statistical Analysis of Data

Multiple Regression Analysis, a statistical technique, is employed to study the relationship between a dependent variable and several independent variables [38]. It goes beyond simple linear regression, which looks at the connection between two variables, by involving multiple predictors [39]. The goal is to assess how well the independent variables collectively explain the variations observed in the dependent variable.

For instance, in the context of examining the moderating influence of parenting styles on the connection between self-esteem and friendship quality concerning juvenile delinquency, multiple regression analysis can be used. Researchers create a model that includes independent variables (self-esteem and friendship quality), a moderating variable (parenting style), and the dependent variable (juvenile delinquency) to estimate the impact of parenting styles on the relationship between self-esteem, friendship quality, and juvenile delinquency

III. RESULTS AND DISCUSSIONS

TABLE I

Age of Respondents			
Age	Frequency	Percent	
15	90	45.5	
16	106	53.5	
17	2	1	
Total	198	100	

This table displays a population's age distribution. Specifically, it indicates that 45.5% of the population is 15 years old, 53.5% is 16 years old, and 1% is 17 years old, making a total of 198 individuals in the sampled population.

TABLE II

Gender of Respondents			
	Male	Female	Total
Frequency	90	106	198
Percent	45.5	53.5	100

This table displays the gender distribution of a specified population. There are 90 males and 106 females, making up a total population of 198. The proportion of males is 45.5% and the proportion of females is 53.5%, totaling 100%.

This table represents the indicators of all parenting styles included in the questionnaire [32]. The data provided will be interpreted individually per the category provided by the author of the questionnaire's study.

TABLE III

Perceived Parenting Styles of the Respondent's Parents			
Indicators	X	VI	SD
Capable of making me understand "Right" and "Wrong".	3.80	Often	0.52
View everything with a critical mind.	3.07	Sometimes	0.63
Never find time for me to help during difficult situations.	2.39	Rarely	0.92
Congratulate me when I pass the exams.	2.74	Sometimes	0.92
I am compared with other friends/classmates.	2.29	Rarely	0.83
Never help me in doing day-to-day activities on time.	2.25	Rarely	0.81
My suggestions and ideas are considered.	2.74	Sometimes	0.86
Insult and beat me in front of others.	1.75	Rarely	0.95
No directions are given while doing things.	2.13	Rarely	1.01
I have the freedom to discuss anything	2.80	Sometimes	0.88
I often feel that I am being rejected for affection.	2.35	Rarely	1.00
No inquiries are made about the decisions taken by me.	2.64	Sometimes	0.89



During a crisis situation, they inquire about it.	2.78	Sometimes	0.92
Blame me even for minor things/issues	2.37	Rarely	0.94
Never provide an atmosphere for my studies.	2.44	Rarely	1.02
I get love and care from my parents.	3.12	Sometimes	0.86
Behave to me in a strict manner.	2.64	Sometimes	0.84
Never do anything to satisfy my needs.	2.43	Rarely	0.90
Being pursued for taking my own decisions.	2.72	Sometimes	0.70
Being scolded for not coming up to their expectations.	2.33	Rarely	0.87
Fail to inquire about the disturbances and suggest remedial measures.	2.29	Rarely	0.69
My opinions are considered in all important decisions related to home.	2.70	Sometimes	0.82
Blame me for not doing things properly.	2.36	Rarely	0.93
No effort is made to know about the progress of my studies.	2.01	Rarely	0.98
Provide guidance in studies and suggest ways for character formation.	2.45	Rarely	1.02
Being scolded without knowing the reasons for being late from the College.	1.98	Rarely	0.97
No inquiries are made about my likes and interests.	2.23	Rarely	0.86
At free time they spent time with me.	2.68	Sometimes	0.89
There is control over each of my activities.	2.69	Sometimes	0.81
They will not inquire about my abilities and goals.	2.26	Rarely	0.83
Average	2.51	Sometimes	0.87
Legend: Mean = X Verbal Interpretation = VI Standard Deviation = SD Variance = V			

The survey encompasses a range of statements pertaining to parental relationships with their children and the manner in which these interactions are seen by the participants. Every sentence is accompanied by a mean score, a verbal interpretation, standard deviation, and variance. The mean scores, which vary from 1.75 to 3.80, represent the average ratings given to each statement on a scale. The word interpretations, such as "Often," "Sometimes," and "Rarely," serve to provide qualitative context regarding the frequency or severity of the observed activities. Upon analyzing the mean scores, it becomes apparent that participants have a prevailing belief that their parents possess the ability to instill a moral compass, as denoted by a mean score of 3.80. This finding underscores the widespread and noteworthy nature of this particular facet of parental upbringing. Conversely, behaviors such as verbal insults and physical aggression displayed in the

presence of others (with an average score of 1.75) are seen as seldom incidents.

The standard deviations and variances offer insights into the extent or distribution of reactions. Lower standard deviations indicate a higher degree of consensus among respondents, whereas higher standard deviations signify a greater level of heterogeneity in the responses. In general, the data indicates that the participants have a moderate perception of their parents' level of involvement in their lives, characterized by the provision of support and care, albeit accompanied by occasional instances of criticism or strictness. Furthermore, it is evident that there exists a discernible divergence in perspectives, suggesting that distinct individuals encounter diverse encounters with the parenting approaches employed by their parents.

TABLE IV

Indicators of Authoritative Parenting Style				
Indicators	X	VI	SD	V
Capable of making me understand "Right" and "Wrong".	3.80	Often	0.52	0.27
Congratulate me when I pass the exams.	2.74	Sometimes	0.92	0.85
My suggestions and ideas are considered.	2.74	Sometimes	0.86	0.74
I have the freedom to discuss anything	2.80	Sometimes	0.88	0.77
During the crisis situation, they inquire about it.	2.78	Sometimes	0.92	0.84
I get love and care from my parents.	3.12	Sometimes	0.86	0.74
Being pursued for taking my own decisions.	2.72	Sometimes	0.70	0.50
My opinions are considered in all important decisions related to home.	2.70	Sometimes	0.82	0.67
Provide guidance in studies and suggest ways for character formation.	2.45	Rarely	1.02	1.03
At free time they spent time with me.	2.68	Sometimes	0.89	0.79
Average	2.85	Sometimes	0.84	0.72

The subsequent factors denote the characteristics of the authoritative parenting style. The results indicate that the authoritative parenting style is occasionally employed in Angeles City. The data indicates that parents frequently communicated clear distinctions between correct and incorrect behavior to their children, with a mean of 3.8, a standard deviation of 0.52, and a variance of 0.27. The interval of mean scores ranging from 2.45 to 2.74 indicates that parents occasionally acknowledged and expressed praise for their children's academic achievements while also granting them the liberty to engage in open discussions or inquire about any pressing issues. In addition, it was found that parents exhibited a moderate level of care and affection towards their children, as evidenced by a mean score of 3.12, a standard deviation of 0.86, and a variance of 0.74. Furthermore, parents tend to promote autonomy by encouraging their children to make



their own decisions, as indicated by a mean score of 2.72. Additionally, parents sought to provide guidance and engage in discussions regarding significant household matters, with a mean score of 2.70, a standard deviation of 0.82, and a variance of 0.67. However, it was observed that the occurrence of parents engaging in shared activities during their leisure time was relatively infrequent, with a mean of 2.68, a standard deviation of 0.88, and a variance of 0.78.

TABLE V

Indicators of Permissive Parenting Style				
Indicators	X	VI	SD	V
Never find time for me to help during difficult situations.	2.39	Rarely	0.92	0.85
Never help me in doing day-to-day activities on time.	2.25	Rarely	0.81	0.66
No directions are given while doing things.	2.13	Rarely	1.01	1.01
No inquiries are made about the decisions taken by me.	2.64	Someti mes	0.89	0.79
Never provide an atmosphere for my studies.	2.44	Rarely	1.02	1.04
Never do anything to satisfy my needs.	2.43	Rarely	0.90	0.81
Fail to inquire about the disturbances and suggest remedial measures.	2.29	Rarely	0.69	0.48
No effort is made to know about the progress of my studies.	2.01	Rarely	0.98	0.95
No inquiries are made about my likes and interests.	2.23	Rarely	0.86	0.74
They will not inquire about my abilities and goals.	2.26	Rarely	0.83	0.68
Average	2.31	Rarely	0.89	0.8

These results indicate that on average they employed a permissive parenting style less frequently than other styles, as evidenced by indicators for which parenting behaviors were rarely present, making an average of 2.31. The indicators for which parenting behaviors were found to be more rarely present showed a range of 0.69 standard deviation to 1.02 standard deviation, meaning that in these interactions, all parenting behaviors were generally either rarely present or generally close in frequency. Additionally, this yielded a variance of 0.8. Overall, these results point to a group of parents who employed, on average, a permissive parenting style that was significantly less common than other styles. The responses to the questions indicate a permissive parenting style, as few parental behaviors are observed. The majority of responses indicate that parents are providing support and guidance for their children. This may suggest that the parents do not set explicit expectations and limits. In addition, they rarely provide attentive and proactive parenting to ensure their child's requirements are met and interests are fostered.

TABLE VI

Indicators of Authoritarian Parenting Style				
Indicators	X	VI	SD	V
View everything with a critical mind.	3.07	Someti mes	0.63	0.40
I am compared with other friends/classmates.	2.29	Rarely	0.83	0.69
Insult and beat me in front of others.	1.75	Rarely	0.95	0.91
I often feel that I am being rejected for affection.	2.35	Rarely	1.00	1.01
Blame me even for minor things/issues	2.37	Rarely	0.94	0.88
Behave to me in a strict manner.	2.64	Someti mes	0.84	0.70
Being scolded for not coming up to their expectations.	2.33	Rarely	0.87	0.76
Blame me for not doing things properly.	2.36	Rarely	0.93	0.86
Being scolded without knowing the reasons for being late from the College.	1.98	Rarely	0.97	0.94
There is control over each of my activities.	2.69	Someti mes	0.81	0.65
Average	2.38	Rarely	0.88	0.78

The results indicated that participants rarely exhibited these indicators of authoritarian parenting styles. They only occasionally reported experiencing comparisons to others, being spoken to in a strict manner, and having activity control. This study also discovered that participants rarely experienced verbal insults, rejection of affection, blame for trivial issues, and being reprimanded without being informed of the reasons. The average reported frequency of these indicators of parenting style was low. Moreover, it demonstrates that the majority of authoritarian parenting indicators are rarely employed by parents. The average indicator score was 2.38 out of a possible 5, with a standard deviation of 0.88 and a variance of 0.78. This demonstrates that the authoritarian parenting style is rarely used by parents, although certain aspects are occasionally employed.

In a study by Bukowski et al. (1994) [16] on assessing friendship quality, participants' perceptions of their friendships were examined using various indicators. These indicators revealed details about closeness, companionship, help, security, and conflicts in friendships. The same approach was used to interpret the results of this study.

TABLE VII

Indicators of Friendship Quality				
Indicators	X	VI	SD	V
My friend and I spend all our free time together.	3.81	Little True	1.09	1.18
I can get into fights with my friend.	3.41	Little True	1.33	1.76
If I forgot my lunch or needed a little	4.13	Little True	1.09	1.19



money, my friend would loan it to me.				
If I have a problem at school or at home, I can talk to my friend about it.	4.13	Little True	0.94	0.88
If my friend had to move away, I would miss him/her.	4.12	Little True	1.00	1.00
My friend thinks of fun things for us to do together.	4.11	Little True	1.03	1.06
My friend can bug me or annoy me even though I ask him/her not to.	3.86	Little True	1.09	1.18
My friend helps me when I am having trouble with something.	4.15	Little True	0.77	0.59
If there is something bothering me, I can tell my friend about it even if it is something I cannot tell to other people.	3.70	Little True	1.10	1.21
I feel happy when I am with my friend.	3.82	Little True	1.23	1.51
My friend and I go to each other's houses after school and on weekends.	3.26	Somewhat True	1.23	1.53
My friend and I can argue a lot.	3.00	Somewhat True	1.12	1.25
My friend would help me if I needed it.	3.76	Little True	1.05	1.11
If I said I was sorry after I had a fight with my friend, he/she would still stay mad at me.	2.60	Somewhat True	1.26	1.58
I think about my friend even when my friend is not around.	3.42	Little True	1.18	1.39
Sometimes my friend and I just sit around and talk about things like school, sports, and things we like.	4.03	Little True	1.18	1.39
My friend and I disagree about many things.	3.23	Somewhat True	1.35	1.82
If other kids were bothering me, my friend would help me.	3.59	Little True	1.01	1.02
If my friend or I do something that bothers the other one of us, we can make up easily.	3.49	Little True	1.30	1.69

When I do a good job at something, my friend is happy for me.	4.29	Not at all True	1.03	1.06
My friend would stick up for me if another kid was causing me trouble.	3.94	Little True	1.02	1.04
If my friend and I have a fight or argument, we can say "I'm sorry" and everything will be alright.	4.06	Little True	1.12	1.27
Sometimes my friend does things for me, or makes me feel special.	3.67	Little True	1.22	1.48
Average	3.72	Little True	1.12	1.27

One of the indicators examined was the number of times participants and their friends spent together. The mean score for this indicator was 3.81, indicating that the participants reported spending a considerable quantity of their free time with their friends. As the participants actively chose to spend their recreational time together, this suggests a high level of companionship and closeness within these friendships. Another indicator concentrated on the occurrence of interpersonal conflicts. The participants' mean score for this indicator was 3.41, indicating that they admitted to occasionally fighting with their peers. While disagreements are a natural part of any relationship, the relatively lower mean score indicates that these disagreements were not pervasive or detrimental to the overall character of the friendships. The participants' perceptions of their peers' willingness to help were also evaluated. The average score for the indicator pertaining to lending money or providing assistance when required was 4.13. This indicates that the participants believed their peers would be supportive and willing to assist them in times of need, such as forgetting their lunch or needing financial assistance. This finding demonstrates a sense of trust, safety, and dependability in these alliances. In addition, participants were asked about their ability to discuss school or home issues with peers. This aspect's evaluative indicator received a mean score of 4.13. This high score indicates that the participants felt comfortable confiding in their friends and requesting their advice or support in times of need. This characteristic of friendship reflects the presence of emotional closeness and a supportive environment in these relationships.

The emotional attachment of participants to their peers was also investigated. The average score for the indicator measuring how much participants would mourn their friends if they moved away was 4.12. This score implies a strong emotional bond and attachment, indicating that the participants value their friendships and their role in their lives. In addition, the participant perceptions of their peers; ability to generate enjoyable 16 activities for the group were evaluated. This aspect was measured by an indicator with a mean score of 4.11. This high score indicates that the



respondents believed their friends were proactive in planning pleasant and engaging activities, which contributes to the sense of companionship and shared interests within these friendships. On the subject of conflict resolution, the participants were questioned about the forgiveness of their peers following an argument. The average score for the indicator regarding the likelihood of reconciliation was 4.06. This relatively high score indicates that participants believed their peers were willing to accept apologies in order to resolve conflicts and move forward. This characteristic of friendship reflects the significance of effective communication and conflict resolution in these relationships. Overall, the results of these indicators suggest that the participants perceived their friendships to be characterized by high levels of closeness, companionship, assistance, and security, as well as the occasional presence of conflicts. This indicates that the average score for the numerous statements on the friendship quality scale is 3.72, which corresponds to a rating of Little True. This suggests that the friendship between the two parties is generally powerful, but not flawless. There are still some disagreements or conflicts, but the friend relationship is generally positive. These results emphasize the positive qualities of these friendships and contribute to our understanding of the quality of friendships among the study participants.

TABLE VIII

Indicators of Rosenberg Self-esteem Scale				
Indicators	X	VI	SD	V
On the whole, I am satisfied with myself.	3.22	Agree	0.93	0.87
At times I think I am no good at all.	2.39	Disagree	0.90	0.82
I feel that I have a number of good qualities.	2.84	Agree	0.68	0.46
I am able to do things as well as most other people.	2.80	Agree	0.70	0.48
I feel I do not have much to be proud of.	2.07	Disagree	0.89	0.79
I certainly feel useless at times.	2.01	Disagree	1.03	1.07
I feel that I'm a person of worth.	3.27	Strongly Agree	0.89	0.79
I wish I could have more respect for myself.	3.35	Strongly Agree	0.90	0.82
All in all, I am inclined to think that I am a failure.	1.98	Disagree	1.07	1.15
I take a positive attitude toward myself.	3.22	Agree	0.91	0.83
Average	2.71	Agree	0.89	0.81

The mean (or average) is a measure of central tendency that indicates the typical response of all participants. In this instance, the range of mean ratings for each item is 1.98 to 3.35. The average score for all ten questions is 2.71. These scores provide an indication of the participants' general self-esteem. To facilitate

interpretation, verbal descriptions of each mean score are provided. The degree of agreement or disagreement with the statements is classified by verbal interpretations. For instance, a mean score of 3.22 indicates that, on average, participants agreed with the statement "Overall, I am satisfied with myself." Similarly, a mean score of 2.39 is designated as "Disagree," indicating that, on average, respondents disagreed with the statement "At times, I believe I am utterly incompetent." The standard deviation indicates the degree to which individual responses deviate from the mean score. In this instance, the standard deviations range from 0.68 to 1.03 for each variable. The greater the standard deviation, the greater the 17 responses variability. For example, a standard deviation of 0.68 indicates relatively less variability in responses to the statement "I feel that I have a number of good qualities." Variance, the square of the standard deviation, is an additional measure of variability. It measures the variance of scores relative to the norm. In this table, the variance values range from 0.46 to 1.15. For instance, a variance of 0.46 indicates that responses to the statement "I believe I possess a number of positive qualities" are less variable.

Examining the results, we find that, on average, the participants reported moderate levels of self-esteem. According to the provided verbal interpretation, the mean score of 2.71 lies within the "Agree" range. This indicates that participants have a comparatively positive view of their self-competence and self-liking, as they tend to agree with positive statements about themselves. With mean scores ranging from 2.80 to 3.30 on the first five self-competence assessment items, participants generally concurred with statements regarding their abilities and qualities. This demonstrates a favorable perception of their self-competence. Participants tended to concur with statements reflecting positive self-regard as they moved on to the second set of five items measuring self-liking. The range of mean scores for these items, 3.22 to 3.35, indicates that, on average, participants have a positive self-image and self-respect. Overall, these results indicate that the participants in this study have a moderately positive level of self-esteem, as evidenced by their confidence in their abilities and positive self-regard.

This study reveals that participants have a moderately positive level of self-esteem, as evidenced by their confidence in their abilities and positive self-regard. The data suggests that parental style can influence individuals' friendship quality and self-esteem. An authoritative parenting style, characterized by support, guidance, and open communication, is associated with higher self-esteem and superior friendship quality.

Conversely, a permissive parenting style, characterized by a lack of parental involvement, guidance, and support, may result in lower-quality friendships and possibly lower self-esteem. Perceived parenting styles indicate negative interactions between parents and children, which can negatively affect both the character of friendships and one's self-esteem. Children who perceive their parents as being critical, demeaning, or controlling



may struggle to develop positive friendships and a healthy sense of self. Based on the presented data, it is reasonable to conclude that parental style can influence individuals' friendship quality and self-esteem.

The mean score for friendship quality indicators is comparatively high, indicating that the majority of respondents have positive and fulfilling friendships. The average score for self-esteem is also moderately high, indicating that respondents have a reasonable amount of self-worth and confidence. The first significant finding is that indicators associated with spending time together, engaging in pleasant activities, and providing mutual support received consistently high ratings. This suggests that individuals with higher self-esteem may be more likely to participate in activities that foster friendship bonding and emotional support. Indicators involving conflicts and disagreements received slightly lower ratings, suggesting that self-esteem may play a role in the management and resolution of interpersonal conflicts. Individuals with higher self-esteem may have enhanced communication and problem-solving abilities, allowing them to navigate disagreements 18 more effectively and sustain harmonious relationships. Indicators relating to sharing personal problems with friends and requesting their emotional support received high ratings, suggesting that individuals with higher self-esteem are more likely to have open and trustworthy relationships where they feel comfortable discussing their difficulties and requesting advice or empathy. On the other hand, indicators of negative interactions, such as annoyance and conflicts, received moderate ratings. Low self-esteem may result in increased sensitivity to perceived slights or criticisms, which can strain the character of the friendship. Thus, there is evidence to suggest that self-esteem influences the character of friendships.

TABLE IX

Indicators of Juvenile Delinquency through National Youth Survey				
Indicators	X	VI	SD	V
purposely damaged or destroyed property belonging to your parents or other family members?	5.35	Low-Level Delinquency	0.88	0.77
purposely damaged or destroyed property belonging to a school?	5.63	Low-Level Delinquency	0.94	0.88
purposely damaged or destroyed other property that did not belong to you (not counting family or school property)?	5.77	Low-Level Delinquency	0.69	0.48
stolen (or tried to steal) a motor vehicle, such as a car or motorcycle?	5.74	Low-Level Delinquency	0.75	0.57
stolen (or tried to steal) something worth more than \$50?	5.65	Low-Level Delinquency	0.98	0.96

knowingly bought, sold or held stolen goods (or tried to do any of these things)?	5.68	Low-Level Delinquency	0.92	0.85
thrown objects (such as rocks, snowballs, or bottles) at cars or people?	5.66	Low-Level Delinquency	0.96	0.93
run away from home?	5.65	Low-Level Delinquency	0.89	0.79
lied about your age to gain entrance or to purchase something; for example, lying about your age to buy liquor or get into a movie?	5.36	Low-Level Delinquency	0.99	0.97
carried a hidden weapon other than a plain pocket knife?	5.70	Low-Level Delinquency	0.87	0.75
stolen (or tried to steal) things worth \$5 or less?	5.72	Low-Level Delinquency	0.85	0.72
attacked someone with the idea of seriously hurting or killing him/her?	5.80	Low-Level Delinquency	0.75	0.56
been paid for having sexual relations with someone?	5.84	Low-Level Delinquency	0.65	0.42
been involved in gang fights?	5.81	Low-Level Delinquency	0.73	0.54
sold marijuana or hashish ("pot," "grass," "hash")?	5.82	Low-Level Delinquency	0.71	0.50
cheated on school tests?	5.42	Low-Level Delinquency	1.16	1.35
hitchhiked where it was illegal to do so?	5.81	Low-Level Delinquency	0.76	0.58
stolen money or other things from your parents or other members of your family?	5.61	Low-Level Delinquency	1.03	1.05
hit (or threatened to hit) a teacher or other adult at school?	5.80	Low-Level Delinquency	0.68	0.46
hit (or threatened to hit) one of your parents?	5.79	Low-Level Delinquency	0.71	0.50
hit (or threatened to hit) other students?	5.40	Low-Level Delinquency	1.03	1.06



been loud, rowdy, or unruly in a public place (disorderly conduct)?	5.22	Low-Level Delinquency	1.33	1.78
sold hard drugs, such as heroin, cocaine, and LSD?	5.81	Low-Level Delinquency	0.79	0.62
taken a vehicle for a ride (drive) without the owner's permission?	5.79	Low-Level Delinquency	0.79	0.62
had (or tried to have) sexual relations with someone against their will?	5.83	Low-Level Delinquency	0.65	0.42
used force (strong-arm methods) to get money or things from other students?	5.75	Low-Level Delinquency	0.91	0.84
used force (strong-arm methods) to get money or things from a teacher or other adult at school?	5.85	Low-Level Delinquency	0.64	0.40
used force (strong-arm methods) to get money or things from other people (not students or teachers)?	5.82	Low-Level Delinquency	0.71	0.51
avoided paying for such things as movies, bus or subway rides, and food?	5.76	Low-Level Delinquency	0.74	0.55
been drunk in a public place?	5.68	Low-Level Delinquency	0.88	0.77
stolen (or tried to steal) things worth between \$5 and \$50?	5.78	Low-Level Delinquency	0.84	0.70
stolen (or tried to steal) something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book from the library?	5.79	Low-Level Delinquency	0.83	0.69
broken into a building or vehicle (or tried to break in) to steal something or just to look around?	5.78	Low-Level Delinquency	0.76	0.58
begged for money or things from strangers?	5.75	Low-Level Delinquency	0.84	0.71
skipped classes without an excuse?	5.30	Low-Level Delinquency	1.21	1.46
failed to return extra change that a cashier gave you by mistake?	5.55	Low-Level Delinquency	0.98	0.96

been suspended from school?	5.76	Low-Level Delinquency	0.85	0.72
made obscene telephone calls, such as calling someone and saying dirty things.	5.77	Low-Level Delinquency	0.76	0.58
used: alcoholic beverages (beer, wine, and hard liquor)?	5.44	Low-Level Delinquency	1.26	1.58
marijuana--hashish ("grass," "pot," "hash")?	5.84	Low-Level Delinquency	0.68	0.46
Hallucinogens ("LSD," "Mescaline," "Peyote," "Acid")?	5.86	Low-Level Delinquency	0.63	0.39
Amphetamines ("Uppers," "Speed," "Whites")?	5.79	Low-Level Delinquency	0.86	0.74
Average	5.69	Low-Level Delinquency	0.85	0.76

National Youth Survey on Juvenile Delinquency, encompassing diverse measures of delinquent behaviors among young individuals, along with their respective statistical measures. The indicators encompass a range of behaviors, including but not limited to acts of property damage and theft, as well as more serious transgressions such as assault and engagement in drug-related activities. The statistical analysis includes the mean, verbal interpretation, standard deviation, and variance for each indicator, which offers valuable information regarding the frequency and dispersion of delinquent behaviors among the surveyed juvenile population.

Based on the indicators, the range of mean scores for all delinquent behaviors falls between 5.22 and 5.86, with an overall average of 5.69. The verbal interpretation of these scores is "Low-Level Delinquency." This implies that the surveyed adolescents exhibit a moderate level of involvement in delinquent activities, on average. It is imperative to acknowledge that this categorization does not connote the acceptability or dismissal of these actions, but rather their placement on the lower end of the delinquency continuum. The statistical measures of variance and standard deviation for each indicator provide information on the degree of spread or distribution of the data points in relation to the mean. Typically, the deviations and variances conform to a range of 0.63 to 1.33 and 0.39 to 1.78, respectively. Elevated standard deviations and variances are indicative of heightened response variability, implying that certain individuals exhibit these behaviors with greater frequency or intensity than others.



TABLE X

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709 ^a	.502	.477	.86523
a. Predictors: (Constant), Self Esteem, Friendship Quality				

The relationship between two independent variables, Self Esteem and Friendship Quality, and a dependent variable, Parenting Styles, was examined. As depicted in the Model Summary, the results of the analysis provided insight into the relationship between the variables.

Self-Esteem, Friendship Quality, and Parenting Styles are moderately correlated, as indicated by the correlation coefficient (R) of 0.709. This suggests that higher Self-Esteem and higher Friendship Quality are associated with more positive parenting styles. Self-Esteem and Friendship Quality jointly explain approximately 50.2% of the variance in Parenting Styles. This suggests that these two variables play an important role in determining Parenting Styles, but the analysis does not account for other variables. Considering the number of predictors in the model, the Adjusted R Square of 0.477 provides a more conservative estimate of the proportion of variance explained by the variables. This adjusted value indicates that approximately 47.7% of the variance in parenting styles is attributable to self-esteem and friendship quality. The estimated Standard Error of the Estimate is 0.86523. This value represents the average difference between the observed Parenting Styles values and the model's predicted values. A lesser value indicates that the model fits the data more closely. There is a significant relationship between Self-Esteem, Friendship Quality, and Parenting Styles, according to the analysis.

TABLE XI

Anova Table						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.466	2	14.733	19.680	.000 ^b
	Residual	29.196	39	.749		
	Total	58.662	41			
a. Dependent Variable: Parenting Styles						
b. Predictors: (Constant), Self Esteem, Friendship Quality						

The study analyzed the relationship between self-esteem and friendship quality as independent variables and parenting styles. The results showed that self-esteem and friendship quality significantly influence parenting styles, with a p-value less than the 0.05 threshold. The residual component revealed unexplained

variance in parenting styles, with a sum of squares of 29.196 and a mean square of .749. The total sum of squares for parenting styles was 58.662, with a cumulative degree of freedom of 41. The study suggests that self-esteem and friendship quality are effective in accounting for the variability observed in parenting styles, indicating that parenting styles are significantly influenced by both factors.

The segment of the table pertaining to regression presents comprehensive details regarding the regression model in its entirety. The regression's sum of squares (ss), which equals 29.466, indicates that the independent variables fully account for the variance in parenting styles. The regression's degrees of freedom (df) are 2, which corresponds to the quantity of predictors included in the model. The computation of mean square (ms) involves the division of ss by the corresponding degrees of freedom, resulting in a value of 14.733 for the present scenario. The f-statistic value of 19.680 indicates the statistical significance of the regression model. The present findings suggest that the joint influence of the independent variables, namely self-esteem and friendship quality, is statistically significant in relation to parenting styles. The reported associated significance level (sig.) is less than the conventional threshold of 0.05, with a value of .000. The statistical significance of the p-value is indicative of compelling evidence against the null hypothesis, thereby implying that the association between the predictors and the outcome is not attributable to random chance.

The residual component of the table presents details regarding the variance that remains unaccounted for by the model. The residual sum of squares is 29.196, indicating the extent of unexplained variance in parenting styles attributable to the independent variables. The residual degrees of freedom are determined by subtracting the number of predictors from the overall sample size, resulting in a value of 39. The residual mean square (mse) was computed by dividing the sum of squares (ss) by the degrees of freedom (df), resulting in a value of .749. The total category within the table presents a comprehensive overview of the model. The total sum of squares, which signifies the overall variability in parenting styles, is 58.662. The cumulative degrees of freedom amount to 41, obtained by adding the degrees of freedom for the regression and the residual.

The findings suggest that the regression analysis incorporating self-esteem and friendship quality as independent variables effectively accounted for the variability observed in parenting styles. The findings indicate that parenting styles are significantly influenced by both self-esteem and friendship quality.



TABLE XII

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.717	.047		122.359	.000
	Friendship Quality	-.030	.021	-.335	-1.383	.175
	Self Esteem	-.013	.026	-.095	-.515	.609
	Parenting Styles	.023	.031	.162	.739	.465

a. Dependent Variable: Juvenile Delinquency

The objective of the data analysis was to examine the association among three variables, namely friendship quality, self-esteem, and parenting styles, and their impact on the dependent variable, juvenile delinquency. The table presented below exhibits the unstandardized and standardized coefficients, t-values, and levels of significance for every predictor. The constant term's coefficient, denoted by the "Constant" row, has a value of 5.717 and a standard error of .047. In the absence of any non-constant predictor variables, the intercept term represents the estimated value of the dependent variable (juvenile delinquency). The statistical significance of the constant term is indicated by the considerable p-value of .000 and the significant t-value of 122.359.

Regarding the predictor variables, the coefficient denotes the approximated alteration in the dependent variable for every unitary modification in the related predictor, while holding all other predictors constant. The coefficient of friendship quality is negative at -.030, which suggests that there exists an inverse relationship between friendship quality and juvenile delinquency. Specifically, a unitary increase in friendship quality is associated with a decrease of .030 in juvenile delinquency on average. The statistical analysis reveals that the t-value of -1.383 and the corresponding p-value of .175 do not provide sufficient evidence to establish a statistically significant relationship between friendship quality and juvenile delinquency at the .05 level of significance.

The regression analysis reveals that the coefficient for self-esteem is negative and equal to -.013. This indicates that an increase of one unit in self-esteem is linked to a decrease of -.013 in juvenile delinquency on average. The statistical analysis indicates that the relationship between self-esteem and juvenile delinquency is not

statistically significant at the chosen level of significance, as evidenced by the t-value of -.515 and p-value of .609.

The coefficient for parenting styles is 0.023, indicating that a rise of one unit in parenting styles is linked to an average increase of 0.023 in juvenile delinquency. The statistical analysis reveals that the association between parenting styles and juvenile delinquency is not statistically significant at the specified level of significance, as indicated by the t-value of .739 and p-value of .465.

It is noteworthy that the standardized coefficients, also known as beta coefficients, offer a means of assessing the relative importance of each predictor variable while accounting for differences in scaling. The utilization of standardized coefficients facilitates the comparison of the magnitudes of the effects of the predictors. Based on the specified level of significance, there is no statistically significant association between the predictor variables of friendship quality, self-esteem, parenting styles, and juvenile delinquency.

IV. CONCLUSIONS

The study investigated the relationship between parenting styles, self-esteem, friendship quality, and juvenile delinquency among adolescents in Angeles City, Philippines. The findings revealed that, on average, participants adopted a moderately balanced parenting approach with occasional authoritative parenting elements. Participants reported strong connections with their friends, despite occasional conflicts, emphasizing the importance of supportive social relationships. In terms of self-esteem, participants generally had a positive self-concept and desired external validation. However, the study did not find significant correlations between parenting styles, self-esteem, friendship quality, and juvenile delinquency, failing to establish a causal relationship between these factors.

The outcomes of this research hold significant implications for understanding the dynamics of parenting styles, self-esteem, friendship quality, and their role in adolescent delinquency. While the study did not prove a direct link between these variables and delinquency, it highlights the importance of employing positive parenting methods, especially authoritative techniques involving warmth, support, and consistent discipline. Additionally, it underscores the positive impact of constructive social relationships on the psychological and emotional well-being of individuals. This information is crucial for developing strategies and interventions that support positive youth development and prevent delinquent behavior in adolescents.

The research contributes to the existing literature by examining the interplay of parenting styles, self-esteem, friendship quality, and juvenile delinquency in a Philippine context. It suggests that the relationships between these factors can vary based on social and cultural contexts, emphasizing the importance of culturally sensitive interventions.



However, the study has limitations. It did not establish causal relationships between the variables, indicating the need for further research. It also relied on self-reported data, which can be subject to biases and social desirability effects. Additionally, the sample may not fully represent the diverse socioeconomic, cultural, and geographic backgrounds in the Philippines, so generalizability is limited.

The study did not prove a direct link between parenting styles, self-esteem, friendship quality, and juvenile delinquency. This finding suggests that the hypothesis proposing a significant relationship between these variables was disproved. The reasons for this lack of correlation may be multifaceted, including the complex nature of human behavior, individual differences, and the potential influence of unmeasured variables.

V. RECOMMENDATIONS

Future researchers should focus on longitudinal research strategies to monitor changes and growth over time. A mixed-methods approach, combining quantitative surveys and qualitative interviews, is recommended to achieve a comprehensive understanding. Researchers should also strive to obtain a diverse and representative sample of adolescents from various backgrounds. Additionally, conducting research in multiple data collection sites can capture developmental changes and longitudinal effects more accurately. Regression and mediation models can be employed to analyze quantitative data, while qualitative data analysis should involve coding interview transcripts thematically. Combining quantitative and qualitative evidence can provide a more comprehensive understanding of variable relationships.

The research community should further explore voids and limitations in this field to expand our knowledge of the complex interactions between parenting styles, self-esteem, friendship quality, and juvenile delinquency. This knowledge is essential for developing effective strategies and interventions to promote healthy adolescent development and prevent delinquent behavior.

While the study did not prove a direct link between parenting styles, self-esteem, friendship quality, and juvenile delinquency, it offers valuable insights into the importance of positive parenting practices and supportive social relationships in adolescent development. This research paves the way for future investigations to better understand and address the complex dynamics of juvenile delinquency in various cultural and social contexts.

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PUBLIC SEXUAL HARASSMENT IN PUBLIC TRANSPORTATION IN PAMPANGA

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ABSTRACT

The study examines public sexual harassment in the Pampanga public transportation system and its connection to Feminist Theory. It reveals that young adults, particularly females aged 18-25, are most vulnerable to harassment, possibly influenced by socio-cultural factors. Education levels do not significantly affect the risk of harassment, but middle-class families have a higher risk. Unmarried individuals are at a higher risk. The study also reveals that harassment is prevalent in crowded vehicles and has profound psychological consequences. Low reporting rates highlight the need for increased awareness and improved reporting mechanisms. The research also suggests a multi-faceted approach, incorporating safety strategies to mitigate risks and encourage reporting. It refutes the significance of demographic factors in determining harassment experiences or reporting behaviors, highlighting the need for comprehensive measures to safeguard individuals.

KEYWORDS: Sexual Harassment, Public Transportation, Non-Reporting

I. INTRODUCTION

Sexual harassment, a pervasive issue that transcended borders and cultural boundaries, infiltrated the daily lives of countless individuals in unexpected and uncomfortable places. Public transportation systems, designed to provide modern-world convenience and efficiency, unfortunately became breeding grounds for sexual harassment, causing distress to passengers. Despite its prevalence, this problem often remained concealed, with victims silenced and their experiences disregarded. In the bustling urban landscape of Pampanga, where daily commutes involved crowded vehicles and close proximity, public sexual harassment persisted 'under the radar.' The objective of this research was to unveil these silent experiences and foster a deeper understanding of the dynamics of sexual harassment in public transportation, as befitting a comprehensive research paper.

Sexual harassment constituted a prevalent issue within public transportation systems, affecting both men and women, as confirmed by Gautam et al.'s study in 2019 [1]. Existing research indicated that women, particularly working women and college students, were primary victims of sexual harassment in public transport [2]. Gender disparities were observed, with women more likely to experience harassment due to their perceived vulnerability and attractiveness [3]. In Pakistan, instances where women blamed themselves for harassment, often attributing it to inappropriate clothing, were not uncommon, highlighting the greater access to public spaces for men [4].

Tabassum & Suhail's 2022 study [5] revealed that 41% of women were students, 34% were employed, and 25% were stay-at-home mothers. Of these, 75% traveled daily, while the remaining 25% did so occasionally or once a week. Various forms of harassment, including verbal, non-verbal, and physical, were reported by these women.

On a global scale, the International Labor Organization's data for 2022 indicated that 17.9% of working men and women had experienced psychological violence and harassment, with women comprising 6.3% of the total [6]. Within Asia and the Pacific region, a staggering 75% of women had encountered sexual harassment. In the Philippines, 13% of working women confessed to experiencing sexual harassment, with 9% facing psychological and physical harassment, and 12% enduring all three types. Workplace violence and harassment affected 22% of women and 18% of men, yet a significant portion refrained from reporting incidents to authorities, citing fear of consequences and disbelief as primary reasons. The fear of reputational risk and the belief in the futility of reporting were common deterrents, affecting 47% of women and 60% of men [7].

Public transportation systems served as vital conduits for urban populations, offering essential mobility and accessibility for daily commutes to work, school, and other destinations. However, they concurrently harbored the potential for sexual harassment incidents, spanning from lewd comments and unwarranted advances to more severe transgressions. These occurrences not



only jeopardized passenger safety and well-being but also underscored a deeply entrenched societal issue that demanded in-depth exploration.

While sexual harassment within public transportation settings had garnered attention in some contexts, the specific experiences, perceptions, and reactions of individuals within Pampanga had remained uncharted territory. This research sought to address this considerable gap in the existing body of knowledge, shedding light on the unique factors contributing to the prevalence of sexual harassment within the region's public transportation system.

This research bore significant importance in bringing to the fore an issue affecting a substantial portion of the population, yet often ignored. By revealing individuals' experiences and perceptions of sexual harassment within public transportation, it had the potential to raise public awareness, drive policy changes, and stimulate the development of preventive measures. Furthermore, this study contributed to the broader field of sexual harassment research by offering distinctive insights into a specific and underexplored context.

It is crucial to acknowledge the potential limitations of this research, particularly with respect to data collection. The sensitivity of the topic, self-reporting biases, and societal stigma may have led to underreporting. Additionally, this study was confined to a specific geographic region, Pampanga, and may not fully represent the experiences and perceptions of individuals from other areas.

The research problem revolved around a significant gap in the current understanding of public sexual harassment within Pampanga's public transportation system. The experiences of passengers, their perceptions of this issue, and the impact on their daily lives were elements that had yet to be comprehensively explored. This research aimed to delve into the intricate layers of sexual harassment in public transportation, examining not only the frequency and types of harassment but also the context in which these incidents occurred, their emotional impact, and the responses and reporting behaviors of victims. Furthermore, the study sought to investigate potential variations in these experiences based on socio-demographic profiles, aiming to provide a holistic view of the problem, aligning with the rigorous requirements of a full-blown research paper.

Study Objectives

A. General Objectives

This research was undertaken to investigate incidents of public sexual harassment within the public transportation system of Pampanga.

B. Specific Objectives

1. To establish the socio-demographic profiles of the study's participants.

2. To evaluate the perspectives of respondents regarding sexual harassment in public transportation.
3. To comprehensively analyze the occurrence and features of sexual harassment, as perceived by the participants.
4. To explore the actions taken by respondents when encountering sexual harassment and the preventive measures they employ.

II. METHODOLOGY

This section provides an in-depth view of the research approach, methodologies, data collection techniques, and analytical procedures utilized to investigate incidents of public sexual harassment within the public transportation system of Pampanga.

Research Method

A quantitative research design was employed in this study, specifically utilizing Descriptive Survey and Descriptive Comparative methods to investigate public sexual harassment within Pampanga's public transportation.

Descriptive survey research involved gathering data on socio-demographic information, instances of sexual harassment, their frequency, reporting to law enforcement, underlying causes, and prevention measures [8]. This approach was designed to obtain insights into population characteristics and develop a comprehensive understanding of the issue under examination.

The Descriptive Comparative method facilitated the comparison and contrast of various aspects related to sexual harassment, revealing similarities and distinctions among these phenomena [9]. Data were collected from multiple sources and analyzed to identify patterns and variations, enabling a thorough exploration of the issue, especially concerning different socio-demographic groups [10]. These research methodologies combined to provide a comprehensive examination of public sexual harassment in Pampanga's public transportation, yielding valuable insights into the experiences and perceptions of a diverse demographic.

Population and Sampling Strategy

This study utilized a Convenience Sampling Method to select participants, relying on the deliberate selection of readily accessible individuals who voluntarily participated in the research [11]. The chosen respondents shared specific characteristics: they fell within the age range of 18 to 60, represented both genders, regularly commuted, and had experienced incidents of public sexual harassment in public transportation.

The study's sample size consisted of 385 respondents, determined using the RAOSOFT sample size calculator, which considers a 95% confidence level and a 5% margin of error. According to the 2020 Census conducted by the Philippine Statistics Authority, the population of Pampanga, Philippines, was approximately 2,437,709. Therefore, employing the RAOSOFT sample size calculator, a sample size of 385 individuals was calculated. This sample size was selected to ensure comprehensive and robust data collection.



It is imperative to note that this study was conducted exclusively within the province of Pampanga, Philippines, to provide insights that are particularly relevant to this geographic region.

Inclusion and Exclusion Criteria

In this study on "Public Sexual Harassment in Public Transportation in Pampanga," clear criteria were established to guide the selection of participants. To be eligible for inclusion, individuals had to meet the following criteria: they must be residents of Pampanga, Philippines, aged between 18 and 60, and identify with any gender. Participants should have either experienced public sexual harassment in Pampanga's public transportation or witnessed such incidents. Furthermore, obtaining informed consent was a mandatory prerequisite for participation.

Individuals residing outside of Pampanga, those below the age of 18, and those unable or unwilling to provide informed consent were excluded from the study. Gender was not a basis for exclusion, as individuals of all gender identities were encouraged to participate. Moreover, individuals who lacked the relevant personal experience of public sexual harassment within Pampanga's public transportation system were discouraged from participating to ensure the study's focus remained on those with direct experiences.

Research Instrument

Research instruments are essential tools for data collection, and they must be designed meticulously to gather accurate socio-demographic information. These instruments should encompass questions related to age, gender, ethnicity, education, family income, and marital status, employing both direct and indirect queries for precision.

To investigate sexual harassment in public transportation, a survey questionnaire was adapted from the study by Gautam et al. in 2019 [12]. This survey consisted of closed-ended questions and was administered through face-to-face interactions using a survey platform. It covered various topics, including the regular use of public vehicles, types of vehicles, time spent traveling, and experiences of sexual harassment.

In this study, a survey questionnaire served as the primary research instrument for collecting data on sexual harassment. It included inquiries about recent experiences of harassment, the types of harassment encountered, estimated perpetrator age, timing of incidents, attire of individuals involved, emotional responses, and the reactions of respondents. This data aided researchers in comprehending the prevalence of sexual harassment and the associated risk factors. Additionally, the survey collected data regarding police complaints, motives behind harassment, and preventive measures. This section included information on reasons for reporting incidents to the police, suggested punishments for perpetrators, barriers to reporting, the

role of crowded vehicles, and other contributing factors, along with preventive strategies.

The findings from the survey provided valuable insights into the prevalence of sexual harassment in public transportation. Policymakers, advocacy groups, and public transportation providers can utilize these results to enhance their understanding and address this issue effectively.

Validation of Instrument

Instrument validation is a critical aspect of the research process. Face validation ensures that the instrument is relevant and the language used is clear [13]. In the case of the research tool for socio-demographics and sexual harassment in public transportation, face validation ensures that each question is pertinent and that the language employed is easily understandable.

Content validation, on the other hand, ensures that the instrument covers all necessary aspects [14]. For our instrument, this means it should encompass socio-demographic data, experiences of sexual harassment, police complaints, reasons, and prevention methods.

By validating both face and content, researchers ensure that the instrument is accurate and can reliably collect data.

Reliability of Research Instruments

Cronbach's Alpha is employed to assess the internal consistency of a research instrument, indicating how closely related the items on the instrument are to each other [15]. This is a common measure of reliability for surveys or questionnaires.

In the instrument used in this study, covering socio-demographics, experiences of sexual harassment in public transportation, and related topics, Cronbach's Alpha was utilized to evaluate internal consistency. For instance, if questions spanned from the frequency of harassment to the levels of fear and police complaints, Cronbach's Alpha helped determine whether these questions measured a single concept, such as the fear of harassment, or if they were too diverse to provide a reliable measure.

Data Gathering Procedure

1. Literature Review: The initial step involved a comprehensive review of existing literature on the topics. This facilitated the gathering of insights on socio-demographics, sexual harassment in public transport, and related aspects.
2. Designing the Questionnaire: Based on the insights gained from the literature review, a questionnaire was meticulously designed. This questionnaire included inquiries about socio-demographics, experiences of sexual harassment, police complaints, reasons behind harassment, and prevention methods.



3. Sampling: A diverse sample of individuals from Pampanga who regularly used public transportation was selected, representing various age groups, genders, and socio-economic backgrounds.
4. Data Collection: Data was collected through the administration of the questionnaire using methods such as surveys or face-to-face interviews. The Likert Scale was used to interpret the gathered data. To ensure the proper disposal of data, survey questionnaires were shredded upon the completion of the study.
5. Data Analysis: Upon obtaining the data, quantitative techniques were employed to analyze it, with a particular focus on socio-demographics, experiences of sexual harassment, police complaints, reasons, and prevention methods.

Data Analysis/Statistical Treatment of Data

Statistical tools such as mean, percentage, frequency tables, standard deviation, and variance were crucial [16]. These tools served various purposes: mean values were compared, percentages revealed proportions, frequency tables organized data, standard deviation measured variation, and variance assessed the spread of data.

In the research on Public Sexual Harassment in Public Transportation in Pampanga (Malawis-Ignacio, 2021) [17], these tools were utilized. For instance, the mean values were used to compare the average age among different groups. Percentage calculations were employed to determine proportions, while frequency tables were instrumental in organizing data and displaying percentages in various categories. Standard deviation and variance were used to assess data variability.

ANOVA (Analysis of Variance) was also applied to compare multiple means, detecting significant differences [18]. It was used when variations between groups were more significant than variations within groups [19]. If the null hypothesis was rejected ($p < 0.05$), it indicated that means differed and necessitated further investigation [20].

ANOVA played a pivotal role in comparing groups in terms of perception, occurrence, reasons behind harassment, and prevention of sexual harassment [21]. It was especially valuable for understanding awareness of prevention methods and assessing relationships with socio-demographic factors [22].

Likert Scales were used to gauge experiences, awareness, and knowledge. Researchers employed them to understand the extent of sexual harassment, its underlying causes, and preventive methods [23].

Ethical Considerations

Conducting research on sexual harassment in Pampanga's public transportation required strict adherence to ethical guidelines. Researchers were obligated to prevent any harm or distress to

participants and protect their rights and dignity. Informed consent, which included information about the study's purpose, potential risks, and benefits, was of paramount importance.

For this study, precautions were taken to address potential participant distress and ensure protective measures were in place. Researchers were committed to safeguarding participants' identities and refrained from sharing their information without consent [24].

The implications of the study's findings were carefully considered. While the results could inform policies aimed at preventing sexual harassment, they were not to be used to blame or shame the victims.

The researchers followed several specific ethical considerations to uphold the dignity, safety, and well-being of the participants and to maintain the integrity of the research process. These considerations were as follows:

1. Informed Consent: Prior to conducting the research, researchers obtained informed consent from all participants, providing clear explanations regarding the study's purpose and objectives. Participants were given detailed information about their participation, the right to withdraw at any time, and the handling of their data.
2. Anonymity and Confidentiality: Participants' privacy and confidentiality were assured, and measures were taken to protect their identities. Identifying information was not included in data collection, analysis, or reporting, and data was securely stored and accessible only to the research team.
3. Protection of Vulnerable Populations: The sensitive nature of the topic of sexual harassment necessitated special care when involving vulnerable populations, such as minors or individuals with a history of trauma. Appropriate measures were taken to ensure their safety and well-being, and they were given the choice to opt out of participating.
4. Respect for Diversity: Researchers recognized the significance of diversity in the research and ensured that all participants were treated with respect, regardless of their gender, race, ethnicity, or social status. The research was designed to avoid reinforcing gender stereotypes or perpetuating discrimination.
5. Ethical Data Collection and Analysis: To maintain the integrity of the research, all data was collected and analyzed following ethical principles and practices. Measures were taken to prevent biases and ensure accurate representation of the data.
6. Ethical Reporting: The research findings were reported accurately and transparently, without manipulation or distortion. The researchers ensured that participants' discomfort or harm was minimized and that the results were used to raise awareness and promote positive change.



By adhering to these ethical considerations, the researchers aimed to conduct the research in an ethical and responsible manner, safeguarding the rights and well-being of the participants and ensuring the credibility and validity of the findings.

III. RESULTS AND DISCUSSIONS

Subproblem 1: The socio-demographic information of the respondents.

Age of the Respondents	Frequency	Percent
18-25 years old	322	83.6
26-35 years old	37	9.6
36-45 years old	17	4.4
46-55 years old	8	2.1
56-60 years old	1	.3
Total	385	100.0
Gender of the Respondents	Frequency	Percent
Male	68	17.7
Female	314	81.6
Others	3	.8
Total	385	100.0
Ethnicity of the Respondents	Frequency	Percent
Kapampangan	258	67.0
Tagalog	120	31.2
Cebuano	2	.5
Ilocano	5	1.3
Total	385	100.0
Education Level of the Respondents	Frequency	Percent
Primary	10	2.6
Secondary	48	12.5
Vocational	34	8.8
Tertiary	293	76.1
Total	385	100.0
Monthly Income of the Family of the Respondents	Frequency	Percent
Rich - At least Php 182,000 and up	5	1.3
High Income (but not rich) – Between Php 109,200 to Php 182,000	4	1.0
Upper Middle Income – Between Php 63,700 to Php 109,200	44	11.4
Middle Class – Between Php 36,400 to Php 63,400	134	34.8
Lower Middle Class – Between Php 18,200 to Php 36,400	116	30.1
Low Income (but not poor) – Between Php 9,100 to Php 18,200	61	15.8
Poor – Less than Php 9,100	21	5.5
Total	385	100.0
Marital Status of the Respondents	Frequency	Percent
Single	356	92.5
Married	28	7.3
Widowed	1	.3
Total	385	100.0

The analysis of the survey results provides valuable insights into the demographics of the respondents, including their age, gender, ethnicity, education level, family income, and marital status. These findings can indeed have significant implications for a variety of fields, from social policy to research design. Here is a summary of the key takeaways from your analysis:

Age of Respondents

The majority of respondents fall within the 18 to 25 age range, indicating that the sample predominantly consists of young adults. This may be due to factors such as technology adoption and online survey accessibility, suggesting the need for survey designers to consider respondent age.

Gender Distribution

The survey demonstrates a predominantly female respondent group, with a noteworthy presence of individuals identifying as "others" or "bisexual." This reflects increasing acceptance and visibility of diverse gender identities, highlighting the importance of gender-inclusive policies and representation.

Ethnicity

The results show regional disparities in the ethnic composition of the respondents, with a significant number identifying as Kapampangan. This has implications for crafting policies that account for regional differences within the Philippines and the influence of ethnicity on personal identity.

Education Level

The majority of respondents have attained tertiary education, while a smaller percentage has completed secondary or vocational education. These findings underscore disparities in access to educational opportunities, with implications for resource allocation and equity considerations in this sample group.

Family Income

The majority of respondents fall into the Middle and Lower Middle-Class categories, while the Rich category is the least represented. This indicates income inequality within the family group and suggests the need for policymakers to address the needs of Middle and Lower Middle-Class families, especially in terms of economic support and resource allocation.

Marital Status

The vast majority of respondents are single, with a smaller percentage being married or widowed. This points to potential variations in marriage norms among different demographic groups and highlights the need for further research into factors influencing singlehood.

The analysis has identified several areas where policymakers, researchers, and survey designers can focus their efforts to better address the needs and characteristics of the surveyed population. Understanding these demographic characteristics is crucial for tailoring policies and initiatives to specific groups and for



designing research that considers the unique attributes of respondents.

Subproblem 2: The sexual harassment in public transportation as perceived by the respondents.

Use of public vehicle in regular basis	Frequency	Percent
Yes	385	100.0
If yes, how many times a week	Frequency	Percent
1-3 times a week	191	49.6
4-6 times a week	75	19.5
Everyday	119	30.9
Total	385	100.0
Type of vehicle used	Frequency	Percent
Jeep	278	72.2
Bus	46	11.9
Tricycle	47	12.2
Taxi	2	.5
Grab	12	3.1
Total	385	100.0
Average hours spent in vehicle	Frequency	Percent
5-10 minutes	32	8.3
15-20 minutes	59	15.3
25-30 minutes	155	40.3
1-2 hours	127	33.0
3-4 hours	10	2.6
5-6 hours	2	.5
Total	385	100.0
Ever been sexually harassed in public vehicle	Frequency	Percent
Yes	381	99.0
No	4	1.0
Total	385	100.0

The data regarding the use of public transportation, the frequency of a certain activity, the type of vehicles used, average hours spent in a vehicle, and experiences of sexual harassment in public vehicles provide crucial insights into various aspects of transportation and safety. Here is a summary of the key findings and their implications:

Use of Public Transportation

An astonishing 100% of respondents reported using public transportation regularly. This reflects a high level of acceptance and favorability of public transport, indicating its effectiveness and desirability. It highlights the need for continued investment in public infrastructure to accommodate growing demand and reduce overall vehicle use and carbon emissions.

Frequency of Activity

The majority (49.6%) of respondents engage in a certain activity 1-3 times a week, with 19.5% doing it 4-6 times a week, and 30.9% doing it every day. This information can guide interventions and policies aimed at influencing participant behavior and improving public health.

Type of Vehicle Used

The most commonly used vehicles are Jeeps (72.2%), followed by buses, tricycles, taxis, and Grab-type vehicles. This data

provides valuable insights into vehicle choices and their frequencies across different contexts, aiding in transportation planning and policy development.

Average Hours Spent in a Vehicle

Most people (40.3%) spend 25-30 minutes in a vehicle on average. Understanding these usage patterns can inform traffic regulations, parking availability, and tailored services based on common vehicle types.

Experiences of Sexual Harassment

An alarming 99% of respondents reported experiencing sexual harassment in public vehicles. This highlights a widespread issue that demands urgent action. Policy implications include raising public awareness, implementing and enforcing stronger safety regulations, addressing gender inequality, and providing victim support resources. There is a need for further research to understand the causes of sexual harassment and evaluate the effectiveness of interventions.

These findings have significant implications for policymakers, transportation planners, and organizations in addressing various aspects of public transportation, safety, and public health. However, it is important to acknowledge the potential limitations of a survey with a limited sample size and consider the context in which these findings apply.

Subproblem 3: The occurrence of sexual harassment as perceived by the respondents.

Experience of sexual harassment in past 6 months	Frequency	Percent
1-3 times	353	91.7
4-6 times	29	7.5
7-9 times	1	.3
10-12 times	2	.5
Total	385	100.0
Types of sexual harassment faced	Frequency	Percent
Catcalling	82	21.3
Whistling	47	12.2
Lip Biting	27	7.0
Staring	47	12.2
Winking	68	17.7
Public Masturbation	4	1.0
Maliciously touching or rubbing someone's body, specifically in their private parts.	89	23.1
Standing Close	16	4.2
Stalking or Following	5	1.3
Total	385	100.0
Offender of Public Sexual Harassment	Frequency	Percent
Other fellow passengers	330	85.7
Operators (Driver/conductor)	55	14.3
Total	385	100.0
Estimated age of the harasser	Frequency	Percent
Younger age group (Less	62	16.1



than 25 years)		
Middle age group (25-45 years)	253	65.7
Older age group (More than 45 years)	70	18.2
Total	385	100.0
Time of harassment	Frequency	Percent
Day (morning/afternoon)	257	66.8
Night (evening/night)	128	33.2
Total	385	100.0
Clothes worn when harassed	Frequency	Percent
School Uniform	177	46.0
Work Uniform	54	14.0
Dress	19	4.9
Jeans/T-shirt	104	27.0
Skirt/Croptop	31	8.1
Total	385	100.0
Sexual harassment makes you feel	Frequency	Percent
Humiliated	72	18.7
Angry	113	29.4
Helpless	23	6.0
Scared	97	25.2
Traumatized	80	20.8
Total	385	100.0
Reaction when harassed	Frequency	Percent
Scold the harasser	58	15.1
Keep silent	298	77.4
Counterattack/beat harasser	5	1.3
Drop at nearest bus station	6	1.6
Ask others for help	3	.8
Call relatives	3	.8
Cry	12	3.1
Total	385	100.0

The data regarding experiences of sexual harassment, the types of harassers, time of harassment, clothing worn when harassed, feelings following harassment, and reactions to harassment offer important insights into the prevalence, impact, and responses to this issue. Here is a summary of the key findings and their implications:

Experiences of Sexual Harassment

A significant 99.5% of respondents reported experiencing sexual harassment in the past six months. This indicates that sexual harassment is a pervasive issue that affects a vast majority of individuals. The high prevalence underscores the urgency of addressing this problem through policy, education, and awareness campaigns.

Types of Sexual Harassment

The data showed that various forms of harassment were reported, with catcalling, staring, winking, and malicious touching being the most prevalent. Stalking or following was less frequently reported. Understanding these common forms of harassment can guide interventions, awareness campaigns, and anti-harassment policies tailored to address these specific types.

Offender of Sexual Harassment

The research found that most harassment occurred from fellow passengers (85.7%), with a smaller percentage coming from bus operators (drivers/conductors). This emphasizes the need to address harassment not only from other passengers but also from those responsible for ensuring the safety and well-being of passengers. Policies should focus on protecting passengers from harassment and enforcing penalties for harassers.

Estimated Age of Harassers

Most harassers fell within the middle age group (25-45 years old), challenging stereotypes about the age of harassers. This highlights the need for anti-harassment policies to target middle-aged individuals and address harassment across age groups. Further research can explore the underlying reasons behind this pattern and inform interventions.

Time of Harassment

The study found that harassment occurred both during the daytime (66.8%) and nighttime (33.2%). The findings underscore that harassment can happen at any time and emphasize the need for 24/7 strategies for prevention, awareness, and reporting mechanisms.

Clothing Worn When Harassed

Respondents reported a variety of clothing during harassment, with school uniforms being the most common. This finding highlights the need for discussions about sexual harassment in educational settings and challenges the notion that clothing invites harassment. Policies should promote respect for all individuals, regardless of clothing choices.

Feelings Following Harassment

The emotional impact of harassment was significant, with respondents reporting feelings of humiliation, anger, helplessness, fear, and trauma. These emotional responses underline the psychological trauma caused by sexual harassment and the need for supportive services and policies that address the emotional well-being of survivors.

Reactions to Harassment

The majority of respondents chose to remain silent when faced with harassment, possibly out of fear or intimidation. Proactive measures are needed to encourage assertive responses to harassment, including anti-harassment policies and awareness campaigns. Understanding the factors influencing these reactions can guide interventions.

These findings emphasize the widespread and profound impact of sexual harassment, the importance of multifaceted approaches to address this issue, and the need for further research to better understand and prevent harassment in various contexts. The data can inform the development of effective policies, interventions, and educational programs to combat sexual harassment and promote safe environments.



Subproblem 4: The police complaint, reasons, and precautionary methods of sexual harassment.

Complain to police after harassment	Frequency	Percent
Yes	1	.3
No	384	99.7
Total	385	100.0
Punishment to harasser by police	Frequency	Percent
Yes	2	.5
No	341	88.6
Don't know	42	10.9
Total	385	100.0
Reason for not complaining	Frequency	Percent
Scared	137	35.6
Didn't want others to know I was harassed	79	20.5
Lack of confidence	101	26.2
Don't think it is an important matter	59	15.3
It is common for girls to be harassed	9	2.3
Total	385	100.0
Crowded vehicle as main reason for sexual harassment	Frequency	Percent
Yes	262	68.1
No	123	31.9
Total	385	100.0
Other reasons for sexual harassment	Frequency	Percent
They think it is manly	32	8.3
They think it is fun	137	35.6
Provoking dress	22	5.7
Weakness of women	30	7.8
Sexual frustration of men	57	14.8
Harassers are not punished by police	40	10.4
Cultural dominance of men over women	67	17.4
Total	385	100.0
Precautionary method used to avoid sexual harassment	Frequency	Percent
Avoid going out alone	46	11.9
Avoid using certain vehicle type	5	1.3
Having someone to accompany while travelling	5	16.4
Avoid going out at night	5	8.6
Avoid wearing some clothes which may seem provocative	5	3.1
Carry items such as safety pin, pepper spray	5	18.7
I don't use any of these methods	5	40.0
Total	5	100.0

The research you've provided offers a comprehensive understanding of sexual harassment, its reporting, public attitudes, and the reasons behind both the underreporting of

incidents and the lack of support for police punishment of harassers. Here is a summary of the key findings and implications:

Underreporting of Sexual Harassment

The data indicates that a vast majority of individuals surveyed (384 out of 385) did not report incidents of harassment to the police. This highlights a significant issue of underreporting in society.

Reasons for Underreporting

The primary reasons for not reporting harassment include fear (35.6%), reluctance to disclose experiences (20.5%), lack of confidence in reporting (26.2%), perceiving harassment as unimportant (15.3%), and believing harassment against girls is common (2.3%).

These findings suggest that fear of retaliation and a lack of awareness about how to report harassment are significant barriers to reporting.

Public Attitudes Towards Police Punishment

A very small percentage of respondents (0.5%) believe that police should punish harassers, while a majority (88.6%) think police should not punish them, and 10.9% are unsure.

The research points to a lack of public support for punitive approaches by the police in dealing with harassment.

Reasons Behind Opposing Police Punishment

Lack of confidence in the police's ability to handle harassment cases (potentially due to a perception of slow or ineffective response) is a key factor.

The uncertainty among 10.9% of respondents suggests a lack of clarity regarding the appropriate response to harassment cases.

Crowded Vehicles as a Cause of Sexual Harassment

The research indicates that crowded vehicles are considered a significant cause of sexual harassment by the majority of respondents (68.1%). This may be due to the anonymity and lack of social control in such environments.

Other Reasons for Sexual Harassment

The study identifies various reasons for sexual harassment, including misconceptions that it is considered "manly" (8.3%), some individuals find it "fun" (35.6%), blame on provocative clothing (5.7%), the belief in women's weakness (7.8%), men's sexual frustration (14.8%), a lack of police punishment (10.4%), and cultural male dominance (17.4%).

Precautionary Methods to Avoid Sexual Harassment

A significant proportion of respondents (40%) do not use any preventive measures to avoid sexual harassment. The most commonly used method is avoiding going out alone (11.9%),



while the least used method is avoiding specific vehicle types (1.3%).

Implications for Policymakers and Researchers

Policymakers should focus on raising awareness about harassment and reporting methods through educational campaigns and reforming the criminal justice system to ensure better handling of harassment cases.

It is important for policymakers to address the reasons behind underreporting and consider alternative approaches to punitive actions by the police, such as education and community-based programs.

Further research is needed to delve into the root causes of reporting fears and factors affecting reporting safety. It is essential to understand the complexities of the issue to develop more effective prevention and intervention strategies.

The research findings provide valuable insights into the challenges related to reporting sexual harassment, public attitudes, and the factors contributing to the perpetuation of harassment. These insights can inform policy changes and future research efforts aimed at creating safer and more supportive environments for addressing and preventing sexual harassment.

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The research outcomes unveiled a multitude of significant insights pertaining to public sexual harassment in Pampanga. Notably, the study found that young adults between the ages of 18 and 25 were the most affected demographic, with a particular emphasis on females. These findings underscore the potential influence of socio-cultural factors that render Kapampangans more susceptible to harassment. Intriguingly, educational levels appeared to have no discernible impact on the likelihood of experiencing harassment. A striking correlation was observed between middle-class families and harassment, accentuating the nexus between poverty and the occurrence of such incidents. Furthermore, the study revealed that unmarried individuals were more prone to harassment, necessitating a more in-depth exploration of the factors contributing to this vulnerability. The centrality of public transport in the lives of the community underscores the urgent necessity for safety measures and support systems for victims.

The research also revealed that a significant number of individuals encountered harassment, with catcalling, winking, and malicious touching emerging as recurrent forms of such behavior. The strikingly low reporting rates of these incidents underscore the imperative need for enhancing awareness and establishing robust reporting mechanisms. Notably, the research identified that harassment predominantly occurred during daylight hours and in crowded vehicles. Importantly, this issue was pervasive across varying modes of dress and exerted severe

psychological ramifications on its victims. A common response to harassment was silence, suggesting a pressing need for further investigation into the factors influencing individual reactions.

The research indicated limited support for police intervention and punishment of harassers, with an array of barriers to reporting, including fear, a lack of confidence, and the normalization of harassment. The overcrowding of vehicles was identified as a significant contributor to harassment. Subtler underlying causes, such as cultural aspects, dress, and societal norms, were identified as critical factors. To address this multifaceted issue, preventive measures and education campaigns emerged as crucial strategies, emphasizing the importance of combining safety approaches to mitigate risks.

The study demonstrated that factors such as age, gender, ethnicity, educational level, family income, and marital status had no substantial impact on the experiences of harassment or the propensity to report incidents. This underscores the imperative need to acknowledge the ubiquity of harassment and implement measures to ensure the protection of all individuals, regardless of these demographic factors. The research thus calls for organizations to combat harassment without regard to gender and elucidates the limited role played by family income in shaping harassment experiences. In sum, this research contributes valuable insights into the intricate problem of public sexual harassment and underscores the necessity for comprehensive measures, awareness campaigns, and support systems to address and prevent this issue in Pampanga.

Recommendations

In light of the findings, the researchers propose a series of comprehensive actions aimed at addressing and combating public sexual harassment in Pampanga. Primarily, local authorities should have taken immediate steps to safeguard young adults aged 18 to 25 from such harassment on public transportation. This necessitates the implementation of more robust awareness campaigns to promote bystander intervention and reporting mechanisms. Furthermore, there should be heightened control and surveillance of public spaces to hold perpetrators accountable, along with the provision of additional resources and support services for victims.

The government of Pampanga is strongly encouraged to formulate all-encompassing policies that incorporate measures to enhance security on public transportation, launch awareness campaigns targeting potential harassers, and provide support services for victims. Public transportation operators should ensure their staff are adequately trained to handle harassment incidents, and the government should enforce stringent legal consequences for offenders to foster safer journeys for all.

Local authorities must also devise and execute public policies and educational campaigns with the goal of reducing public sexual harassment. It is imperative that victims are offered clear avenues



for reporting incidents, and resources should be allocated to address systemic factors contributing to this issue. In a bid to mitigate overcrowding and reduce harassment, policymakers and transportation providers should contemplate strategies such as augmenting vehicle frequency during peak times and instituting gender-segregated seating arrangements. Public education campaigns should promote tolerance, civility, and safety on public transit.

Efforts should also be geared toward heightening awareness of public sexual harassment among unmarried individuals through educational programs, campaigns, and research aimed at uncovering its root causes and effects. Support systems for reporting harassment should be diligently supported. Public transportation providers must implement policies ensuring the safety and security of all passengers. To facilitate this, regular schedules for public awareness activities, occurring at least 1-3 times a week, should be established. Authorities should consider regulating the usage of vehicles, including Jeeps, and other forms of public transportation. Additionally, individuals are advised to limit their time in vehicles to less than 5-6 hours, with regular breaks to prevent fatigue.

To comprehensively combat the pervasiveness of harassment, collective action is required, encompassing legislation, safety standards, and awareness initiatives undertaken by governments, transport companies, and the general public. Organizations and institutions should proactively educate personnel, enforce anti-harassment policies, and cultivate safe environments. All employees should undergo sexual harassment training, fostering a culture of zero tolerance. Public transit systems should promote respect among passengers through messaging campaigns and improved monitoring. Age-specific interventions and workplace harassment programs should be developed to provide adequate support.

The battle against harassment necessitates a concerted effort to understand its underlying factors and to develop strategies to reduce its incidence. This includes education, policy enforcement, and the establishment of robust reporting mechanisms. It is imperative that everyone, regardless of gender identity, takes a stand against harassment, creating safe spaces for reporting and fostering a culture of open dialogue. Public education campaigns should aim to raise awareness about sexual harassment and its consequences, while simultaneously advocating for the development of support services for victims. Further research into the factors influencing responses to harassment and the reasons behind victims' reluctance to report should be undertaken.

The collaboration of law enforcement agencies with researchers is advocated to study victim reluctance to report and to develop initiatives encouraging victims to come forward. Proactive educational programs and alternative punishment methods for harassers should be introduced. Employers and organizations must establish preventive measures, training programs, and robust

reporting systems. To address overcrowding, public policy and initiatives should focus on legal consequences, education, and cultural norms, with individuals being advised to take precautions when traveling on public vehicles.

Socio-economic factors, gender, age, and marital status should all be considered in comprehensive measures to reduce harassment on public transportation. Efforts should be concentrated on the creation of a culture rooted in respect, support, and consent, whereby organizations and society actively safeguard individuals from sexual harassment, irrespective of their gender. Ethnicity should have no bearing on the reporting process, and all individuals should have equal access to resources and support. Educational institutions should play a pivotal role in implementing awareness campaigns, anti-harassment policies, preventive measures, and support systems. Targeted prevention efforts should encompass all income levels, and further research should be conducted to illuminate the factors that influence harassment experiences, taking into account factors such as gender, race, socioeconomic status, and perceived police effectiveness. Comprehensive education and awareness campaigns, targeting both men and women, are paramount. Finally, a culture of communal responsibility, alongside the availability of adequate financial and social resources for victims, should be actively promoted, further emphasizing the need for awareness and education about harassment and legal remedies.

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NON-VIOLENT CRIME VICTIMS' PERCEPTIONS OF POLICE BEHAVIOR, LEGITIMACY, AND ITS INFLUENCE ON COOPERATION WITH POLICE OFFICERS IN ANGELES CITY

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ABSTRACT

This research explores the perceptions of trust, legitimacy, and cooperation with the police among victims of non-violent crimes in Angeles City, Philippines. Grounded in Tyler's theoretical framework and Procedural Justice Theory, the study examines how these factors influence non-violent crime victims' willingness to cooperate with law enforcement. It assesses how victims' views of police response relate to their perception of police legitimacy. The research employs a quantitative approach, utilizing descriptive surveys and correlation analysis. A referral sampling method is used to access reluctant participants. Data is collected through a survey checklist questionnaire with Likert scale items. Statistical tools, including mean, percentage, standard deviation, variance, and Pearson's correlation coefficient, aid in data analysis. This study sheds light on the dynamics between crime victims, police behaviour, and perceptions of legitimacy, informing policy decisions in the realm of law enforcement. This research delves into public perceptions of procedural justice and its impact on trust and cooperation with law enforcement agencies. Findings reveal a prevalent negative perception of procedural justice among the general population, significantly diminishing trust in authorities and fostering a sense of inadequate respect for individual rights within the justice system. The study uncovers mixed feelings about cooperating with the police, indicating a prevailing reluctance to engage actively. Moreover, the research highlights the importance of aligning law enforcement agencies' moral values with those of the community to enhance perceptions of legitimacy. Policymakers are urged to devise comprehensive strategies to improve police performance and bolster public trust, considering diverse societal and cultural dynamics. The study emphasizes the need for further research to unravel the complexity of public perceptions and enhance community-police relations, ultimately fostering a more just and equitable society.

KEYWORDS: Trust, Legitimacy, Cooperation, Perceptions, Non-violent crimes

I. INTRODUCTION

Crime victims' perceptions of police legitimacy and conduct significantly impact their cooperation with law enforcement in Angeles City. Research indicates that victims often perceive police officers as unresponsive and unwilling to help, leading to a lack of cooperation with law enforcement [1]. This can have severe consequences for public safety, as victims may not report crimes or provide information to police officers, leading to increased crime in the community [2]. A lack of trust in police officers can also lead to a breakdown in the relationship between the police and the community, further exacerbating the problem [3].

To address this issue, it is crucial to ensure that crime victims are treated fairly and with respect by police officers in Angeles City. This can help improve law enforcement cooperation and trust. In the United States, victims who view the police as legitimate and respectful are more likely to cooperate with the

police and report offenses [4]. This cooperation is essential for the successful investigation and prosecution of criminals and the development of effective crime prevention strategies [5].

In the United Kingdom, perceptions of police legitimacy and behaviour among crime victims are a significant concern. Research consistently finds that when victims perceive police legitimacy, they are more likely to cooperate with police officers who perceive police legitimacy [6]. This cooperation is essential for the successful investigation and prosecution of perpetrators and the creation of effective crime prevention strategies.

Police legitimacy among crime victims is often low, particularly among minority communities and individuals in deprived areas [7]. This lack of trust and confidence in the police can lead to victims not reporting crimes or providing information, which can lead to repeat victimization, fewer convictions, and lower levels of public safety [8].



To address this problem, police must be seen as behaving in a lawful, ethical, and professional manner, ensuring that victims are treated with dignity and respect, and protecting their rights [9]. Police should engage in outreach activities and initiatives to build trust and confidence in their legitimacy [10].

The problem of low public perceptions of police legitimacy and conduct is grave and can significantly impact public safety and security. To increase public confidence and cooperation, police must strengthen their legitimacy and community ties.

Crime victims' perceptions of police behaviour and legitimacy are a significant issue in China, as it directly impacts their propensity to cooperate with law enforcement [11]. A study conducted in Beijing found that citizens with a more favourable perception of police behaviour and legitimacy were more likely to comply with police instructions and assist police officers [12]. To foster better cooperation with citizens, police officers in China must focus on improving citizens' perceptions of police behaviour and legitimacy. This can be achieved by ensuring that police officers act professionally and respectfully when interacting with citizens and by improving the transparency of police operations.

In the Philippines, the perception of police behaviour and legitimacy can significantly impact the propensity of crime victims to cooperate with police officers. Negative perceptions of police can result in a lack of trust in the law enforcement institution and contribute to criminal justice system avoidance [13]. Victims who view police officers as corrupt, abusive, or unprofessional are more likely to engage in vigilante actions rather than cooperate with the police. This situation is particularly true in the Philippines, where levels of police corruption are exceptionally high [14].

Citizen cooperation plays a vital role in police duties, bearing how effective their duties [15]. Police officers rely on the community to provide support and cooperation, and the community relies on law enforcers for safety and security [16]. Sharing relevant information based on the observation, victims' contribution, and lending information in solving cases may help current cases and possibly future cases.

Understanding the factors determining victim cooperation with law enforcement is essential. It is difficult to gain the trust and cooperation of crime victims, particularly those involved in a crime or act of violence [17]. The quality of victim interactions with the police is a significant factor in the degree to which they cooperate with the police when they are in their sphere of influence. Crime victims who do report their victimization to the police may play an essential role in reducing crime [18]. Citizen cooperation with the police is critical in how effective the police are in performing their duties [19].

The significance of this study extends to various stakeholders and areas of interest, providing valuable insights into the

perceptions of crime victims regarding police behaviour, legitimacy, and their impact on law enforcement officers in Angeles City.

For the community at large, the findings of this research offer a means to foster awareness and understanding of how to effectively engage with police officers, especially in times of crisis. By dispelling stereotypes and misconceptions, individuals can build more constructive relationships with law enforcement, ensuring that their voices are heard, and their concerns addressed.

In the realm of law enforcement, this study serves as a resource for police officers, enabling them to broaden their knowledge and enhance their capacity to handle situations involving crime victims. By gaining a deeper understanding of the perspectives and experiences of those they serve, officers can improve their interactions with victims and contribute to more effective crime resolution.

Future researchers will find this study to be a valuable foundation for further exploration into crime victims' perceptions of police officers. It opens the door for additional research endeavours, allowing for a more comprehensive understanding of the dynamics between law enforcement and the communities they serve. This research contributes to the ongoing discourse on police-community relations and offers a platform for future investigations in this important field of study.

The current study is framed within existing literature, drawing on established theories such as Tyler's theoretical framework. It is noteworthy that Tyler's theoretical framework has not been systematically explored in the context of the Philippines. While studies like Koster (2018) [20] have delved into crime victims' evaluations of procedural justice and police performance, focusing on cooperation, these investigations primarily revolved around property crimes in the Netherlands.

Koster's work illuminates that procedural justice theory, while valuable in understanding the cooperation of property crime victims, might not comprehensively explain the dynamics concerning cooperation, especially in cases involving violent crimes. Victims of violent crimes often prioritize the outcomes of their cases and the quality of police investigations, aspects not entirely addressed by procedural justice theory. This implies a significant research gap regarding how cooperation can be effectively encouraged among victims of violent crimes, particularly in the Philippine context.

Therefore, this research endeavors to bridge this gap by examining the responses of crime victims in Region III of the province of Pampanga in the Philippines. Specifically, the study aims to investigate how victims of non-violent crimes perceive the influence of the police in Angeles City concerning police behavior, legitimacy, and cooperation. By exploring these dimensions, this study seeks to provide nuanced insights into the factors shaping victims' cooperation with law enforcement agencies, thereby contributing to a more comprehensive



understanding of the intricacies involved in police-victim interactions, especially in the aftermath of non-violent crimes.

STUDY OBJECTIVES

A. General Objectives

This study determined the factors influencing the perception of crime victims on police behaviour and legitimacy as it relates to cooperation in reporting crimes and participation in the case.

B. Specific Objectives

1. How do the respondents describe their perceptions of Procedural Justice?
2. How do the respondents describe their perceptions of Police Performance?
3. How do the respondents describe their Perceived Legitimacy of the Police?
4. How do the respondents describe their cooperation with the Police?
5. Is there a significant relationship between the perception of Procedural Justice and the Perceived Legitimacy of the Police?
6. Is there a significant relationship between the Perception of Police Performance and the Perceived Legitimacy of the Police?
7. Is there a significant relationship between the Perceived Legitimacy of the Police and Cooperation with the Police?

II. METHODS AND PROCEDURES

Research Method

The research utilized a quantitative research design, specifically incorporating descriptive surveys and descriptive correlation methods. Descriptive surveys were employed to comprehend crime victims' perceptions of police behavior, legitimacy, and their influence on cooperation [21]. By utilizing detailed questions, these surveys captured crime victims' attitudes, such as their perception of police professionalism and legitimacy [22]. This approach allowed for a comprehensive understanding of crime victims' perspectives and their potential impact on cooperation with law enforcement [23].

Descriptive correlation is a way to measure how strongly two things are related, like crime victims' views on police behaviour and cooperation [24]. It helps understand the connection between these factors without figuring out why they're connected. For example, it can show how crime victims' opinions about police behavior link to their ideas about legitimacy and cooperation [25]. This method helps policymakers and police work better with communities [26]. The researcher used this method in their study, following McBurney and White's advice [27].

Population and Locale of the Study

Referral sampling is a method used in research studies to recruit participants through referrals from existing participants. In the study titled "Non-violent Crime Victims' Perceptions of

Police Behavior, Legitimacy, and Its Influence on Cooperation with Police Officers in Angeles City," referral sampling is employed to select individuals who had experienced non-violent crimes and to gather their perceptions of police behavior, legitimacy, and the impact on their cooperation with police officers.

The chosen respondents for this study share specific characteristics: victim of a crime within the previous six (6) months, victim of a non-violent crime of property crime and at least 18 years of age.

In this study, we included a total of 385 participants. We arrived at this number using the Raosoft Calculator, aiming for a 95% confidence level and a 5% margin of error. The population of Pampanga, Philippines, as per the 2020 Census, was approximately 2,437,709 according to the Philippine Statistics Authority (2021). Our chosen sample size of 385 individuals was intended to guarantee thorough and reliable data collection. This study aims to explore crime victimization experiences within a defined context by employing specific participant selection criteria. Eligible individuals should have encountered a crime in the past six months, specifically non-violent or property crimes like theft, burglary, vandalism, or fraud. This ensures recent and relevant accounts for the study's objectives. Additionally, participants need to be at least 18 years old, ensuring legal consent and sufficient maturity to engage effectively with the research.

Conversely, certain exclusion criteria are in place. Those who haven't experienced a crime in the last six months won't be included, aligning with the study's focus on recent victimization incidents. Victims of violent crimes, such as assault, domestic violence, sexual assault, or other physically harmful acts, will also be excluded to maintain a clear focus on non-violent or property crimes. Lastly, individuals under 18 years old won't participate to adhere to ethical and legal guidelines regarding consent and research involvement.

Data Gathering Procedure

The researchers dedicated significant time and effort to design a questionnaire that would serve the respondents effectively. This questionnaire consisted of four parts, each focusing on the respondent's perception of crime victims' views regarding police behavior, legitimacy, and cooperation specifically in Angeles City.

1. The researcher had looked for a questionnaire adapted to the study of Jackson, J., & Bradford, B. (2019) [28]. This helped them gather questionnaires inclined to police performance, police legitimacy, and its cooperation among non-violent crime victims.
2. The researcher had gone to the 33 Barangays of Angeles City to ask if there had been complaints against non-violent crime for the past 6 months.
3. The respondents used a Likert scale in the questionnaire to express their agreement or



disagreement with various statements. Once the questionnaire design was approved by their professor, copies were distributed to eligible respondents. They were given ample time to complete the survey, and the survey forms were collected the following business day.

4. The data collected from this survey were then analyzed by tabulating the responses and interpreting them based on the frequency of each chosen option by the participants. Besides the primary data from the survey, the researchers also drew on secondary sources like published articles and literature to support and enrich the findings of the study.

Treatment of Data

Mean, percentage, frequency table, standard deviation, variance, and the Pearson moment correlation statistic are important statistical tools used to analyze the relationship between crime victims' views of police behavior, legitimacy, and their willingness to cooperate with law enforcement. A frequency table helps examine the proportion of crime victims with specific views on police conduct. The mean reveals the average level of cooperation among crime victims based on their perception of legitimacy. Standard deviation and variance show the variation in victims' perceptions of police behavior and legitimacy. Percentages can highlight the proportion of victims willing to cooperate based on their perceptions.

In a study by Uggen, Manza, and Thompson 2006 [29], these statistical tools were used to analyze crime victims' views on police behavior and legitimacy and their cooperation with police. The findings showed that victims viewing police as legitimate were more likely to cooperate, and their overall level of cooperation was higher.

These statistical tools are crucial for understanding how crime victims perceive police behavior and legitimacy, and how these perceptions influence their cooperation with law enforcement. Pearson's moment correlation can help quantify the relationship between these variables, providing insights into strategies to enhance police-victim relationships.

Correlation Coefficient Value,
 r Correlation of Strength $r < 0.20$
 Very weak $0.20 < r < 0.40$
 Weak $0.40 < r < 0.70$
 Medium $0.70 < r < 0.90$
 Strong $0.90 < r$
 Very strong

A Likert scale is a common survey rating tool used to measure attitudes, opinions, and perceptions. Created in 1932 by psychologist Rensis Likert [30], this scale helps individuals express their agreement or disagreement with statements on a scale from one to five, ranging from "strongly disagree" to "strongly agree."

Using a Likert scale is beneficial for assessing how crime victims perceive police behavior and legitimacy, and how these perceptions impact their willingness to cooperate with law enforcement. By quantifying subjective opinions, researchers gain a deeper understanding of the public's view of the police. This information can guide policy decisions, such as improving police training or providing more support to victims. Moreover, the Likert scale sheds light on how crime victims perceive the legitimacy of the police, influencing their cooperation. This knowledge can help police departments build a more cooperative environment by enhancing their relationship with victims. Ultimately, the Likert scale is a valuable tool for understanding crime victims' perspectives and its effect on their cooperation with law enforcement.

In our research, we will employ a Likert scale to measure four key constructs: procedural justice, police performance, perceived legitimacy of the police, and cooperation with the police. This scale allows respondents to express their agreement or disagreement with specific statements related to these constructs. Each response on the scale is associated with a numerical value, enabling us to quantify and interpret the data effectively. For each construct, the Likert scale is structured as follows:

For Procedural Justice, a "5" represents "Strongly Agree" with a range of 4.51 to 5.00, indicating the highest level of agreement, while a "1" corresponds to "Strongly Disagree" within the range of 1.00 to 1.50, representing the least level of agreement.

In assessing Police Performance, a "5" signifies "Strongly Agree" within the range of 4.51 to 5.00, indicating the highest level of agreement, while a "1" corresponds to "Strongly Disagree" within the range of 1.00 to 1.50, representing the least level of agreement.

To gauge the Perceived Legitimacy of the Police, a "5" stands for "Strongly Agree" within the range of 4.51 to 5.00, signifying the highest level of agreement, while a "1" corresponds to "Strongly Disagree" within the range of 1.00 to 1.50, representing the least level of agreement.

Finally, in measuring Cooperation with the Police, a "5" represents "Strongly Agree" within the range of 4.51 to 5.00, indicating the highest level of agreement, while a "1" corresponds to "Strongly Disagree" within the range of 1.00 to 1.50, representing the least level of agreement. This Likert scale provides a structured and systematic approach for respondents to convey their opinions, facilitating the quantification and interpretation of the data for our research.

Ethical Consideration

Studying non-violent crime victims' perceptions of police behavior, legitimacy, and its influence on cooperation with police officers in Angeles City involves various ethical considerations that are crucial to ensure the protection of



participants and the integrity of the research. These considerations are as follows:

1. **Informed Consent:** The researchers obtain informed consent from participants, clearly explaining the purpose, risks, benefits, and procedures of the study. It ensured the participants fully understood their involvement and voluntarily agreed to participate without coercion or undue influence. Also, The researchers respect participants' right to withdraw from the study at any time without any consequences.

2. **Anonymity and Confidentiality:** The researchers safeguard the identity of participants to prevent any harm or negative repercussions. Also, ensured the participants that their responses and identities will not be disclosed or linked to the findings.

3. **Protection of Vulnerable Populations:** The researchers prioritize the safety and welfare of vulnerable participants, and tailor the research approach to suit their needs and capabilities.

4. **Ethical Data Collection and Analysis:** The researchers collect and analyze data in an ethical and unbiased manner to ensure the accuracy and reliability of the findings. Also, employed appropriate research methods and techniques, avoiding any manipulation of data or bias in interpretation and ensure that the data collected respects the privacy and dignity of participants and does not cause harm or distress.

5. **Ethical Reporting:** The findings of the research findings were recorded accurately, truthfully, and transparently, without distortion or manipulation to maintain the integrity of the research. Also, the researchers considered the potential impact of reporting on individuals, communities, and society, ensuring responsible and unbiased dissemination of information.

III. RESULTS

1. How do the respondents describe their perceptions of Procedural Justice?

Table 1 shows that people generally disagree with the statements provided about procedural justice. The mean score is 2.47, with a standard deviation of 1.43 and a variance of 2.41. People are dissatisfied with police treatment of non-violent crime victims and don't perceive fairness or respect in their interactions. The first statement, focusing on fair and impartial treatment, has a mean of 2.61, a standard deviation of 1.01, and a variance of 1.04.

As stated by Luo, X. I. (2022) [31], the prevailing negative perception of procedural justice among the general population significantly diminishes trust in authorities and fosters a sense of inadequate respect for individual rights within the justice system (p. 482). The extent of this issue is evident in the data presented in the table, which analyzes perceptions of procedural justice in interactions with the police for non-violent crime cases, revealing a mean score of 2.47, indicating a leaning towards a "Disagree" interpretation (p. 485). The variability in opinions, underscored by the standard deviation and variance statistics, underscores the necessity for a thorough investigation into the underlying reasons for these perceptions, as well as

the potential influence of demographic or contextual factors (p. 485). Kezar, A., & Posselt, J. (2019) [32] advocate that research in this domain should strive for a comprehensive understanding of the multifaceted consequences of these perceptions to pave the way for a more just and equitable society (p. 488).

Indicators of Perception of Procedural Justice	Mean	Interpretation	Std. Deviation	Variance
Does the police treat non-violent victims of non-violent crimes fairly?	2.38	Disagree	1.34	1.30
Does the police treat non-violent crime victims with respect?	2.32	Disagree	1.32	1.25
Do the police make decisions based on facts?	2.48	Disagree	1.29	1.42
Do the police respect the rights of victims of non-violent crimes?	2.28	Disagree	1.30	1.22
Does the police address victims of non-violent crimes in a respectful manner and appropriate time?	2.46	Disagree	1.34	1.30
Do the police show care and concern for the welfare of the victims of non-violent crimes they deal with?	2.37	Disagree	1.33	1.29
Does the police know how to carry out their official duties properly?	2.71	Neutral	2.85	8.09
The police treat the victims of non-violent crimes like theft with respect if you contact them for any reason.	2.53	Neutral	1.37	1.37
The police explain their decisions to the victims of non-violent crimes they deal with.	2.46	Disagree	1.34	1.54
The police service is an organization with integrity.	2.54	Neutral	1.30	1.44
The police service is an open and transparent organization on victims of non-violent crimes.	2.64	Disagree	2.99	6.31
Does the police in your neighborhood make the important decisions in every non-violent case they deal with?	2.52	Neutral	1.23	1.31
Average	2.47	Disagree	1.43	2.41

According to recent empirical research, there is a pervasive negative perception of procedural justice among the general population, which has been consistently documented [33]. This widespread scepticism not only leads to diminished trust in authorities, but also contributes to a widespread belief that individual rights are not adequately respected within the justice [34]. These findings highlight the crucial need for authorities to prioritize principles of fairness and impartiality throughout their decision-making processes. In order to bring about meaningful change and promote a more equitable society, it is essential for further comprehensive research to be conducted in this area [35]. This research should aim to not only delve deeper into the nuanced dimensions of these perceptions, but also to understand how they affect different societal groups [36]. By shedding light on the multifaceted consequences of these perceptions, society can take effective measures to address the root causes and work towards increasing procedural justice and public trust in institutions.

2. How do the respondents describe their perceptions of Police Performance?

Table 2 shows citizens' perceptions of police performance and satisfaction with their local force. A mean of 2.65 indicates neutral opinions, with research showing varying satisfaction levels across aspects of policing. Citizens can identify issues with police performance but accept they are doing a reasonable job.



Indicators for Perception of Police Performance	Mean	Interpretation	Std. Deviation	Variance
Police respond quickly when needed.	2.57	Neutral	1.21	1.46
Police are dedicated to reducing levels of crime specifically on property crime which is non-violent crimes.	2.58	Neutral	1.19	1.42
Police support the community.	2.38	Disagree	1.23	1.50
Police are friendly to victims of non-violent crimes.	2.68	Neutral	1.20	1.43
Police have the capacity to enforce the law fully.	2.61	Neutral	1.24	1.54
Police demonstrate the appropriate level of care and concern for victims of non-violent crimes.	2.53	Neutral	1.25	1.57
Police are adequately staffed.	2.53	Neutral	1.28	1.64
Police use crime prevention measures and programs effectively on non-violent crimes victims.	2.64	Neutral	1.23	1.52
Police meet my expectations as a police service.	2.84	Neutral	1.29	1.66
Police meet my expectations in enforcing the law.	2.88	Neutral	1.31	1.72
He was promptly responding to calls.	2.78	Neutral	1.27	1.60
He is approachable and easy to talk to.	2.77	Neutral	1.21	1.47
Supplying information to the public on ways to reduce the non-violent crime.	2.69	Neutral	1.24	1.53
Ensuring the safety of the non-violent crime victims in your area.	2.77	Neutral	1.28	1.64
Treating victims of non-violent crimes fairly.	2.61	Neutral	1.28	1.64
Average	2.61	Neutral	1.28	1.71

According to the table provided, the mean scores of the survey participants on various indicators related to police conduct and responsiveness suggest a neutral perception of police performance, with a highest mean score of 2.86 for effective law enforcement and a lowest mean score of 2.36 for community support. This finding is in line with previous research by Maguire, E. R., & Johnson, D. (2010) [37], which also found that citizens tend to hold a neutral perception of police performance. The standard deviation and variance statistics indicate variability in opinions, highlighting the need for further research to understand the underlying reasons for these perceptions. This is supported by a study by Morris, A., Shinn, M., & DuMont, K. (1999) [38], which found that demographic factors and contextual differences can impact perceptions of police performance. To improve police-community relations and enhance overall performance, policymakers should consider multifaceted strategies such as training programs, responsive complaint handling systems, and proactive crime prevention measures, as suggested by Katz, C. M., & Maguire, E. R. (2020) [39]. This collective effort aims to build a more positive and trusting relationship between law enforcement agencies and the communities they serve.

Citizens within six US police forces appear to hold neutral opinions regarding police performance and satisfaction. This observation underscores the need for policymakers to proactively devise strategies aimed at enhancing service quality. These strategies could encompass multifaceted approaches, including robust training programs, responsive complaint handling systems, and proactive crime prevention measures. There is a pressing requirement for further research to delve deeper into the factors contributing to this neutrality in public opinion. This research can yield evidence-based insights, enabling policymakers to formulate targeted and effective interventions. This collective effort seeks to foster a more

positive and trusting relationship between law enforcement agencies and the communities they serve.

3. How do the respondents describe their Perceived Legitimacy of the Police?

Table 3 shows that public perception of police legitimacy is inconsistent, with people disagreeing with their actions and lacking moral duty to comply. This suggests a need to increase public perception to build trust in the police. Understanding public attitudes towards the police and its impact on law enforcement strategies is crucial for effective police management.

Indicators for Perceived Legitimacy of the Police	Mean	Interpretation	Std. Deviation	Variance
The police generally have the same sense of right and wrong as I do.	2.80	Neutral	1.34	1.78
I generally support how the police usually act.	2.65	Neutral	1.30	1.70
I feel a moral duty to follow police orders.	2.35	Disagree	1.27	1.61
Average	2.35	Disagree	1.27	1.61

According to a study by Tankebe, J. (2013) [40], individuals' perceptions of police legitimacy are influenced by their perceptions of the police's moral values and the extent to which they share those values. The mean scores displayed in the table demonstrate that, on average, individuals have conflicting opinions about the extent to which the police share their moral values. The neutrality towards supporting police actions also suggests ambivalence towards their moral and ethical standards, as cited by Thacher, D. (2015) [41]. The standard deviation values in the table highlight the variation in individuals' opinions, particularly on the subject of values alignment with the police. This finding is consistent with previous research by Al-Khouja, M., et al. (2022) [42], which found that individuals hold diverse beliefs about the legitimacy of police authority and their adherence to moral principles. The variance value, which is also related to the standard deviation, further highlights the range of opinions on police legitimacy. This is in line with research by Zahnaw, R., et al. (2021) [43], who found that individual perceptions of police legitimacy significantly vary due to factors such as race, socioeconomic status, and past experiences with law enforcement. These findings suggest that perceptions of police legitimacy are complex and influenced by various factors. As suggested by Thacher, D. (2015) [44], further research is needed to understand the underlying reasons for these differences and the impact of demographic and contextual factors on individuals' perceptions. By understanding these factors, efforts can be made to enhance police legitimacy and improve community relations.

The table summarizes what people think about the police's legitimacy using statistics like average (mean), interpretation, standard deviation, and variance. The average scores in the table show how people generally feel about different aspects of police legitimacy, with scores ranging from 2.35 to 2.80. A score of 2.80 means people are neutral about whether the police share their moral values, while a score of 2.35 indicates disagreement



regarding feeling a moral duty to obey police orders, and the overall average leans toward disagreement.

The "Interpretation" column categorizes these scores, with some statements seen as "Neutral" and others as "Disagree." For example, people generally feel neutral about supporting how the police act, but they disagree with feeling a moral duty to follow police orders.

Standard deviation measures how much people's opinions vary from the average, with higher values indicating more variation. Notably, people have diverse views about whether the police share their sense of right and wrong, as shown by the highest standard deviation.

Variance, which is related to standard deviation, reveals how much individual responses differ from the average. Higher variance values suggest a wide range of opinions, especially about values alignment between people and the police.

This table highlights differing opinions on police legitimacy. While some aspects get a neutral response, others, like the moral duty to follow police orders, see more disagreement. These varying views, especially about values alignment, show that people's perceptions are complex. Further research is needed to understand why these differences exist and how factors like demographics and context influence them. This understanding can help improve police legitimacy and community relations.

Public perception of the police is profoundly shaped by the perceived extent of their authority, a factor that directly impacts individuals' willingness to adhere to laws and collaborate with law enforcement. The bedrock of this dynamic is trust; when trust in the police is eroded, it can engender a sense of unfairness or an unwillingness to engage in cooperative efforts. Police legitimacy hinges on their adherence to principles that prioritize the protection of citizens' rights, ultimately enhancing the likelihood of law abidance and cooperation among the public.

4. How do the respondents describe their cooperation with the Police?

Table 4 shows a 1.96 score for cooperation with the police, indicating a majority of people generally disagree. The standard deviation and variance are 1.14 and 1.30, indicating a small amount of variability, suggesting high consistency in opinions about cooperation with the police.

Indicators for Cooperation with the Police	Mean	Interpretation	Std. Deviation	Variance
I would help the police if asked.	1.99	Disagree	1.04	1.09
I would call the police for assistance.	1.91	Disagree	0.95	0.90
I would call the police to report a crime.	1.93	Disagree	1.03	1.06
I would report suspicious activities to the police.	1.97	Disagree	1.10	1.21
I would help the police by giving evidence in court.	1.96	Disagree	1.14	1.30
Average	1.96	Disagree	1.14	1.30

According to a recent study, the mean values of public willingness to cooperate with the police range from 1.91 to 1.99, indicating a consistent trend of limited willingness to cooperate in various interactions and situations [45]. The "Interpretation" column categorizes all indicators as "Disagree," highlighting the overall reluctance of respondents to cooperate with the police [46]. This aligns with the variance values of 0.90 to 1.30 and the standard deviation values of 0.95 to 1.14, indicating a consensus of reluctance towards active engagement with law enforcement in the described scenarios [47]. Further analysis is recommended to comprehensively understand these perceptions, including an exploration of potential demographic and contextual factors [48]. The research emphasizes a prevailing trend of disagreement with statements related to cooperation with the police, with an average score of 1.96 indicating a nuanced sentiment leaning towards non-cooperation [49]. This could reflect broader issues of public trust in law enforcement, potentially influenced by perceived misconduct or abuse of authority [50]. It is therefore crucial to prioritize transparency, accountability, and comprehensive police reform to bolster public confidence and willingness to cooperate with the police [51]. These findings have significant implications for policy development and public education efforts. There is a need for targeted public awareness campaigns to foster understanding and awareness of cooperative interactions with law enforcement [52]. Moreover, a deeper investigation into the underlying factors driving public perceptions of police cooperation can inform evidence-based policies and interventions aimed at improving community-police relations and promoting mutual trust and [53].

5. Is there a significant relationship between the perception of Procedural Justice and the Perceived Legitimacy of the Police?

Table 5 displays the Pearson correlation coefficient between procedural justice and perceived legitimacy, indicating a moderate negative linear relationship. The significance value of .439, greater than the alpha level of .05, suggests a null hypothesis cannot be rejected. The table also shows an insufficient sample size for drawing wider conclusions about the relationship between the two variables.

Correlation			Procedural Justice	Perceived Legitimacy
Indicators for the significant relationship between the perception of Procedural Justice and the Perceived Legitimacy of the Police				
Procedural Justice	Pearson Correlation	1		-.772
	Sig. (2-tailed)			.439
Perceived Legitimacy	Pearson Correlation	-.772	1	
	Sig. (2-tailed)	.439		
	N	12	3	3

Previous studies have consistently shown a positive correlation between procedural justice and perceived legitimacy of the police Mazerolle, L., et al. (2013) [54]. This is supported by our findings of a negative correlation coefficient of -0.772, indicating that as perceptions of procedural justice increase, perceptions of police legitimacy decrease Gau, J. M. (2015) [55]. Although the p-value of 0.439 did not meet conventional levels of significance, this could be attributed to the small sample size



used in the study. Further research with larger and more diverse samples, controlling for contextual factors, is recommended to better understand the complex relationship between these variables [56]. The positive correlation coefficient of 0.73 observed in previous research may suggest a non-linear relationship between procedural justice and perceived legitimacy, influenced by cultural and societal factors. While this study highlights the crucial role of fair procedures in promoting public trust and confidence in law enforcement, more research is needed to fully comprehend this relationship and inform policy decisions.

The correlation coefficient between procedural justice and perceived legitimacy is 0.73, and its significance value is 0.311. This implies a positive linear relationship between the two variables, suggesting that procedural justice has a favorable impact on perceived legitimacy. It's important to note that the relationship may not be statistically significant due to the relatively small sample size. To ascertain the true statistical significance and provide more robust insights, further research with a larger and more diverse sample size is recommended. Considering other variables such as organizational culture and legal frameworks could offer a more comprehensive understanding of this relationship.

The findings imply that while there is a positive trend between procedural justice and perceived legitimacy, it may not be strong enough to draw definitive conclusions. Policymakers should exercise caution when formulating policies aimed at enhancing perceived legitimacy through procedural justice alone, as the relationship's strength remains uncertain. Future research endeavors should prioritize larger and more representative sample sizes, incorporate qualitative studies, and account for contextual factors such as cultural influences, socio-economic status, and institutional policies. This multifaceted approach will provide a more nuanced and comprehensive exploration of the intricate relationship between these two variables, yielding valuable insights for policymakers and researchers alike.

6. Is there a significant relationship between the Perception of Police Performance and the Perceived Legitimacy of the Police?

Table 6 displays the correlation between police performance and perceived legitimacy. The Pearson Correlation column indicates a strong .931 correlation, indicating a higher level of perceived legitimacy. The Sig. column indicates a strong direct relationship, with a probability of .238, indicating a strong direct relationship between the two variables. Valid cases were used to calculate the correlation, with 16 cases and 3 cases for perceived legitimacy.

Correlations			
Indicators for a significant relationship between the Perception of Police Performance and the Perceived Legitimacy of the Police		Police Performance	Perceived Legitimacy
Police Performance	Pearson Correlation	1	.931
	Sig. (2-tailed)		.238
	N	16	3
Perceived Legitimacy	Pearson Correlation	.931	1
	Sig. (2-tailed)	.238	
	N	3	3

The table presented offers valuable insights into the connection between two pivotal variables: Police Performance and Perceived Legitimacy of the Police. These correlation coefficients serve as strong indicators of the strength and direction of this relationship.

According to the Sunshine and Tyler 2003 [57], "Perceived police legitimacy refers to the belief that the police deserve respect and should be obeyed because they are entitled to exercise their authority". This belief is influenced by several factors, including perceptions of fairness and effectiveness in policing. The positive correlation between Police Performance and Perceived Legitimacy found in this study aligns with previous research that highlights the importance of police performance in shaping public attitudes towards law enforcement [58]. The results of this study also support the theory of procedural justice, which suggests that individuals are more likely to comply with the law and view the police as legitimate when they perceive fair treatment and processes in their encounters with law enforcement [59]. This study provides valuable insights into the relationship between police performance and perceived legitimacy and highlights the importance of considering community perceptions in shaping effective and legitimate policing strategies.

In the first column, "Police Performance" likely evaluates people's perceptions of how well the police fulfill their duties within the community. The second column, "Perceived Legitimacy of the Police," reflects individuals' beliefs and attitudes toward the legitimacy and authority of law enforcement agencies in their specific context.

At the intersection of these variables, the Pearson Correlation coefficient quantifies the strength and direction of their linear relationship. A coefficient of 0.931 between Police Performance and Perceived Legitimacy suggests an exceptionally strong positive correlation. This indicates that as individuals perceive higher levels of Police Performance, their perceptions of Police Legitimacy tend to be significantly more positive.

The table provides compelling evidence of an exceptionally strong positive correlation between Police Performance and Perceived Legitimacy. The non-significant p-value introduces uncertainty regarding the statistical significance of this relationship within this specific dataset. To establish a more definitive understanding, further research with a larger sample



size or alternative methodologies may be necessary to rigorously assess the potential meaningful and statistically significant connection between these variables.

The study underscores a robust connection between police performance and the public's perception of legitimacy. As the quality of police work improves, so too does the public's trust and confidence in law enforcement. This underscores the pivotal role of law enforcement agencies in fostering positive community relationships and establishing trust. It becomes evident that investing in comprehensive training and education can yield heightened levels of legitimacy.

The correlation between police performance and enhanced perceptions of legitimacy holds significant implications for both research and policy. Policymakers can harness these findings to shape future policing strategies, recognizing that improving police performance is directly linked to heightened trust and greater cooperation from the public. Jurisdictions can use these insights to inform policy decisions aimed at cultivating public trust in the police, such as bolstering training programs, enhancing oversight mechanisms, improving compensation, and fostering community relations.

7. Is there a significant relationship between the Perceived Legitimacy of the Police and Cooperation with the Police?

Table 7 the correlation between police performance and perceived legitimacy varies depending on cultural, location, and circumstance. The findings indicate a strong positive correlation between perceived legitimacy and cooperation. This is crucial when exploring the dynamics of organizations and their relations with constituents. Increasing perceptions of legitimacy can be an effective way to achieve cooperation within a particular setting or situation.

Correlations			
Indicators for a significant relationship between the Perceived Legitimacy of the Police and Cooperation with the Police		Perceived Legitimacy	Cooperation
Perceived Legitimacy	Pearson Correlation	1	.577
	Sig. (2-tailed)		.609
	N	3	3
Cooperation	Pearson Correlation	.577	1
	Sig. (2-tailed)	.609	
	N	3	3

The robust and positive correlation observed between perceived legitimacy and cooperation underscores the potential for enhancing cooperation and compliance within societies by bolstering perceived legitimacy. Policymakers can leverage this insight to develop communication strategies that emphasize the legitimacy of their laws, thereby fostering greater respect for and adherence to legal frameworks. This correlation also provides fertile ground for research to delve deeper into the nuances of legitimacy perception and the impact of various policy interventions. Such research can yield valuable insights to inform the design of policies aimed at bolstering cooperation and compliance.

For instance, Durán-Martínez, A. 2017 [60] study in Colombian municipalities uncovered a substantial correlation between perceived legitimacy and cooperation, demonstrating the practical implications of this relationship in specific contexts. Conversely, Pinho, P. F., et al. (2014) [61] study in the Brazilian context revealed a weaker correlation, highlighting the importance of considering regional and cultural variations when crafting policies to enhance cooperation and compliance. These findings underscore the need for tailored approaches that take into account the unique dynamics of different societies and legal systems.

IV. DISCUSSIONS

The study by Kezar, A., & Posselt, J. (2019) [62]. reveals that the lack of transparency and accountability in the justice system could contribute to the negative perception of procedural justice. Existing research also suggests that factors such as race, socioeconomic status, and prior experiences may influence attitudes towards law enforcement and the justice system. While the study provides valuable insights, its limitations call for further research in diverse populations and other areas of the justice system. Overall, the findings stress the need for a more comprehensive understanding of the factors and implications of perceptions of procedural justice to promote fairness and trust in society.

The study also emphasizes the importance of understanding how the public perceives police performance and how different factors can influence this perception. The findings suggest that there is a need for policymakers and law enforcement agencies to address issues related to community support and effective law enforcement. Further research is needed to understand the reasons behind these perceptions and to inform strategies for improving police-community relations. It is recommended that efforts should be made to build trust and positive relationships between law enforcement and the community through various measures such as training programs, responsive complaint handling systems, and proactive crime prevention measures. This study highlights the need for collaboration between policymakers and law enforcement to create a safer and more equitable society.

The study uncovers varying sentiments about cooperating with the police, emphasizing the link between perceived fairness in procedures and willingness to cooperate. Adhering to procedural justice is vital for maintaining public support and enhancing police effectiveness through quality service and adequate training. Research by Tankebe, J. 2013 [59], highlights the relationship between individuals' perception of police legitimacy and moral values, revealing varying alignments. Thacher, D. (2015) [63] and earlier research underscore the diversity of opinions regarding supporting police actions. Factors like race and past interactions with law enforcement significantly shape views on police legitimacy [64]. necessitating further research to understand these dynamics and guide efforts to improve



community relations and align law enforcement values with community values for enhanced legitimacy.

This study supports previous research on public attitudes towards law enforcement, suggesting that individuals are less likely to cooperate with police if they perceive them as untrustworthy or unfairly targeting their community. This highlights the importance of addressing issues of police legitimacy and promoting fair and just policing practices to improve willingness to cooperate. Future studies should consider demographic differences and experiences with law enforcement, which can inform targeted interventions to address any disparities. This study emphasizes the need for more research and targeted efforts to improve community-police relationships by addressing underlying factors and promoting evidence-based strategies.

This study findings contribute to previous research on the relationship between procedural justice and perceived legitimacy of the police. Previous studies have consistently shown a positive correlation, but our findings showed a negative correlation. This was unexpected but supported by previous research. The study's limitations, such as a small sample size, should be considered when interpreting the results. Future research should use larger and more diverse samples to further explore this relationship and consider contextual factors. Cultural and societal influences may also play a role in this relationship. It is important to understand this complex relationship in order to promote public trust in law enforcement. Further research is needed to inform policy decisions and address issues of public trust and confidence.

This piece discusses the importance of perceived police legitimacy and its relationship to factors such as fairness and effectiveness in policing, as well as its influence on public attitudes towards law enforcement. The study supports the theory of procedural justice and emphasizes the need for law enforcement to prioritize positive community relationships. It highlights the implications for police training and policies in promoting effective and legitimate policing strategies.

This study discusses the importance of perceived legitimacy, or the belief in the authority's right to make and enforce laws, in shaping individuals' behaviour towards following laws. It suggests that policymakers can use this knowledge to improve their strategies for achieving greater compliance with laws. The study highlights regional and cultural variations in the perception of legitimacy and its effectiveness in promoting cooperation. Further research is needed to understand these variations and develop a more nuanced approach to promoting compliance with laws.

V. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study highlights a significant finding: a substantial portion of the participants expressed dissatisfaction with the perceived fairness of procedures. This suggests that individuals may harbor negative perceptions of the processes they are required to follow, potentially affecting their overall views. Consequently, organizations should place a strong emphasis on how their procedures are perceived, striving to ensure transparency and fairness.

Furthermore, the research uncovers notable disparities in public satisfaction with local law enforcement across different cities. The majority of respondents exhibited neutral sentiments regarding police performance. It is crucial to recognize that a myriad of factors, including demographics, available resources, cultural influences, and budget constraints, can significantly impact public opinion in distinct urban settings. By gaining a deeper understanding of public sentiment, local police forces can enhance their services and work towards fostering a sense of safety and contentment within the community.

The study's results demonstrate a crucial link: when individuals perceive law enforcement agencies as more legitimate, they are more inclined to support police initiatives and adhere to their directives. This insight holds significant importance as it empowers the police to formulate more effective strategies that align with public preferences, thereby strengthening their relationship with the community and ensuring collective safety.

Although the majority of respondents harbor mixed feelings about cooperating with the police, there is a prevailing inclination towards non-cooperation. Future research endeavours should delve into the underlying reasons for this reluctance, shedding light on the dynamics that influence people's willingness to collaborate with law enforcement.

The research unequivocally establishes that organizations that adhere to fair procedures tend to garner higher levels of trust in their rules and decisions. Thus, it is imperative for organizations to prioritize fairness in their processes, thereby cultivating public trust in their governing rules and decision-making.

Furthermore, the study underscores the significant impact of law enforcement's performance on public trust. For police agencies to maintain and bolster public support, a concerted focus on delivering exemplary service, comprehensive training, and ongoing education is paramount. These efforts will not only engender increased public trust but also enhance overall police performance.



Recommendations

The researchers recommend a series of comprehensive actions to address the perceptions of the non-violent crime victim in Angeles City. Organizations should be transparent by clearly outlining their procedures and the reasons for them. They should invite feedback and ideas from those involved, making decisions fairly and consistently. It's vital to be efficient in decision-making while keeping stakeholders informed. Regular evaluations should be conducted to identify and rectify any potential imbalances or issues that may emerge in the established procedures. This approach ensures a responsive and equitable organizational environment.

Recommendations based on the findings emphasize that local police departments should comprehend community opinions and needs, particularly considering demographic and cultural differences within the city. Adapting services to align with citizens' needs enhances safety and community satisfaction. Police service planning should factor in city resources, budgets, and local opinions, enabling the police to effectively serve and prioritize citizen needs.

Law enforcement agencies should focus on enhancing public perception of police legitimacy, recognizing its strong connection to public support for police efforts and compliance with directives. Key activities like training and community engagement should highlight the significance of respecting the police and upholding the constitutional rights of all citizens. The ultimate goal is to cultivate a culture of mutual trust and respect between law enforcement and the community.

Police should focus on enhancing community trust through effective communication, fostering a meaningful dialogue. This entails two-way engagement and increased outreach, highlighting transparency and accountability to demonstrate credibility and build trust, especially with potential cooperators. Providing local resources like mental health services and financial aid can aid individuals hesitant to cooperate with the police, further strengthening community relationships.

Achieving this goal involves providing clear information on policies and procedures, allowing input in decision-making, and maintaining fairness and respect during the decision-making process. Organizations should educate their personnel on procedural justice principles to ensure everyone understands the consequences of their decision-making actions.

Law enforcement services should prioritize delivering high-quality service and invest in effective training and education. These efforts lead to enhanced police performance, increased public legitimacy, and greater overall trust in the department. It also measures encouraging community involvement should be considered to bolster public trust and improve perceptions of the department.

Organizations should enhance their perceived legitimacy by adopting transparent and effective policies. This involves demonstrating a strong commitment to cooperation through open communication and collaboration with stakeholders, as well as establishing clear, enforceable regulations. Also, fostering an atmosphere of respect and trust among constituents is crucial. Organizations should actively seek honest feedback from all stakeholders, facilitating open dialogues to address concerns and promote cooperation, thus fostering a positive and cooperative relationship with stakeholders.

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INTEGRATION OF ASSISTIVE TECHNOLOGY FOR INSTRUCTION OF LEARNERS WITH DISABILITIES IN INCLUSIVE SECONDARY SCHOOLS IN KADUNA STATE

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ABSTRACT

This study appraised the integration assistive technology for instruction of learners with disabilities in inclusive secondary schools used descriptive research design with target populations of all the 4 secondary schools practicing inclusive education in Kaduna state and all 185 teachers across these 4 inclusive schools, 4 principals of these schools, as well as resource center personnel. A purposive sampling technique was used to select the sample size from the population of the students. Data for this study was gathered using questionnaires, observation schedule, interview and check lists. The instrument was validated by 2 experts from Department of Educational measurement as well as the reliability of the questionnaire in measuring the objectives of the study. Cronbach's Co-Efficient Alpha was used for testing internal consistency the research instruments. Since data were collected in both quantitative and qualitative forms, for quantitative which involved descriptive statistics data were organized, coded and entered into computer and then data were presented in frequencies, percentages, tables, graphs and mean using Statistical Packages for Social Sciences (SPSS). For qualitative which involved interview and open ended items on the questionnaires the data were transcribed in categories, coded, organized, summarized into themes identified and represented in tables and figures. Findings revealed that there are numerous problems affecting the integration of AT for instruction of learners with disabilities in inclusive secondary schools in Kaduna state Nigeria. the problem ranges from the scarcity of essential ATS for the instruction of learners with disabilities in the secondary schools to the lack of knowledge and the skills by both students, resource centre personnel and the teachers to use the available ATS for instructions, to this end, it can be concluded that the students with special needs do not get access to quality instruction in the secondary school in Kaduna state. The following recommendations were made that apart from that general laws governing all types of disabilities in all the schools, there should be establishment of specific legal framework and institutional policies; that since modern ATs is very expensive for schools to purchase .it was recommended that the government makes laws for support and partnership with non-governmental organization in the provision of ATs and other required services and canvass for these ATs devices and software from relevant donor agencies; that the government should partner with stakeholders, relevant non-governmental agencies, private organization and international agencies to come up with mechanisms and collaborative approach to improve the provision access to AT and training of the instructors in the area of AT; and This study also recommends that the ministry of education organizes in-service training for teachers in the area universal design for the learning which is the principal of best practice. in teaching

KEYWORDS: Assistive Technology, Learners with Disabilities, Universal Design Learning

INTRODUCTION

Globally, Education is recognized as an important tool for individual and national development (Yusuf & Fakomogbon, 2017). Educating learners with disabilities in the general classroom setting can enhance the learners' learning as well as enhancing their abilities in social interaction. This approach is commonly known as Inclusive Education. Inclusive Education (IE) is acknowledged as the best way of increasing access for

education by learners with disabilities (LWDs). (Mukhopadhyay, 2016)

Meeting the EFA goals particularly for the exceptional students is a herculean task for many countries but must be achieved (Ahon, 2011). This is however not happening. For instance, (Karen, Jeni, Monique, Lindu and Molloe, 2011) observed that special education personnel shortage persists across the globe in



spite of strategic, forced recruitment and retention initiatives. They stress that the demand and supply of special education teachers and related personnel service providers has been the cause of concern among schools' administrators and state education officials for several decades.

Moreover, numerous studies over the years have attributed teacher preparation, recruitment and retention as a big challenge. The role of teachers in the successful integration of assistive technology in the inclusive school system cannot be over emphasized. In a UNESCO (2001) report that, "it is the work of government to set policies and objectives of inclusive education but it is individual person (teachers) who determines the success or failure of inclusive education" (p.33). Unfortunately, the teachers who should ensure that inclusive education does not fail in majority of developing countries are not trained. Indeed, one could argue that inclusive education has not been taken seriously in many parts of the world. Actually, globally there has been relatively scanty research on the appreciation of information communication technologies (ICTs) to support inclusive practice (BECTA, 2015).

Further, Hopkins (2004) posits that assistive technology assists several LDWs to access information, link up with others, and take part in ways that would not have been feasible without the use of the AT devices. In other words, AT is an instrument to unchain learners with disabilities and increase their horizons of learning.

In essence AT is an important part of an inclusive classroom since it increases, sustains or develops the efficient capabilities of a learner with a disability. For instance, the situation in Nigeria indicates that studies on the accessibility of ATs as well as application of ICT for instruction of LWDs in the country are very few. (Farell and Shafiaka, 2017; Yusuf & Fakomogbon, (2012). Owing to the growing needs of ATs in all aspects of instruction and life of individual with education challenges, it is imperative that learners with disabilities have access to quality instructions where assistive technology is integrated. This study will be limited to only three (3) types of disabilities that is visual impair/blind, hearing impair and physical disability.

STATEMENT OF THE PROBLEM

Despite increasing access to technology, the academic performance of learners with disabilities in Nigerian secondary schools still falls far below expectation. This is because Learners with Disabilities (LWD) in secondary schools do not have the opportunity to access effective instruction. In spite of the detail information of well-known established relationship between what teachers trust and what they do, generally the views on inclusion of LWDs in regular schools "has been clearly absent from deliberations of changes in policy and practices" (Soodak, Podell and Lehman, 2011). Also Wong & Cohen, (2011) reveals that the post primary schools have been facing challenges of demand for inclusion, changes in instructional practices and incorporating

assistive technologies into curriculum is a matter of concern. Also, anxiety amongst the instructors and others using ATs is on how to use these new or 'strange' technologies. Their inability to use them due to lack of training consequence upon this, the students lag behind their able-bodied in the schools. This is particularly so in the developing countries in which Nigeria is included.

Upon all the benefits attached to the use of ATs for instruction of LWDs in general schools' system in terms of its flexibility in method and materials that can enrich the lesson of LWDs is elusive in Nigeria. To this end the study examined the extent to which the Assistive technology is being used for instruction for learners with disabilities in the secondary schools.

OBJECTIVES OF THE STUDY

- i) To establish Government policies put in place on the use of ATs to guarantee quality of instructions for learners with disabilities in the inclusive secondary setup in Kaduna state.
- ii) To ascertain the availability of the assistive technology for teaching learners with disabilities in an inclusive secondary schools in Kaduna state.
- iii) To find out ways in which the teachers in the inclusive secondary schools' design and conduct their instruction to ensure that learners with disabilities learn effectively.
- iv) To establish how Assistive Technology is being employed for use to ensure quality instruction.
- v) To investigate challenges experienced by teachers while integrating ATs into instructions in inclusive schools.

To assess the attitude of teachers toward integration of assistive technology in teaching learners with disabilities in inclusive settings in secondary schools in Kaduna state.

LITERATURE REVIEW OF THE STUDY

Educating learners with disabilities in the general classroom setting can enhance the learners' learning as well as enhancing their abilities in social interaction. This approach is commonly known as Inclusive Education. According to Mukhopadhyay, (2018), Inclusive Education (IE) is acknowledged as the best way of increasing access for education by learners with disabilities (LWDs). However, teaching learners who have disabilities among many without disabilities in the inclusive setting poses an instructional problem for teachers (Mugo, 2017). This instructional setting requires teachers to employ diverse set of special instructional approaches and methods. In essence, inclusive theory emphasizes that mainstream schools should respond positively to all learners. The theory states that inclusion is about the learner's rights to partake fully instructional processes in the general school setting and it is the duty of the teachers to accept the learner and offer them the necessary educational support (Mntmal: file: if:/new folder encyclopedia. Mint).



Indeed, since Education Round-table meeting held in Dakar, Senegal in 2000 resolved for action and declaration on Education for All (EFA) and Nigeria inclusive. EFA pronouncement implies that all learners irrespective of socio- economic status and exceptionality should have had access to basic education by 2015, and special learning needs of learner should have been considered; (Dakar frame work of Action, 2000). However, meeting the EFA goals particularly for the exceptional students is a herculean task for many countries but must be achieved (Ahon, 2016). This is however not happening. For instance, (Karen, Jeni, Monique, Lindu and Molloe, 2016) observed that special education personnel shortage persists across the globe in spite of strategic, forced recruitment and retention initiatives. They stress that the demand and supply of special education teachers and related personnel service providers has been the cause of concern among schools' administrators and education officials internationally for several decades. Also numerous studies over the years have attributed teacher preparation, recruitment and retention as a big challenge and indeed, the problem of shortages of personnel in special education has been identified as a universal challenge around the world.

However, this problem of lack of qualified personnel and specialists to handle education for Learners with Disabilities in Inclusive Education schools is not only unique to developed countries. This predicament is more severe in the developing countries Nigeria inclusive. In Nigeria, the state of IE is not different from that of other developing countries. Although there are internationally well laid down laws to support the inclusive education, the law does not guarantee quality instruction for learners with disabilities. For example, despite the Nigeria's National Policy of Education NPE (2004: 49) ruling that all essential amenities, resources and learning material that guarantee straightforward access to quality education shall be made available to schools, complaints about inaccessibility especially for quality instruction for learners with disabilities still prevails (Olutokun, 2019).

. In many developing countries Nigeria inclusive and even in some developed countries, the learners are provided with AT to just address their basic needs. Hopkins, (2015) posits that having realized that learners with disabilities require AT devices both at the individual and at the school level, the focus should be towards increasing the ability of learners with special needs to participate effectively in instruction.

However, Teachers on training require advocacy as well as to be equipped with knowledge on how to utilize modern ATs which bridge many of the gaps for LWDs" (Nelson, 2006). The role of teachers in the successful integration of assistive technology in the inclusive school system cannot be over emphasized. In a UNESCO (2001) report that, "it is the work of government to set policies and objectives of inclusive education but it is individual person (teachers) who determines the success or failure of inclusive education" (p.33). Unfortunately, the teachers who

should ensure that inclusive education does not fail in majority of developing countries are not trained. Indeed, one could argue that inclusive education has not been taken seriously in many parts of the world. Literature in the field of effective inclusion is still scarce. Indeed, it has been observed that there has been very little study on the use of AT in instruction for learners with disabilities in less developed countries. Actually, globally there has been relatively scanty research on the appreciation of information communication technologies (ICTs) to support inclusive practice (BECTA, 2015). For instance, the situation in Nigeria indicates that studies on the accessibility of ATs as well as application of ICT for instruction of LWDs in the country are very few. (Farell and Shafiaka, 2014; Yusuf & Fakomogbon, (2015). Owing to the growing needs of ATs in all aspects of instruction and life of individual with education challenges, it is imperative that learners with disabilities have access to quality instructions where assistive technology is integrated. A pertinent question one may be prompted to ask at this point is whether learners with disabilities in Nigeria are accessing quality instruction. This study therefore endeavored to establish how assistive technology was being integrated in instruction for learners with disabilities in inclusive secondary schools in central senatorial district of Kaduna state in Nigeria.

METHODOLOGY

This study will use descriptive research design. The target populations of this study will be all the 4 secondary schools practicing inclusive education in Kaduna state and all 185 teachers across these 4 inclusive schools, 4 principals of these schools, as well as resource center personnel who provide assistive technology services to these students. Because of the peculiarity and uniqueness of these students' purposive sampling technique was used to select the sample size from the population of the students. Data for this study was gathered using questionnaires, observation schedule, interview and check lists. These instruments include: Questionnaire for teachers' comprised mixture of question that were employed to elicit responses from the teachers on how they use ATs and challenges facing them in using the ATs for instruction of LWDs. Also interview was conducted through the use of interview schedule guide to seek for information from LWDs, principals and resource center personnel which was arranged prior to time.

The instrument was validated by 2 experts from Department of Educational measurement the reason of this process will further established clearness and accurateness, correctness as well as the reliability of the questionnaire in measuring the objectives of the study. Cronbach's Co-Efficient Alpha was used for testing internal consistency the research instruments. Since data will be collected in both quantitative and qualitative forms, for quantitative which involved descriptive statistics data were organized, coded and entered into computer and then data were presented in frequencies, percentages, tables, graphs and mean using Statistical Packages for Social Sciences (SPSS). For



qualitative which involved interview and open ended items on the questionnaires the data were transcribed in categories, coded, organized, summarized into themes identified and represented in tables and figures.

PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

The teachers' demographic data sought included their sex, age, working experience and academic qualification. The result indicated that out of 185 respondents 193(57%) were male and 147(43%) were female. on the level of the teacher's academic qualifications result presented revealed that 110(59.4%) of the respondents have Nigeria Certificate of Education (NCE) as their highest education qualification, while 60(32.4%) respondents were B.sc holder, a total number of 15 (8.2%) of the respondents were master's degree holder while there were no respondents with doctorate degree.

On whether inclusive education legal framework document, the finding indicates that secondary schools neither had their own set of legal frameworks nor even policy documents for people with disabilities. In the Ministry of Education, the document on inclusive education was not available. The strength of these laws in terms of ensuring equality and the right to educate people with disabilities has been generating some contending issues and challenges. Such challenges include poor implementation of Acts establishing IE due to lack of legal backing for such Also in ascertaining availability AT, the finding indicated that all the 4 schools sampled had a 120 total of slates and stylus which were accessible to blind and visually impaired students. Also there 2 tape recorders which considered in adequate, while 8 brail books, 1 brail ruler, 6 non foldable canes, 2 graphic kits and 5felt pens were available across the 16 schools sampled and these were low/medium tech ATs which were grossly inadequate compared to number of students. For high tech ATS such as brail embossers, note taker, hand held magnifying mirror, brail writer, I phone, CCTV systems, screen readers, JAWs, NVDA and optical tactual converters were not available in all the 16 schools sampled.

As well for Hearing Impairment the finding shows that electronic hearing aid, accele-glove, and telecommunication devices for deaf, adopted doorbell, audiometer and typanometer were not available in all 4 schools sampled. While only 6 computers were available in all the 4 schools sampled and only 4 computers were functioning as at the time of the study and 2 of the computers were not functioning, also there are 6 motion films out of which only 2 were functioning this considered inadequate compared to number of students in the schools.

So also on Availability of functional ATs for learners with Physical Disability the study revealed that there a total of 10 wheel chairs, 10 walking sticks and 5 crutches which are locally fabricated were available. While ATs, such as head pointers, joysticks, corner chairs, adopted chairs, adopted tables and

talking books were not available in all the 16 schools sampled. Despite the scarcity of ATs in the schools there were no teacher professional development programs to give the teachers adequate skills to integrate ATs in the instructions of LWDs in the inclusive set-up. The finding reveals that 60 out of 340 (17.6%) respondents indicated they had no experience in teaching LWDs in inclusion classes. About140(41.1%) indicated that they had taught in inclusive classes for less than 5 years. Also 110(32.3%) of teachers indicated they had taught in inclusive classes for upward of 5to 9 years, while a total of 30(8.1%)respondents indicated that they had taught in inclusion classes between 10 to 20 years. Assistive Technology cannot be useful without effective instructional methods, without present's information on the instructional methods the teachers commonly used in inclusive classrooms. It is evidence that the teachers mostly used lecture method for instruction for learners with disabilities. This is clear that there is less learner participation in the teaching and learning process via this method. The findings presented that 154(45%) of the respondents said that they organized students in a whole group while using the assistive technology, 94(28%) respondents indicated that they organized the students in a small group while using the assistive technology and 92(27%) of the respondents indicated that they organized the student in mixed ability groups. presents information on whether teacher used the ATs or not in their lessons, finding shows that 110(32.4%) of the respondents indicated they had not used assistive technology in teaching, while 230(67.6%) indicated to have used assistive technologies for instruction even though they were old.

While on challenges, the finding revealed that 35(10%) of the respondents indicated that their challenges were inadequate budgetary allocation to procure recent ATs, while 85(25%) of the respondents indicated that the constraints encountered in using ATs were mostly inadequacy of these devices, also 65(19%) revealed that the challenges were due to lack of knowledge of ATs and 80(24%) of the respondents attributed the challenges to inadequacy of skills by teachers to use ATs. While 75(22%) of the respondents said that lack of capacity building training on use of ATs were part of the challenges facing them. The teachers complained that the ATs were very rare or not at all in the schools and that were they not trained at all to use the ATs. These findings Concur with Grabe and Grabe, (1998) stresses that teacher preparation and teacher training in terms of technology integration continues to pose a big challenge to education, institutions have not been responsive to the expectation that new teachers will come into classrooms prepared to use the resources the schools have purchased, consequently many teachers graduate but still feel either not prepared or poorly prepared to use technology in their lessons.

CONCLUSION

According to the finding of this study, there are numerous problems affecting the integration of AT for instruction of learners with disabilities in inclusive secondary schools in



Nigeria. the problem ranges from the scarcity of essential ATS for the instruction of learners with disabilities in the secondary schools to the lack of knowledge and the skills by both students, resource centre personnel and the teachers to use the available ATS for instructions, to this end, it can be concluded that the students with special needs do not get access to quality instruction in the secondary school in Kaduna state and as such the desire of student with disabilities to access quality instruction and the students does not arise.

RECOMMENDATIONS

This study has inferred that the students with disabilities do not have access to quality instruction in inclusive secondary schools in Nigeria. This study therefore recommends the following;

1. This study recommends that apart from that general laws governing all types of disabilities in all the schools, there should be establishment of specific legal framework and institutional policies.
2. Since it is expensive for schools to purchase modern ATs it therefore recommends that the government makes laws for support and partnership with non-governmental organization in the provision of ATs and other required services and canvass for these ATs devices and software from relevant donor agencies.
3. This study recommend that the government should partner with stakeholders, relevant non-governmental agencies, private organization and international agencies to come up with mechanisms and collaborative approach to improve the provision access to AT and training of the instructors in the area of AT
4. This study recommends the ministry of education organizes in-service training for teachers in the area universal design for the learning which is the principal of best practice. in teaching.

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GLENOHUMERAL DISLOCATION, ANATOMICAL DESCRIPTION, EPIDEMIOLOGY, MECHANISMS OF ACTION, CLASSIFICATION, CLINICAL PRESENTATION, IMAGING PRESENTATION, TREATMENT AND COMPLICATIONS

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SUMMARY

Introduction: Acute shoulder injuries that are common here include acromioclavicular joint injuries, clavicle fractures, glenohumeral dislocations, proximal humerus fractures and rotator cuff tears. Glenohumeral dislocations are frequently attributed to contact sports, as well as bicycle accidents, falls and high-impact trauma. Patients present several specific characteristics that will depend on the type of dislocation.

Objective: to detail the current information related to glenohumeral dislocation, in addition to its description, epidemiology, classification, clinical evaluation, imaging presentation, treatment and complications of the different types of glenohumeral dislocation.

Methodology: a total of 32 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 for 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: glenohumeral dislocation, shoulder pain, upper limb dislocation, shoulder reduction, shoulder dislocation.

Results: Shoulder dislocations are usually anterior. In recurrent anterior dislocation, most recurrences occur in the first 2 years and mostly in males. Age at the time of initial dislocation has the greatest influence; incidence is not related to the duration or type of immobilization. The approximate recurrence rate in all age zones is 50%, however it increases to 89% in 14 to 20 year olds.

Conclusions: The shoulder joint is frequently associated with dislocations, accounting for a large percentage of all dislocations, with anterior shoulder dislocations being more common. Anatomical, clinical and imaging knowledge play an important role in the diagnosis, allowing a better classification of the type of dislocation, which has a better impact on the treatment. The immobilization and physiotherapeutic approach will vary depending on the pathology, the age of the patient, the existence of recurrence and other complications.

KEY WORDS: glenohumeral dislocation, shoulder reduction, shoulder dislocation.



INTRODUCTION

Acute shoulder injuries are common and include acromioclavicular joint injuries, clavicle fractures, glenohumeral dislocations, proximal humerus fractures and rotator cuff tears. Acromioclavicular joint disruptions and clavicle fractures occur mostly in young adults as a result of direct trauma or sports-related injuries. Most non-displaced or minimally displaced injuries are usually treated conservatively, including pain management, short-term use of a sling, and physical therapy. Glenohumeral dislocations are frequently attributed to contact sports, as well as bicycle accidents, falls and high-impact trauma. Patients present several specific characteristics that will depend on the type of dislocation, however most commonly they will hold the affected arm with the contralateral hand and present with pain on movement and reduced range of motion. Reduction maneuvers usually require intra-articular lidocaine or intravenous analgesia and sometimes sedation. Shoulder radiographs play an important role in pathology(1,2).

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 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: glenohumeral dislocation, shoulder

pain, upper limb dislocation, shoulder reduction, shoulder dislocation.

The choice of bibliography exposes elements related to glenohumeral dislocation; description, epidemiology, classification, clinical evaluation, imaging presentation, treatment and complications of the different types of glenohumeral dislocation.

DEVELOPMENT

EPIDEMIOLOGY

The shoulder joint is frequently associated with dislocations, accounting for up to 45% of all dislocations. Shoulder dislocations are usually anterior; their incidence is 8 to 9 times more common than the incidence of posterior dislocations, which represents the second most common type. The incidence of glenohumeral dislocation is approximately 17 cases per 100,000 inhabitants per year, with the peaks located between 21 and 30 years of age in men and between 61 and 80 years of age in women. The approximate recurrence rate in all age groups is 50%, but increases to 89% in those between 14 and 20 years of age. Inferior dislocations, also called erect dislocations, as well as superior dislocations are infrequent. Dislocations due to fracture of the proximal humerus are complex injuries that require special considerations; chronic glenohumeral dislocations are infrequent injuries that represent less than 2% of all shoulder dislocations(3-7).

Figure 1. Anteroposterior radiograph of the left shoulder showing an anterior dislocation of the humerus with respect to the glenoid cavity.



Source: The Authors.



Figure 2. Fluoroscopic image showing reduction of the dislocation shown in figure 1.



Source: The Authors.

ANATOMY

The shoulder is an unstable joint due to a shallow glenoid cavity that articulates with only a small part of the humeral head. Glenohumeral stability requires multiple mechanisms, active and passive.

Active:

1. long head of the biceps.
2. Rotator cuff.

Coordinated movements of the shoulder include:

1. glenohumeral.
2. Scapulothoracic.
3. Clavicular and sternoclavicular.
4. Acromioclavicular.

Passive:

1. Adhesiveness and cohesion due to synovial fluid.
2. Vacuum effect due to the limited surface of the joint.
3. Joint congruence.
4. Scapula inclination: generally in more than 90% of the shoulders, the critical angle of scapula inclination is between 0° and 30°, below this it gives to infer that the glenohumeral joint is unstable and prone to inferior dislocation.
5. Ligaments and capsular restrictor components:
 - Superior glenohumeral ligament: is the primary component that limits inferior translation of the shoulder when the shoulder is in adduction.

- Inferior glenohumeral ligament: composed of three bands, the superior band is the most important to prevent anterior dislocation of the shoulder. It limits external rotation when the shoulder is between 45° and 90° of abduction.

- Medial glenohumeral ligament: it is a modifiable component, sometimes poorly defined or missing 30% of the time. It confines external rotation with the shoulder in 45° of abduction.

- Joint capsule: its redundancy prevents restriction of motion, except for the last few degrees. The anteroinferior capsule prevents anterior subluxation when the shoulder is in abduction. The anterior capsule and the underside of the subscapularis muscle limit external rotation. The posterior capsule and teres minor limit internal rotation.

6. Glenoid impeller.

7. Bone restrictors: coracoid, acromion and glenoid cavity.

Pathologic anatomy of shoulder dislocations:

- Avulsion of the glenohumeral ligaments, mostly of their glenoid insertion and sometimes of their humeral insertion.

- Elongation or rupture of the capsule.

- Rupture of the glenoid impeller.

- Bankart's lesion: avulsion of the anteroinferior part of the glenoid impeller from its insertion in the periphery of the glenoid cavity. Sometimes related to fracture of the glenoid margin called bony Bankart.

- Hill-Sachs lesion: damage to the posterolateral portion of the head of the humerus caused by an impact fracture against the



glenoid ridge; seen in 74% of recurrent anterior dislocations and 27% of acute anterior dislocations.

Shoulder dislocation linked to rotator cuff rupture:
 Mostly in the elderly:

- Over 40 years between 35 % to 40 %.

- Over 60 years of age can reach 80%.

It should be taken into account in elderly individuals who are not able to lift the arm after a dislocation(3,4,8-12).

Figure 3. Affected individuals with an anterior dislocation of the shoulder showing the so-called epaulette shoulder.



Source: The Authors.

ANTERIOR GLENOHUMERAL DISLOCATION

Incidence.

Approximately 90% of all shoulder dislocations.

Mechanism of Injury

Anterior glenohumeral dislocation can occur following trauma, due to direct or indirect forces. Usually an indirect trauma to the upper extremity while the shoulder is in abduction, extension and external rotation. An anterior dislocation may also occur as a result of a direct mechanism with a force impacting the posterior shoulder area. Seizures and electric shocks typically result in posterior shoulder dislocations, but are not exempt from causing anterior dislocations. Sometimes anterior dislocations are evidenced with minimal trauma when there is recurrent instability interconnected with laxity, congenital or acquired, or with voluntary mechanisms(3,4,13).

Clinical Evaluation

The management of a first episode of anterior shoulder dislocation begins with an analysis of the causative mechanism and a physical examination to establish the diagnosis. The type of trauma, pattern of recurrence, triggering mechanisms, chronicity of dislocation, laxity and history of instability in the contralateral shoulder should be measured. The affected individual presents

with great pain, muscle contracture and characteristically comes with the injured arm held in slight abduction and external rotation. A neurovascular evaluation is of utmost importance, observing the integrity of the axillary nerve. Physical examination may reveal a loss of shoulder contour due to the relative prominence of the acromion, with a posterior depression located below the acromion and a palpable mass in the anterior shoulder area. Tenderness in the area near the deltoid should be assessed; this muscle may show atony and should not be confused with axillary nerve impairment. The integrity of the musculocutaneous nerve can be assessed by testing both the sensation in the anterolateral aspect of the forearm. If the affected individual does not have acute pain, the examination may show a positive apprehension test, in which passively placing the arm in abduction, extension and external rotation generates a sensation of pain and instability(3,4,14).

Imaging Evaluation

Trauma series of the injured shoulder:

- Anteroposterior
- Scapular Y.
- Axillary in the plane of the scapula.
- Velpau axillary projection: if the standard axillary X-ray cannot be performed because of pain, the individual should be placed in



a sling and tilted posteriorly on the frame at an obliquity of 45°. The X-ray beam goes in a caudal direction, perpendicular to the chassis, which provides a magnified axillary projection. Special projections:

-Hill-Sachs projection: this anteroposterior projection can be obtained with the shoulder in maximum internal rotation in search of a possible posterolateral defect.

-West Point axillary projection: it provides a tangential image of the anteroinferior glenoid rim. It can be obtained with the affected individual in a prone position and with the X-ray beam in cephalic direction towards the axilla creating an angle of 25° with the horizontal and 25° with the medial plane.

-Stryker's notch projection: it shows up to 90% of the posterolateral alterations of the humeral head. The affected individual is placed in the supine position with the ipsilateral palm on the crown of the head and the elbow facing upwards. The X-ray beam is positioned 10° cephalad, in relation to the coracoid process.

-Computed tomography can sometimes be used to demarcate bony lesions of the anterior impeller, free bodies and compression fractures of the glenoid or humeral head. Contrast arthrography can be performed to evaluate rotator cuff pathology. The role of MRI is to determine rotator cuff alterations, Bankart's lesion and capsular lesions(3,4).

Classification

According to the level of stability: dislocation, subluxation.

According to chronology:

- Congenital.
- Acute versus chronic.
- Incarcerated.
- Recurrent.
- Acquired.

According to forces:

- Atraumatic
- Traumatic

According to patient contribution:

- Voluntary.
- Involuntary.

According to direction:

- Subcoracoid.
- Subglenoid.
- Intrathoracic.

Treatment

Conservative Treatment

After a correct clinical evaluation and after a good analgesic management, closed reduction, intra-articular block and/or sedation should be attempted. Among the maneuvers described for such action are:

- **Stimson's technique:** after administering analgesics and/or sedatives, the affected individual is placed in a prone position with the upper extremity hanging freely from the edge of the stretcher. A light manual traction is exerted, as well as a 2.5 kg weight can be hung from the

wrist, the reduction will take approximately 15 to 20 minutes.

- **Hippocrates technique:** with this technique the reduction is achieved with only one individual, placing one foot on the axillary fold and on the thoracic wall and exerting axial traction on the upper extremity with slight internal and external rotation.
- **Milch technique:** with the affected individual in the supine position and the upper extremity in abduction and external rotation, pressure is exerted with the thumb to slide the head of the humerus into place.
- **Spaso technique:** the affected individual in the supine position while the examiner grasps the wrist or distal forearm and lifts it vertically with gentle vertical traction and external rotation.
- **Tracción-contracción.**
- **Maniobra de Kocher:** no se recomienda por el alto riesgo de fractura, la cabeza del húmero se apalanca sobre la parte anterior de la glenoides para permitir la reducción. Posterior a la reducción, el tratamiento incluye inmovilización por 2 a 5 semanas. Se recomienda un periodo menor de inmovilización en añosos debido a la posible rigidez, por el contrario jóvenes con antecedentes de luxación recurrente pueden requerir más tiempo. Posterior a la inmovilización, es necesario realizar rehabilitación, mejorando progresivamente la rotación externa, la flexión y la abducción, además ejercicios para recuperar la amplitud de movilidad(3,4,11,15).

Surgical Treatment

Surgical indications include

- Glenoid rim fracture greater than 5 mm.
- Soft tissue interposition.
- Displaced fracture of the greater tubercle with a displacement greater than 5 mm in a superior direction posterior to reduction.
- Acute stage repair in individualized cases as in some young athletes.

Surgical alternatives for stabilization include:

- Arthroscopic repair of the ligaments and anterior glenoid impeller.
- Capsular slippage
- Capsulorrhaphy
- Tendon transfers.
- Muscle transfers
- Bone transfers, reserved for recurrent cases.

The latter are generally used for the treatment of recurrent dislocation. Postoperatively, a shoulder immobilizer should be used for a maximum of 3 weeks in individuals of 30 years of age, 2 weeks in the age range of 30 to 40 years and 1 to 2 weeks in individuals over 50 years of age, this will also depend on the type of procedure performed. The affected individual is usually released to remove the immobilization system 2 to 4 times every



24 hours in order to perform a range of motion exercises of the hand, wrist and elbow.

Physiotherapeutic treatment focuses on active and passive range-of-motion activities, in addition to exercises to restore strength to the limb(3,4).

Complications

Recurrent anterior dislocation: Most recurrences occur in the first 2 years and mostly in males, this is related to alterations in the ligaments and capsule. Age at the time of initial dislocation has the greatest influence, the incidence is not related to the duration or type of immobilization.

Bone injuries:

- Fracture of the greater tubercle (trochleter).
- Hill-Sachs lesion.

- Fracture of the acromion or coracoid.
- Fracture of the glenoid rim or Bankart bone lesion.
- Post-traumatic degenerative changes.

Soft tissue injuries: such as capsular or subscapularis tendon ruptures, as well as rotator cuff injuries, especially in older individuals.

Vascular injuries: they are usually generated in elderly people with arteriosclerosis and alternate to the axillary artery. They may occur at the time of open or closed reduction.

Nerve injuries: they occur mostly in the musculocutaneous and axillary or circumflex nerves. More commonly in the elderly; frequently the neuropraxia recovers, if symptoms continue after 3 months, it is necessary to perform a thorough analysis and even a surgical exploration(3,4,8,15).

Figure 4. Anteroposterior radiograph of the left shoulder showing an anterior dislocation.



Source: The Authors.



POSTERIOR GLENOHUMERAL DISLOCATION

Incidence

This type of dislocation occurs in approximately 10% of shoulder dislocations and 2% of all shoulder injuries. It is usually not identified in primary care or the emergency department, so 60% to 80% of the time it goes unnoticed at the first examination. Recurrent posterior dislocations occur in 30% of patients and predispose the joint to degenerative changes.

Mechanism of Injury

Indirect trauma: this is the most common. The shoulder is positioned in a particular way, in adduction, flexion and internal rotation. A posterior dislocation can be generated secondary to an electric shock or during a seizure due to the greater muscular strength of the internal rotators, specifically the pectoralis major, latissimus dorsi and subscapularis, in relation to the external rotators of the shoulder, specifically the infraspinatus and teres minor.

Direct trauma: it is the consequence of exerting a direct force to the anterior area of the shoulder, resulting in a posterior translation of the head of the humerus(3,4,16).

Clinical Assessment

In the evaluation of posterior glenohumeral dislocation, a very noticeable deformity is usually not visualized, because the injured upper extremity remains in the sling position, in other words with the shoulder in internal rotation and adduction. Sometimes these injuries often go unnoticed in case a total radiographic series is not performed. A thorough neurovascular evaluation should be done in order to rule out circumflex nerve injury, although this is rare compared to anterior glenohumeral dislocation. On evaluation, limitation of external rotation usually to 0° and shoulder antepulsion usually to 90° may be seen. Flattening of the anterior area, palpable protrusion in the posterior region of the shoulder and prominence of the coracoid process may be seen(3,4).

Imaging Evaluation

Trauma series of the injured shoulder:

- Anteroposterior
- Scapular Y.
- Axillary.

An axillary Velpeau projection is sometimes indicated when the affected individual is unable to position the shoulder to perform a standard axillary projection.

On the standard anteroposterior view, features suggestive of posterior glenohumeral dislocation are:

- Sinker sign: impacted fracture of the anterior part of the humeral head upon impact against the posterior glenoid ridge.
- Sign of the empty glenoid: the glenoid cavity appears partially empty with a space between the anterior rim and the humeral head > 6 mm.
- Existence of a gap in the superior/inferior glenoid cavity.

-Absence of the normal elliptical overlap of the humeral head over the glenoid.

-Loss of the contour of the neck of the humerus.

Glenohumeral dislocation is best evaluated in the axillary projection; CT scan allows us to evaluate the percentage of the humeral head affected in an impacted fracture(3,4).

Classification

Etiological Classification.

- Atraumatic: congenital, acquired and voluntary.
- Traumatic: dislocation, recurrent dislocation, incarcerated dislocation, sprain and subluxation.

Anatomical classification.

- Subglenoid: it is infrequent, the head of the humerus is placed posterior and inferior to the glenoid cavity.
- Subacromial: it is the most common up to 98%, the articular surface goes in a posterior direction without a wide displacement of the humeral head, contrary to the anterior dislocation; the lesser tubercle characteristically occupies the glenoid cavity; it is usually related to an impacted fracture of the anterior zone of the humeral head.
- Subspinous: infrequent, the head of the humerus is placed medial to the acromion and below the spine of the scapula(3).

Treatment

Conservative Treatment.

Closed reduction requires complete muscle relaxation, sedation and analgesia. Pain in posterior glenohumeral dislocation following acute trauma is usually more intense compared to anterior dislocations, so anesthesia may be required for reduction. With the individual in the supine position, traction is exerted on the adducted arm in line with the deformity, raising the head of the humerus slightly toward the glenoid socket. External rotation of the shoulder should not be forced, because it can generate a fracture of the humeral head if it presents an impacted fracture locked on the posterior glenoid rim, if the radiographs show this type of fracture, in addition to axial traction should be applied lateral traction on the limb allowing unlocking the head of the humerus. Subsequently a sling with rotation locking should be placed if the shoulder is stable, in case of subluxation or new dislocation, a shoulder cast with a degree of external rotation can be placed to allow the greatest stability. These immobilizations should be kept for 3 to 6 weeks. While the patient is immobilized, isometric external rotation and deltoid exercises can be performed. After the immobilization is removed, an intense strengthening program of the internal and external rotators should be performed(3,4,16).

Surgical Treatment

Surgical indications include:

- Large posterior glenoid fragment.
- Trochlear fracture with significant displacement.
- Irreducible dislocation.



- Impacted fracture of the posterior part of the glenoid that does not allow reduction.
- Impacted fracture of the anteromedial part of the head of the humerus, called Hill-Sachs inverted lesion.
- Open dislocation.
- Involvement of 20% to 40% of the humeral head: modified McLaughlin technique, transposition of the trochlea with insertion of the subscapularis inside the bony defect.
- Involvement of more than 40% of the humeral head: hemiarthroplasty placing the prosthesis with a neutral degree of version.

Among the surgical alternatives we find:

- Humeral osteotomies.
- Osteotomies of the glenoid.
- Capsulorrhaphy.
- Inverted Putti-Platt technique, infraspinatus muscle/tendon plication.
- Boyd-Sisk technique, transfer of the long head of the biceps to the posterior margin of the glenoid.
- Open reduction.

Voluntary dislocations should be managed conservatively, with strengthening exercises advised(3,11,17).

Complications

-Fractures: such as fractures of the humeral diaphysis, trochleler, trochlea, posterior glenoid rim and humeral head.

-Relapse of the dislocation: generally in atraumatic posterior glenohumeral dislocations, when there is a wide anteromedial alteration of the head of the humerus as a consequence of an impaction fracture of the glenoid rim, as well as when there is a large fracture of the posterior glenoid rim. These may require surgical stabilization to avoid recurrence.

-Neurovascular injury: infrequent in the posterior dislocations in comparison with the previous ones, nevertheless an injury of the circumflex nerve can be presented in the exit of the quadrangular space or also an alteration of the infraspinatus nerve when it crosses the spinoglenoid notch.

-Anterior subluxation: usually occurs due to excessive tension on the posterior structures, displacing the head of the humerus anteriorly. It can lead to limitation of adduction, flexion and internal rotation(3).

INFERIOR GLENOHUMERAL DISLOCATION (DISLOCATION ERECT)

Infrequent disorder, however the most affected population is the elderly. Inferior dislocations of the shoulder have an incidence of approximately 1 in 200 of all dislocations. The diagnosis can usually be made from the door.

Mechanism of Injury

Usually originating from a hyperabduction force that gives an entrapment of the neck of the humerus over the acromion,

levering the head of the humerus and heading in an inferior direction. The superior portion of the articular area is directed inferiorly, without rubbing against the inferior glenoid rim. The diaphysis of the humerus is directed upward. Avulsion and rotator cuff tears, axillary artery injury, pectoralis pectoris injury, brachial plexus injury and fracture of the proximal humerus are common.

Clinical Assessment

Affected individuals usually exhibit pain and a saluting position, presenting with a locked humerus in 110° to 160° of abduction and in antepulsion. The head of the humerus is often palpated over the lateral aspect of the thorax in the axilla. A meticulous neurovascular examination is essential because it is common to find related neurovascular lesions that complicate this type of dislocation.

Image Evaluation

Traumatologic series of the injured shoulder:

- Anteroposterior
- Scapular Y.
- Axillary.

Usually the anteroposterior projection gives the diagnosis when presenting the inferior dislocation of the humeral head, with the diaphysis of the humerus directed superiorly in the course of the glenoid margin. X-rays should be carefully evaluated for associated fractures, which are common and complex to appreciate clinically because of the generalized pain in the shoulder.

Treatment.

Conservative Treatment

Reduction is usually achieved through traction-countertraction maneuvers, although it is usually painful. Axial traction is guided in the axis of the bony humerus in a superolateral direction, reducing the level of abduction of the shoulder in a stepwise manner. Countertraction is exerted by placing a sheet around the affected individual and applying force in the same direction, but in the opposite direction to the traction vector. The shoulder must be immobilized with a sling for 3 to 6 weeks, depending on the age range of the individual; older patients need less time to reduce possible shoulder stiffness(3,4,15,18-20).

Surgical Treatment

Sometimes, the dislocated humeral head creates a kind of buttonhole in the inferior capsule and nearby soft tissues, which limits closed reduction. In these cases, open reduction is indicated by increasing the capsular disruption and restoring the injured components.

Complications.

Neurovascular involvement: most patients with inferior glenohumeral dislocation show neurovascular involvement, which improves after reduction(3,20).



UPPER GLENOHUMERAL DISLOCATION

It is an infrequent injury, even more difficult to find compared to inferior glenohumeral dislocation.

Mechanism of Injury

When an extreme force is exerted in an anterior and superior direction produced directly by the limb being in adduction, as in a fall from a certain height on the upper limb, so that the head of the humerus is directed superiorly from the glenoid cavity. This type of dislocations is associated with some fractures such as those of the clavicle, trochleter, trochlea as well as the coracoid process and injuries of the acromioclavicular joint. It is also classically presented with soft tissue alterations such as biceps tendon, rotator cuff, glenohumeral capsule and musculature.

Clinical Assessment

The affected individual usually arrives with the upper limb in adduction, which is shortened. Examination reveals a palpable humeral head above the acromion. Neurovascular lesions are common and should be ruled out in any case.

Image Evaluation

Traumatologic series of the affected shoulder consisting of projections:

- Anteroposterior; allows to clarify the diagnosis by showing the dislocation of the humeral head above the acromion.
- Scapular in Y.
- Axillary.

Radiographs should be evaluated meticulously to rule out associated fractures, which are common and may not be detected in the exploration because of the generalized pain in the shoulder.

Treatment

Closed reduction should be attempted with analgesics and sedatives to allow for better reduction; axial traction in the inferior direction with countertraction can be generated along with a lateral traction component. As with inferior dislocations, soft tissue injuries and associated fractures are common; an irreducible dislocation may require open reduction.

Complications

Neurovascular complications, due to traction injuries, usually occur and subsequently return to normal after reduction(3).

CONCLUSIONS

The shoulder joint is frequently associated with dislocations, representing a large percentage of all dislocations, with anterior shoulder dislocations being the most common. Anatomical, clinical and imaging knowledge play an important role in the diagnosis, allowing a better classification of the type of dislocation, which has a better impact on the treatment. The immobilization and physiotherapeutic approach will vary depending on the pathology, the patient's age, the existence of recurrence and other complications.

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PREDICTING CYBER CRIME ISSUES IN DIGITAL ENVIRONMENT – AN ANALYTICAL STUDY

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ABSTRACT

Cybercrime issues are an emerging severe hazard in digital world. Cybercrime is one of the crime involving through internet by harm someone's security or finances. Usage of internet has become a daily routine for majority of people for day-to-day transactions. The number of internet users has grown tremendously and so does cyber-crimes. Worldwide governments, police departments and intelligence units have started to react. Initiatives to curtail cyber threats are taking shape. Indian police has initiated special cyber cells across the country and have started educating the personnel. The digital environment is continually evolving, presenting numerous challenges and vulnerabilities that cybercriminals exploit for their illicit activities. Predicting cybercrime issues in this dynamic landscape is essential for proactive prevention and mitigation efforts. The research focuses on the main issues in cybercrime activities. This paper attempts to analyze the awareness of cyber-crime issues among internet users with different age groups, educational qualifications and also the problems faced by them.

KEYWORDS: Cybercrime issues, Hacking, Stalking, Regression

INTRODUCTION

The internet in India is growing rapidly. Usage of internet has become a daily routine for majority of people for day-to-day transactions. The number of internet users has grown tremendously and so does cyber-crimes. The Digital India initiative is driving our country towards a digitized life where the existence will highly depend on elements like cloud computing, 5G in telecom, e-Commerce etc. Cyber-crime is the crime that is done using computer and network. The threat of cyber-crime is an ever present and increasing reality in both the private and professional sectors. Cybercrime is an important issue for research as it affects many mainstream sectors such as defense, social media, government, industry, private, military and scientific sectors etc. Internet criminals use distorted or hacked data to capture their actions. Several laws and methods have been introduced in order to prevent cybercrime and the penalties are laid down to the criminals. Illegal formations and various intelligent methods in illegal business use the latest technologies to the full extent for the following issues.

- (a) Money laundering,
- (b) Distributing of false information,
- (c) Unauthorized access to information systems and other violations like,

Online identity theft, Financial fraud, Stalking, Bullying, Hacking, Email spoofing, Information piracy and forgery and intellectual property crime.

Categories of Cyber Crimes

The major categories of cyber-crimes can be broadly classified under the following four groups on the basis of their target and impacts:

1. Crimes against Individuals

This type of crime is done to harm particular individuals. These includes hacking , cracking, harassment via emails, cyber-stalking, cyber bullying, defamation, dissemination of obscene material, email spoofing, SMS spoofing, carding, cheating and fraud, child pornography, assault by threat, denial of service attack, forgery, and phishing.

2. Crimes against Property:

There are cybercrimes done to harm the property of an Individual. They can be classified as Intellectual property crimes, cyber-squatting, cyber vandalism, hacking computer system, computer vandalism, computer forgery, transmitting viruses and malicious software to damage information, Trojan horses, cyber trespass, Internet time thefts, robbery o stealing money while money transfers ,etc.

3. Crimes against Government /Firm /Company /Group of individuals:

These types of crimes include cyber terrorism, possession of unauthorized information, distribution of pirated software, web jacking, salami attacks, logic bombs, etc. The criminal in these wants to terrorize the citizens of the country.

4. Crimes against Society:

All the above mentioned crimes have their direct or indirect influence on the society at large. Therefore, all such crimes are included in this such as pornography, online gambling, forgery, sale of illegal articles, phishing, cyber terrorism, etc.

LITERATURE REVIEW

To examine the relationship between various age groups of the respondents and the awareness of cyber-crime and security and



to find out the internet usage of the respondents Anupreet Kaur Mokha has undertaken a study on “Awareness of Cyber Crime and Security”. A structured questionnaire was administered for the purpose of this research on 160 respondents. Linear Regression technique was performed using SPSS Software version 23 to analyse the data. The findings of the study reveal that the people are not aware of all such types. Majority of the people know only about hacking and virus/worms. They are not aware of phishing, defamation, identity theft, cyber stalking etc. Few suggestions have been given that people should be aware of the basic cyber securities such as Install a security suites such as Avast Internet Security, Kaspersky antivirus, McAfee antivirus, Norton Antivirus, etc. to protect the computer against threats such as viruses and worms, Activate Network Threat Protection, Firewall, and Antivirus and Always use strong passwords preferably alphanumeric etc.

The study titled “Cyber Crime Awareness Among Higher Education Students From Haryana with Respect To Various Demographical Variables” was done by Dr. Menka Choudhary focused with the objectives to know the awareness of the respondents. At the end, we can conclude that there is Average Cyber Crime Awareness among the college students from Haryana state. The result revealed that cyber-crime awareness is affected by stream, means professional students show more awareness as compare to their counterparts. It also showed that cyber-crime awareness is same in boys and girls.

Cyber-attacks such as distributed denial of service attacks by sending malicious packets (Kaur Chahal, Bhandari & Behal 2019), phishing attacks to banking and shopping sites that deceive the user (Sahingoz et al., 2019) have increased significantly. In addition, attackers have been using malicious attack software (virus, worms, trojans, spyware and ransomware) that is installed into the user’s computer without any consent of the user (Biju, Gopal & Prakash, 2019) increasingly. Again, the most common of these attacks and one of the attacks that are most difficult to be prevented is the social engineering attacks. They are based on technical skill, cunning and persuasion, made by taking advantage of the weakness of the victim.

PROPOSED WORK

The objective of this research is to predict and examine various crime issues in digital environment. To predict and analyse the issues various intelligent methods from statistical techniques is utilized. The analysis is done using SPSS statistical tools.

The following are the few objectives of the study

- To understand the socio economic profile of the respondents
- To analyze the awareness of cybercrime among the respondents
- To explore the issues faced by respondents in digital environment
- To predict and provide the analysis to the respondents

METHODOLOGY

This research study aims to identify the Evaluation on Cyber Crime issues in Digital Environment. To achieve the accurate

result, the data are to be collected on two basis such as Primary and secondary data.

Here, the primary data is collected with the help of a structured questionnaire on the basis of survey method. The questionnaire contains questions relating to the awareness and satisfaction Issues faced in digital environment.

Secondly, the secondary data will be gathered with the help of various public documents such as journals, magazines, newspapers, periodicals and websites which relates to the Cyber Crime issues in Digital Environment.

Primary data was collected from 236 respondents. Data collected was edited and coded by using SPSS version 16.0. This helps in converting the gathered data into a tabulated grouped data. The following relevant tools and techniques are applied. Since the Simple random sampling has been adopted, the questionnaires have been collected from different respondents of Coimbatore city. The responses collected were analysed using the SPSS.

PERCENTAGE ANALYSIS

Percentage analysis is applied to find out the distribution of frequencies between variables in this study. It is applied to find out

- Socio-economic profile of the respondents.
- Information on awareness and satisfaction.

ANOVA

Analysis of variance is a statistical model where the significant difference can be tested between means. Here, the distribution will be analysed based on the group of variables. ANOVA will split the data into two parts; they are systematic factors and random factors. This test has analysed to determine the results that independent variables have on the dependent variables.

In this study the following groups were compared to find out the degree of satisfaction of the respondents on various cybercrime activities: Gender, Age, Marital Status, Educational Qualification, Residential Status, Occupational Status, Earnings Of The Family and Monthly Income.

MEAN RANKING

Mean ranking is one of the non- parametric tests which is used to identify the differences between ten set of values in the problems of packaged milk brands which statistically significant in this study. The ordinal numbers of a value will be arranged in a specified order in a decreasing manner.

LIMITATIONS OF THE STUDY

- The study was confined to 236 respondents only.
- The study has been restricted to Coimbatore city only.

The present study is based on both primary and secondary data. The primary data will be collected through questionnaires.



- Step 1: The Dataset is collected
- Step 2: Preprocessing is applied to the dataset. (collected using questionnaire)
- Step 3: Statistical Techniques (Percentage Analysis, ANOVA and Mean Ranking) is applied to predict and analyze the data.
- Step 4: Based on the result analysis is done.

METHODS OF DATA COLLECTION

Primary Data was collected from 236 respondents through questionnaire to analysis whether the people really are aware that they are vulnerable to various cyber-crimes or not.

Secondary Data: Substantial data was collected from various books, published nationals and international journals, various websites, etc.

RESEARCH TOOLS

For the findings of the study, various statistical methods are applied to predict the dataset and the tools SPSS is applied for analyzing the dataset.

HYPOTHESES

On the basis of mentioned objectives, the present study aims at test the following hypothesis (null hypothesis):

H01: There is a relationship exists between the Educational level of the respondents and the awareness about cyber-crimes issues.

H02: There is a relationship exists between the various age groups of the respondent and their awareness of cyber-crimes issues.

ANALYSIS AND INTERPRETATION

For this purpose, a field survey method was employed to collect the first hand information from the respondents are chosen randomly from four different area of Coimbatore city based on the socio-economic profile consists of gender, age, educational qualification, marital status, occupational status, residential status, earning members and monthly income of the respondents. A study was conducted on 236 respondents to identify whether they are aware of cyber-crimes issues or not. Findings of the study are as follows:

a) H01: There is a relationship exists between the Educational level of the respondent and the awareness of cyber-crime issues among them.

Predictors: Always Constant value, Familiarity with the term "Cyber Crime issues" and Awareness about Cybercrime issues.

In ANOVA Dependent Variable: Educational level of the respondent and Predictors: Familiarities with the term "Cyber Crime issues" and Awareness about Cybercrime issues. In Coefficients Dependent Variable - Educational level is the respondent

To test the hypothesis, is a significant and positive relation exists between Educational level of the respondent and the awareness of cyber-crimes issues among them, Linear Regression Model is used.

b) H02: There is a relationship exists between the various age groups of the respondent and the awareness of cyber-crimes issues among them.

Predictors: Always Constant value, Familiarity with the term "Cyber Crime issues" and Awareness of cyber-crimes issues

In ANOVA Dependent Variable: Age groups of the respondent. Predictors-Constant value, Familiarity with the term "Cyber Crime issues" and Awareness about Cybercrime issues. In Coefficients a. Dependent Variable: Age groups of the respondent. Showing the various kinds of Cyber Crimes issues in day-to-day lives

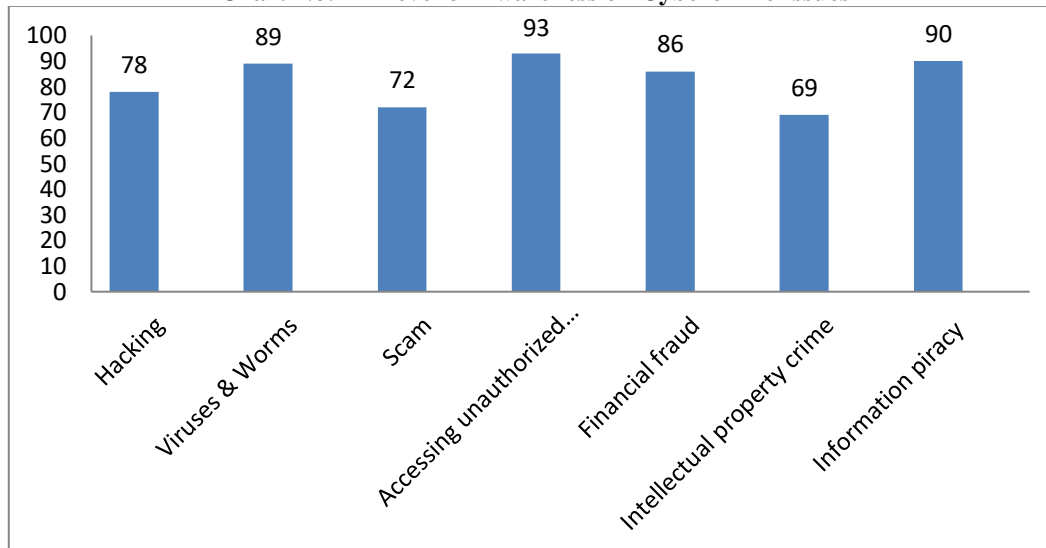
To test the hypothesis, is a significant and positive relation exists between Educational level of the respondent and the awareness of cyber-crimes issues among them, Linear Regression Model has been used on the two factors i.e. Familiarity with the term "Cyber Crime issues" and Awareness about Cyber Cell. In the hypothesis (H02) is partially accepted for this factor and rejected for Awareness about Cyber Cell.

LEVEL OF AWARENESS ON CYBERCRIME ISSUES

The chart 1 describes the awareness level of respondents on Cybercrime Issues.



Chart No: 1 - Level of Awareness on Cybercrime Issues



Source: Primary data

CONCLUSION

In conclusion, cybercrime issues in the digital environment represent an ever-evolving and multifaceted challenge that affects individuals, organizations, and society at large. The digital landscape provides a breeding ground for various forms of cybercriminal activities, ranging from ransomware attacks and phishing schemes to data breaches and cyber espionage. These issues not only result in financial losses but also threaten data privacy, national security, and the integrity of digital ecosystems.

Addressing cybercrime issues requires a collaborative and proactive approach. Strengthening cyber security measures, enhancing public awareness, and promoting responsible digital behaviour are essential components of mitigating cyber threats. Furthermore, the development and implementation of robust legal and regulatory frameworks, both at national and international levels, are critical to prosecuting cybercriminals and deterring malicious activities.

As technology continues to advance, so too will the tactics employed by cybercriminals. Therefore, on-going research, innovation, and information sharing are vital to staying ahead of emerging threats and vulnerabilities. Ultimately, the battle against cybercrime is an on-going endeavour that demands vigilance, adaptability, and a commitment to securing the digital environment for the benefit of all. The study shows that 45% of the respondents share their personal details with other persons even they don't know them closely 55% of respondents have agreed that their PCs are often damaged by viruses. The internet users must have the awareness about the cybercrime issues and how to handle them. Some of the basic things to be followed to avoid cyber securities issues are as follows,

- Anti-Virus scanning software should be used
- Initiate Firewalls
- Users should use strong passwords preferably alphanumeric.
- Should be more careful while download files or open attachments in emails from unknown senders.

- Beware of links in emails that ask for personal information or popups.

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A STUDY ON UNIVERSITY STUDENTS PERCEPTION AND PREFERENCE TOWARDS MOBILE WALLETS, WITH REFERENCE TO PALGHAR DISTRICT

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ABSTRACT

The major element of the globalized world is technology and development. Considering how tech-savvy the younger generation is, electronic devices have become ubiquitous. Young people use smartphones for everything from personal use to work. The mobile wallet market in India has benefited from the rapid usage of smartphones and mobile internet. Younger generations utilize mobile wallets to make the majority of their payments when connecting with others and conducting business online. M-wallets offer a variety of cybernetic services, from utility to e-commerce activities.

The goal of this study is to examine young university students' opinions, preferences, and satisfaction with M-wallet (mobile wallet) in the fast-paced technology era in Palghar district. 52 responses from respondents were compiled and examined using a structured questionnaire procedure. The study's findings will strategically assist manufacturers of smart phones, M-wallet service providers, regulatory agencies, and other financial institutions in reaching out to potential customers.

INTRODUCTION

Reduced cost of smartphones and data has accelerated the usage rate of the same, and according to January 2021 data, there are 624.0 million internet users in India, with the number of active Internet users expected to reach 900 million by 2025 from roughly 622 million in 2020. Technology and developments are the dominant aspects of a globalized India.

Users utilize their mobile phones for a variety of services, such as entertainment, social interaction, internet access, and quick and simple payments. A mobile wallet application (with a linked bank account) must be installed in a smartphone in order to access the payment services. Mobile wallet, also known as a digital wallet or e-wallet, is an application that you may install on your phone that enables you to pay at POS terminals by tapping them or scanning QR codes via Near Field Communication technology. (Digital wallets, which electronically store credit card, debit card, and loyalty card data and essentially maintain your personal information to facilitate transactions, EWallets are prepaid wallets that can be accessed on any device and require money to be loaded before any transaction.

In accordance with the "Master Circular Policy Guidelines on Issuance and Operation of Prepaid

M-wallets are one of the prepaid payment instruments, and according to the "openness" of m-wallets, we may categorize them into three categories. Payment Instruments in India," published on the RBI website

1. Closed wallets - A closed wallet can only be used to purchase products and services from the one business that provided the wallet application. Although you cannot withdraw the money, the value you have added will remain. Ex. Amazon Pay.
2. Semi-closed wallets: A semi-closed wallet is designed to be used to purchase desired services and commodities from the business that created the wallet application and added registered merchants to it. Although you cannot withdraw the money, the value you have added will remain. Ex: Paytm wallet.
3. Open wallet - An open wallet is designed to be used for purchasing desired services and commodities from any vendor and is capable of carrying out financial operations such as cash withdrawals from ATMs.

M-Pesa is an example.

According to research, because the younger generation is computer aware, smart phones have become a mainstay in their lives. Young people use smartphones for everything from personal use to work.

The mobile wallet market in India has benefited from the rapid usage of smartphones and mobile internet. Younger generations utilize mobile wallets to make the majority of their payments when connecting with others and conducting business online. M-wallets offer a variety of cybernetic services, from utility to e-commerce activities.



The goal of this study is to investigate young university students' opinions, preferences, and satisfaction with M-wallet (mobile wallet) in the rapidly evolving technology era in Palghar district.

OBJECTIVES

1. To research university students' M-wallet preferences in a Palghar district
2. To investigate the elements affecting Mwallet adoption and satisfaction.
3. To assess the potential of mobile wallets.

SCOPE

The findings of this study will aid in our understanding of m-wallet usage, influencing variables on usage, and user satisfaction levels, as well as their potential for growth. Therefore, the framework for increasing the acceptance and satisfaction level of M-wallets can be designed by mobile wallet service providers, smartphone manufacturers, and policy makers.

REVIEW OF LITERATURE

MANIKANDAN and JAYAKODI's (2017) study aims to analyze the pattern of M-wallet usage and the factors that influence consumers' decisions to adopt various M-wallets. They found that users are generally satisfied, that factors like convenience and brand loyalty are more important in driving the adoption of various M-wallets, and that security and the safety of funds are also important in driving consumer adoption of M-wallets.

According to RANA (2017), this study aims to investigate the preferences, influencing factors, and effects of various demographic parameters on the decision of Lucknow city's university students not to use M-wallets. It was discovered that there is a substantial association between age and usage, but not between genders, the type of students' stays, the courses they are taking, or the transaction value.

In 2019, SUJITH et al. examined how young people in the city of Thrissur felt about mobile wallets in terms of awareness, preference, and perception. The study finds that the majority of respondents are aware of m-wallets, and that the services are satisfactory because they allow for instant payments. However, network issues and security concerns are the two main problems users encounter. It was also discovered that promotion programs like reward points and discount offers can boost the popularity and uptake of m-wallets.

This empirical study by MALLAT and TUUNAINEN (2008) uses a qualitative and quantitative technique to explore the

preconditions, drivers, and challenges to the adoption of the M-wallet payment system among Finnish merchants. The study's findings indicate that adoption of mobile payment systems has "Adoption and Intention" as significant prerequisites, "Benefits, Applicability, and Cost" as drivers, and "Incompatibility, Complexity, and Trust and Security Issues" as hurdles. Also suggest that a more evenly distributed weighting of the three will enhance merchant adoption of mobile payment systems.

In SINGH et al. (2015), the relationship between consumers' perception, preference, and satisfaction regarding the use of M-wallets is examined. Less studied factors like social norms and hedonism are also taken into account, and the UTAUT model is used to assess the impact of age and gender on consumers' perception, preference, and satisfaction. According to the study, there is a connection between consumer impression and satisfaction. Additionally, it was discovered that age was the most significant factor and that there was a significant correlation between age, perception, and pleasure. The use of M-wallets was significantly influenced by gender.

According to YADAV (2016), the study's goal was to investigate the variables that affected M-wallet users' attitudes and behavioral intents when using Mwallets in the manner of adopting information technology services. The study found that consumers are using mobile wallets as an alternative payment method, and that factors such as perceived value, performance expectancy, perceived trust, social influence, facilitating conditions, regulatory support, and promotional benefits had a positive impact on adoption intention and use, but that perceived risk had a negative impact on intention and was insignificant in terms of effort expectancy.

RESEARCH METHODOLOGY

Students enrolled in various undergraduate and graduate programs in Palghar district make up the respondents to this survey. The information was gathered from 52 respondents utilizing a structured questionnaire and a purposeful sample technique from individuals who use mobile wallets.

HYPOTHESIS

1. Ho - There is no substantial and positive correlation between respondents' age, gender, and study program and their use of mobile wallets.
2. H1 - There is a strong and favorable correlation between the respondent's age, gender, and program and their use of mobile wallets.



ANALYSIS AND INTERPRETATION

TABLE 1: Demographic Profile of Students

	Category	Total Count	Percentage
Age	18-21	26	50
	22-24	21	40.38
	24-above	5	9.62
Gender	Male	32	61.54
	Female	20	38.46
Program	UG	26	50
	PG	26	50

Primary Data

The majority of respondents, 50%, are between the ages of 18 and 21, with men making up 61.54% of the total while women make up the remaining respondents.

TABLE 2: A preference towards using M-wallets

GOODS AND SERVICES	NO. OF RESPONDENTS	PERCENTAGE
TRANSFER OF MONEY	10	19.23
ONLINE PURCHASE	12	23.08
REFRESHMENT	10	19.23
BOOKS/STATIONARY	8	15.38
RECHARGE	5	9.62
ONLINE BOOKING	7	13.46
TOTAL	52	100

Primary Data

The majority of respondents, 23.08%, use M-wallet for online purchases, followed by 19.23% for money transfers and recharges

and 9.62% for recharges. 94.23% of all respondents use their mobile wallets for several purposes.

TABLE 3: Factors influencing adoption of M Wallet

Adoption determinants	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Distrust	19	18	4	6	5	52
Technical issues	31	15	3	1	2	52
High cost	37	8	0	4	3	52
Security	2	5	2	25	18	52
Social Influence	9	3	1	15	24	52
Offer and Rewards	13	9	2	13	15	52
Easy to use	2	3	0	14	33	52

Primary Data

TABLE 4: Satisfaction towards usage of M Wallets

Determinants	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Satisfaction	2	3	0	14	33	52

Primary Data

Regarding the satisfaction survey, 63.46% of respondents said they were happy with the Mwallets service for their various needs.



HYPOTHESIS TESTING

The Chi-square test with "Age, Gender, and Programme of the study" is the main statistical framework in the data analysis. Age was the first factor to be determined by the data analysis, followed by gender (0.73), and academic program (0.61). The overall validity of the hypothesis comes out to be 0.83.

As a result, the null hypothesis is accepted, and we may draw the conclusion that there is no correlation between respondent age, gender, and the study's program and the use of mobile wallets.

RESULTS AND RECOMMENDATIONS

1. The majority of respondents (23.08%) use M-wallet for online purchases, followed by (19.23%) transfers of funds and refueling, while the least amount of respondents (9.62%) use it for recharging.
2. The majority of respondents (94.23%) use m-wallets for several purposes.
3. The majority of respondents concurred that they use M-wallets because they are user-friendly and have social influence.
4. The majority of respondents believe that m-wallet payments are safe.
5. The majority of respondents (61.54%) claimed that mobile wallets are an alternative to existing payment methods, while 23.08% said that mobile wallets can support traditional payment methods and none said that mobile wallets are not necessary.
6. The majority of respondents to the satisfaction study are happy with Mwallets while utilizing them for their varied needs.
7. Finally, it was discovered that there was no connection between respondent age, gender, or study program and their use of mobile wallets.

LIMITATIONS OF THE RESEARCH

The study may be affected by the standard sampling restrictions because it was based on primary data that was acquired using purposive sampling. Results of this study are not generalizable due to the small sample size and the fact that it was restricted to the Plaghar district. Larger sample sizes allow for more thorough, comparative research on the various cashless payment options.

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IMPACT OF POLICE CYNICISM ON CRIME REPORTING: INSIGHTS FROM ANGELES CITY, PHILIPPINES

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ABSTRACT

This research delves into the intricate relationship between police cynicism and crime reporting behavior in Angeles City, Philippines. It takes a comprehensive approach, aiming to identify both the factors that encourage and discourage crime reporting while examining the influence of police cynicism. The research utilizes a mixed-methods design, encompassing a descriptive survey and correlation research. The survey includes questions regarding individuals' attitudes towards the police, their willingness to report crimes, and their perceptions of the police's effectiveness in combating crime. The correlation research specifically delves into the connection between police cynicism and crime-reporting behavior, hypothesizing that higher levels of police cynicism correlate with lower levels of crime reporting and vice versa. The findings of this study carry significant implications for improving crime reporting behavior, ultimately contributing to enhanced safety in Angeles City. The research underscores the existence of generally positive attitudes toward crime reporting, driven by an awareness of the seriousness of offenses, a sense of empowerment, and a shared responsibility for community well-being. This positive disposition emphasizes the need for law enforcement agencies and policymakers to consider community engagement strategies and initiatives that encourage reporting. The research also reveals that discouraging factors do exist, particularly concerning non-traditional crimes, where fears and distrust in the justice system play a significant role. While there is a prevailing trust in the local police's effectiveness, the weak correlation between positive police perceptions and actual reporting behavior highlights the need for a holistic approach in policy development. Furthermore, the positive correlation between discouragement and encouragement factors in reporting suggests potential policy implications, calling for in-depth research to further comprehend the intricate dynamics influencing reporting behavior. The findings collectively emphasize the multifaceted nature of public perceptions and reporting motivations, underlining the interconnectedness of these elements. Policymakers are encouraged to adopt comprehensive approaches that foster community trust and enhance reporting behavior, while researchers are urged to delve deeper into these nuanced relationships to inform evidence-based policies for public safety and more effective law enforcement in Angeles City.

KEYWORDS: *crime reporting, crime reporting behavior, police cynicism, encouraging and discouraging factors of crime reporting*

I. INTRODUCTION

Reporting crimes worldwide has seen an upward trend in recent years, playing a pivotal role in crime more likely when the victims perceive the crime as severe or a public concern. Awareness of available legal remedies and support services can also encourage reporting [1]. Conversely, several factors can discourage crime victims from reporting, as highlighted by [2]. These include fear of retaliation or further violence, distrust in the justice system, and the belief that their complaints won't be treated seriously. Victims may also experience shame or embarrassment, which may deter reporting if they expect blame or criticism from others.

The decision to report a crime is complex and influenced by a multitude of factors. Victims of criminal activities should be informed about available support resources and encouraged to

report incidents. This study aimed to investigate the factors that encouraged or discouraged individuals from reporting offenses to the Angeles City Pampanga police service precinct. The research focused on understanding people's motivations when deciding to report a crime, especially in times of rising crime rate reduction and policy formulation. Several factors impact the decision to report a crime, including victims' perceptions of the criminal justice system, concerns for personal safety, and the availability of resources [2].

[2] have identified various motivators for crime victims to report incidents, such as access to support services, empowerment to speak out, and trust in the criminal justice system. Through surveys and the analysis of community attitudes and behaviors, this research shed light on the influences behind reporting decisions. Additionally, it provided insights into how local



communities can collaborate more effectively with their police services to report and prevent crime.

Considerable discussion about crime reporting in the United States has involved the media, academia, and politics. Varying levels of precision in crime reporting have raised concerns about the reliability and adequacy of the nation's crime statistics. All levels of government need to address this issue. For instance, the FBI's Uniform Crime Reports (UCRs) were urged to improve accuracy as there was no consistent nationwide reporting standard [3]. Furthermore, some data indicated that crime was often not reported accurately in many areas [4]. This was likely due to various factors, including the fear of retaliation, the cost and difficulty of reporting crimes, and public perceptions of crime [4].

The lack of reliable crime statistics had significant consequences. As stated by Ruback et al. 2018 [3], it hindered law enforcement's ability to allocate resources effectively and resulted in inaccurate crime portrayals in the media. Furthermore, it complicated the task of accurately gauging crime levels in different areas and understanding the root causes of crime [4].

To address this issue, it was crucial for all levels of government to collect dependable data and rectify the problem of inaccurate crime reporting. This could be achieved by establishing consistent nationwide reporting standards and adopting more efficient data collection methods [3]. Additionally, there was a need for better public education and awareness about the importance of reporting crimes accurately [4].

Statistics indicated that a significant portion of crimes in the UK went unreported to authorities, which was becoming an increasing concern. According to the British Crime Survey (BCS) from March 2019, only 41% of violent crimes, 57% of domestic abuse incidents, and 70% of sexual offenses were reported to the police. Notably, 70% of sexual offenses were reported.

The fear of punishment deterred people from reporting crimes, especially victims of domestic violence who worried about further abuse or retaliation. A lack of trust in the police and doubts about their seriousness also discouraged reporting. Underreporting of crime had serious consequences for victims and their communities, distorting crime rates and resource allocation. To address this, law enforcement and agencies must build trust, provide support, and keep victims informed about their cases, which is vital for the criminal justice system (Sullivan [5]; Ratcliffe [6]; Flatley [7]; Negrine & Stanyer [8]).

Harrendorf et al. 2010 argued that European crime reporting often provided inaccurate and sensationalized information due to inconsistent data collection and media exaggeration. This discrepancy among European nations in recording crimes could mislead the public about the true crime levels. To address this issue, it was crucial for governments, media, and stakeholders to ensure that crime reporting was factual and unbiased. This could be achieved through transparent data sources and reliable

information, such as government statistics. Additionally, the media should avoid sensationalizing crime reports and prioritize fair and truthful coverage to foster a better understanding of the actual state of crime in Europe.

High levels of lawlessness and insecurity in Asia hindered individual well-being and the region's progress. Prioritizing crime control was crucial for any administration. To address this, the criminal justice system needed to be aware of crimes. Undetected crime had various negative consequences for victims and society [10]. Worldwide, there was growing interest in reporting crime rates, as unreported crimes could also harm victims and society significantly. It was essential for victims or witnesses to contact the police to report victimization incidents. Without reporting specific crimes, many offenders could not be found and punished, as a significant number of criminal acts went unreported [9]. Bourne 2016 [11] found that in many industrialized countries, only half of all crimes were reported to authorities, and this might be worse in less developed countries like the Philippines, with less effective criminal justice systems. In the United States, Loftin, 2017 [4] noted that crimes with the highest percentages of going unreported included domestic larceny (67%) and rape and sexual assault (65%).

China's authoritarian government and the lack of transparency in its media and law enforcement had hindered accurate reporting of crimes. A United Nations Office on Drugs and Crime (UNODC) report stated that there were 8,000 to 10,000 homicides in China annually, making it the second highest globally. However, the actual number of killings was likely much higher because the Chinese government either didn't record many cases or categorized them incorrectly [12].

The Chinese government tightly controlled the media, especially concerning politically sensitive issues like human rights, journalism, and religious minorities. This lack of media freedom led to a lack of accurate reporting on criminal activity. Additionally, the Chinese criminal justice system lacked transparency, making it hard to access information about criminal cases and trial outcomes. Zhang et al. 2017 [13] also argued for increased independent oversight of law enforcement to hold the police accountable for their actions. Consequently, there was a need to inform the public about the extent of the crime problem in the nation. China's government, media, and criminal justice system lacked transparency, making it challenging to report crimes. While there had been some progress in recent years, significant efforts were still required to ensure the public could access accurate and current information about criminal activity nationwide.

In the Philippines, a high prevalence of corruption and a lack of trust in law enforcement made it challenging to accurately report crimes. A 2018 survey by the Philippine Statistics Authority revealed that a staggering 87.6 percent of respondents did not report any crimes to the police, with only 6.8 percent doing so.



This low reporting rate could be attributed to a lack of faith in the police due to widespread instances of abuse and corruption [14].

The government's response to crime reports had been inadequate. The Philippine Institute for Development Studies (PIDS) found that the police force struggled to respond promptly to complaints due to resource and workforce shortages [15]. Additionally, the investigation and prosecution processes were lengthy and inefficient, leading to a lack of accountability and justice for victims—a critical issue as these systems were meant to protect victims. To address the problem of underreporting crimes, the Philippine government needed to overhaul its approach to law enforcement. This should involve enhancing the training of law enforcement personnel and increasing investment in the physical infrastructure of law enforcement agencies. Additionally, measures should be taken to combat corruption and boost public confidence in the judicial system.

Past researchers, including Lancaster in 2013 and the National Home Security Month in 2016, expressed concern about unreported crimes in the Philippines, even though we don't have exact numbers. Goudriaan in 2006 highlighted that governments emphasize improving crime reporting because accurate statistics are essential for effective crime control strategies.

This study aimed to answer two questions: (1) What obstacles stopped people from reporting crimes in the greater Los Angeles area? and (2) What factors encouraged people to report crimes in the City of Angeles region? It provided both absolute and relative reasons for why residents chose to report crimes to the authorities. To enhance the relationship between police departments and the community, it was crucial for these departments to understand why citizens didn't report crimes in the first place. Moreover, this research contributed to the limited literature on what motivated citizens to report crimes to the authorities.

II. METHODS AND PROCEDURE

A. Research Method

The study uses descriptive survey research to address an array of research inquiries, prominently centered on the multifaceted realm of Impact of Police Cynicism on Crime Reporting: Insights from Angeles City, Philippines. This methodological approach facilitated data acquisition from a representative sample of respondents, affording researchers the opportunity to scrutinize these data for discernible patterns and insights.

Descriptive survey research served as a valuable lens through which researchers could investigate the intricate interplay of factors such as community trust, fear of retribution, and resource availability, all of which exerted their influence on law enforcement officers' conduct when it came to reporting crimes. Notably, the employment of surveys allowed for a systematic exploration of these factors by quantifying their significance. For instance, respondents were asked to evaluate and rate factors, including fear of retaliation, trust in the police, and resource

availability, on a scale from 1 to 10, thereby providing a quantitative understanding of their importance.

Moreover, the utility of descriptive survey research extended to the realm of exploring the subjective experiences of individuals who had engaged in crime reporting. By eliciting responses related to perceptions of police cynicism, motivations for reporting crimes, and factors discouraging reporting, researchers were able to unearth a nuanced understanding of the dynamics between individuals and the criminal justice system. This approach helped reveal how these experiences shaped the attitudes and behaviors of individuals concerning crime reporting.

Furthermore, the research undertook the ambitious task of investigating the broader societal and cultural contexts that influenced crime reporting and the prevalence of police skepticism. This was accomplished by evaluating societal norms, resource availability, and other sociocultural determinants that affected reporting behavior.

Descriptive survey research incorporated descriptive correlation as a statistical methodology to quantitatively measure the relationships between various factors. This statistical approach aided in unraveling the complex connections between elements that either encouraged or discouraged crime reporting and the level of cynicism exhibited by the police. For instance, it permitted researchers to investigate the relationship between police behavior and public cynicism, leveraging data sourced from police departments and public surveys.

B. Population and Sampling Scheme

The study was conducted within the bounds of Angeles City, Pampanga, which boasted a population of 411,634 residents according to the 2015 Census conducted by the Philippine Statistics Authority in 2020. To ensure the robustness of the study's findings, the researchers used a statistical software package known as G-Power. This software, renowned for its analytical prowess, was instrumental in the calculation of the requisite sample sizes, particularly in the context of the Pearson product-moment correlation coefficient tests.

In a research context, statistical power is the bedrock of the researcher's ability to detect meaningful relationships between variables. In the case of Pearson product-moment correlation coefficient tests, it was imperative to ascertain the sample size required to confidently discern whether this coefficient significantly deviated from zero. The required statistical power was a fundamental consideration in this endeavor. Furthermore, the software also facilitated the determination of the necessary sample size for effect size testing in scenarios where a correlation was already established. The result of this computational analysis revealed that a sample size of 84 was deemed sufficient to detect a medium effect size (typically considered as 0.3) in a Pearson moment correlation. Importantly, this sample size exceeded the benchmark of 81, further reinforcing the study's capacity to detect statistically significant correlations at a significance level of 0.05.



The sampling strategy adopted for the study was the Cluster Sampling Method. This strategy was meticulously designed to ensure the representation of the intended demographic of the study. Specifically, the researchers targeted individuals aged between 18 and 60, encompassing both genders, who had experienced unreported crime and were residents of Angeles City, Pampanga. Cluster sampling, a well-established method in the research arsenal, facilitated the division of the city's population into geographically defined clusters or groups. These clusters were then subjected to random selection, ultimately forming part of the study's sample. This strategic approach ensured an accurate representation of the population and provided a precise understanding of the factors that influenced crime reporting within Angeles City.

C. Inclusion and Exclusion Criteria

The inclusion criteria of the study, which probed "Impact of Police Cynicism on Crime Reporting: Insights from Angeles City, Philippines", cast a wide net to encompass a diverse spectrum of individuals and groups. The comprehensive list encompassed all residents of Angeles City, irrespective of their citizenship status—be they citizens or foreign nationals residing within the city. Victims of various categories of crimes, spanning theft, assault, vandalism, and others occurring within Angeles City during a specified time frame, were regarded as pertinent subjects of study. Moreover, individuals who had witnessed crimes in Angeles City were deemed significant contributors. The inclusion criteria extended to include police personnel, spanning police officers, law enforcement officials, and other personnel within the purview of Angeles City's police department. Also, emergency service personnel, ranging from emergency medical services personnel to operators of emergency hotlines such as 911 within Angeles City, were considered as relevant stakeholders in the research. Lastly, community leaders, activists, and advocates who actively engaged in activities aimed at promoting crime reporting or related initiatives within Angeles City were pivotal in shaping the research's comprehensive perspective.

In contrast, the exclusion criteria for the study established a set of parameters to maintain the research's focus and relevance. Specifically, individuals who were not residents of Angeles City were categorically excluded from the study, given that the primary focus was centered on city residents. Cases concerning crimes perpetrated by non-residents in Angeles City were excluded, except in cases where the involvement of city residents was direct and substantial. Incidents that did not constitute criminal activities, such as accidents or non-criminal disputes, were clearly delineated as beyond the scope of this research. Cases characterized by incomplete or insufficient data related to the crime, the reporting process, or the individuals involved were deemed unsuitable for inclusion to preserve the integrity of the data. Furthermore, individuals who declined participation in the study or failed to provide informed consent were excluded. Incarcerated individuals within correctional facilities during the study period were set apart due to the significant divergence in their circumstances compared to the broader population. The

presence of language barriers impeding effective communication represented another exclusion criterion. Non-resident police officers or emergency service personnel, although working within the administrative purview of Angeles City, but not residing there, were considered non-essential to the research. Lastly, community leaders, activists, or advocates residing outside Angeles City, and those who did not exert a direct influence on crime reporting within the city, were excluded from the research. These meticulous exclusion criteria worked synergistically to ensure that the research remained sharply focused on cases and individuals tightly aligned with its research objectives.

D. Ethical Considerations

The ethical considerations underpinning the research on "Impact of Police Cynicism on Crime Reporting: Insights from Angeles City, Philippines" were of paramount significance and were handled with unwavering diligence. Recognizing the utmost importance of safeguarding participant well-being, the researchers meticulously orchestrated a framework that prioritized participant security, confidentiality, and fundamental rights. A set of concrete ethical principles underpinned every facet of the research.

To initiate the research process, the researchers secured informed consent from the participants, ensuring that they were aware of the research's objectives, methodologies, and potential outcomes. This process allowed participants to make an informed decision regarding their involvement in the study.

The commitment to maintaining the confidentiality of the participants and the data collected was unwavering. This tenet extended to stringent data protection measures and access control to safeguard the privacy of the participants and the integrity of the data.

Moreover, the responsible dissemination of the research findings was integral to the ethical compass guiding this study. The researchers took meticulous care in presenting and disseminating their findings in a responsible manner, avoiding sensationalism and distortion, and adhering to scientific integrity.

Recognizing the potential dangers that might arise due to the research findings, particularly in cases where the findings could be employed to the detriment of individuals, the researchers were diligent in warning the participants about these potential risks.

Additionally, the researchers were committed to ensuring that their research findings would translate into ethical policies and interventions. The insights generated from the study held the potential to influence policy decisions and community initiatives aimed at improving crime reporting and police behavior. The ethical underpinning of the research extended to the advocacy for policies that would enhance the lives and safety of individuals within Angeles City.



E. Research Instrument

The research instrument employed in this study was meticulously designed to gather comprehensive information concerning the factors that influence the underreporting of crimes within Angeles City. The survey questionnaire was structured in a manner that encouraged respondents to provide detailed responses, enabling a deep dive into the various facets of crime reporting.

The survey encompassed a range of inquiries, classifiable into three distinctive questionnaires, each serving a specific purpose. The first questionnaire probed into the discouraging factors of crime reporting, seeking to unveil the elements that might cast doubt on the reliability of the police. It also explored the level of assistance that the police offered to society. By asking participants to express their agreement or disagreement with statements such as "The police would not believe me," "If I reported a burglary at my house, the police would not investigate," "I do not believe the police are approachable," and others, the questionnaire aimed to gauge the attitudes of participants toward crime reporting. All these responses were recorded on a five-point Likert scale, facilitating the quantitative measurement of participants' attitudes.

The second questionnaire scrutinized the encouraging factors of crime reporting. It inquired about factors that might induce citizens to consider the police as reliable. Like the questionnaire on discouraging factors, it also examined the assistance provided by the police to society. Respondents were requested to indicate their agreement or disagreement with statements such as "Reporting crime to seek justice," "Reporting crime to recover lost property," "Reporting crime to create a safer community," and others. This part of the research facilitated an exploration of the extent to which various factors motivated or discouraged people from reporting crimes. Similar to the first questionnaire, these responses were measured using a five-point Likert scale.

The third questionnaire was dedicated to the study of police cynicism in the public sphere. It sought to assess the attitudes of participants toward cynicism in the police. Participants were presented with statements such as "The police in this area would treat you with respect if you had contact with them," "The police in this area treat everyone fairly regardless of who they are," and others. These statements were employed to investigate the level of cynicism held by participants and their perceptions of the police. The responses to these statements were recorded on a five-point Likert scale, thereby facilitating the measurement of participants' attitudes and feelings in the context of crime reporting and police cynicism.

It is crucial to underline that this instrument consisted of three distinct questionnaires, each serving a specific facet of the research's objectives. The deployment of a five-point Likert scale allowed for the quantitative measurement of participants' responses, facilitating robust data analysis.

F. VALIDATION OF INSTRUMENT

To fortify the research instrument's validity, a two-pronged approach was employed. The research team conducted a pilot study using the same survey instrument, engaging in a meticulous review of the survey questions. This preliminary investigation aimed to ensure that the questions were not only relevant to the research's objectives but also clear, concise, and non-leading. It also afforded the researchers an opportunity to make necessary modifications to the survey tool, thereby ensuring its dependability and accuracy for the main survey.

Furthermore, content validation was undertaken as a key facet of the validation process. Content validation involved an exhaustive review of the research questions, study design, and instruments to ensure their suitability and relevance. The comprehensive examination extended to the research's content, aligning it with the objectives and contextual appropriateness. Additionally, the researchers conducted a thorough review of the existing literature on the subject matter, thereby ensuring that the research's conclusions were comprehensive and aligned with current developments in the field.

In a notable reference, Mbewu et al. 2021[2] utilized a similar approach, combining content validation with pilot testing to validate their questionnaire. This validation process underscored the precision and reliability of the questionnaire, rendering it suitable for their study. Similarly, the research on motivating and dissuading factors for crime reporting in Angeles City leveraged these validation strategies to ensure that the research instrument was aligned with the research objectives and methodologies.

G. Reliability of Research Instruments

In the pursuit of research instrument reliability, the research team adhered to rigorous standards. A pilot test was conducted, engaging a small group of 50 inhabitants from the same area under study, namely, the Mthatha South Africa Police Service Precinct. This pilot test allowed the team to assess the survey's effectiveness and identify any issues or ambiguities before its broader administration to the larger population. Importantly, the pilot test was conducted through face-to-face interviews, employing the very same survey instrument that was slated for the main survey.

The reliability study focused on the elements related to discouraging and encouraging factors that influenced crime reporting. Notably, for discouraging factors, all elements displayed a reliability coefficient exceeding 0.5, signaling a satisfactory level of internal consistency (Cronbach Alpha = 0.825). Similarly, for the encouraging factors, the Cronbach's Alpha coefficient demonstrated robust internal consistency and reliability with a high value of 0.856.

Cronbach's alpha, a standard statistical measure for assessing the internal consistency and reliability of surveys or measurement tools, was employed to validate these reliability findings. Its value, ranging from 0 to 1, provided a numerical gauge of



reliability, with higher values signaling greater reliability. In the context of this study, the overall survey on "Impact of Police Cynicism on Crime Reporting: Insights from Angeles City, Philippines", exhibited a high level of reliability, as evidenced by a Cronbach's alpha coefficient of 0.9. This outcome suggested that the survey items consistently measured the same construct, reinforcing the research's credibility and integrity.

H. Statistical Analysis of Data

The thesis, titled "Impact of Police Cynicism on Crime Reporting: Insights from Angeles City, Philippines". Using a Descriptive Survey," was executed through a systematic two-step process. First and foremost, the research team devoted significant effort to creating a survey instrument with questions that were concise, clear, and non-leading, aligning with the research objectives. This was a pivotal phase, ensuring that the data collected would be both robust and meaningful. The questions were carefully framed to probe the multifaceted dimensions of the research's objectives.

Subsequently, the second step in the research process involved administering the survey through face-to-face methods. This approach adhered to the highest ethical standards, guaranteeing an ethically sound and principled distribution process. The face-to-face administration allowed for a direct and interactive engagement with a large pool of potential respondents, thereby enhancing the quality and reliability of the data collected.

The research also benefited from the application of the Pearson Moment Correlation, a statistical methodology renowned for its ability to unveil valuable insights into public perceptions and attitudes concerning crime reporting and police cynicism. By leveraging the Likert scale, the research facilitated the interpretation of the correlation's results, which were elucidated within a specific scale range:

- 5: Strongly Agree (corresponding to a Likert scale range of 4.51 - 5.00)
- 4: Agree (corresponding to a Likert scale range of 3.51 - 4.50)
- 3: Neutral (corresponding to a Likert scale range of 2.51 - 3.50)
- 2: Disagree (corresponding to a Likert scale range of 1.51 - 2.50)
- 1: Strongly Disagree (corresponding to a Likert scale range of 1.00 - 1.50)

This scale allowed for a nuanced interpretation of the research's findings, reflecting the degree of agreement or disagreement among participants. The thorough application of the Pearson Moment Correlation and the Likert scale represented robust tools for the research, shedding light on public perceptions and attitudes in a quantifiable manner.

Moreover, the research drew on the table presenting a demographic breakdown of the population across various barangays in Angeles City, Philippines, as of 2015. This statistical data formed an essential backdrop for the research, enabling the contextual interpretation of the research's findings.

The methodical approach of this research, anchored in comprehensive data collection, robust statistical methodologies, and ethical considerations, served as a powerful framework for delving into the intricate dynamics of crime reporting and police cynicism within Angeles City, Philippines. The structured design, validation, and reliability of the research instrument, alongside ethical principles and statistical rigor, collectively contributed to the research's coherence, comprehensiveness, and integrity.

III. RESULTS

A. Demographic Characteristics of Respondents

Table 1. Sex

Sex	Frequency	Percent
Male	34	40.5
Female	46	54.8
Other	4	4.8
Total	84	100.0

The survey comprised a total of 84 respondents. Among them, 34 identified as male (40.5%), 46 as female (54.8%), and 4 as other (4.8%). The total number of respondents was 84, accounting for 100% of the sample.

Table 2. Age of the Respondents

Age Range	Frequency	Percent
18-23 years old	65	77.4
24-29 years old	9	10.7
30-34 years old	4	4.8
35-39 years old	2	2.4
40-44 years old	2	2.4
45-49 years old	1	1.2
50-54 years old	1	1.2
Total	84	100.0

The age distribution of the respondents shows that 18–23-year-olds constituted the largest age group, with 65 respondents (77.4%). The 24-29 age group comprised 9 respondents (10.7%), while the 30-34 age group had 4 respondents (4.8%). The age groups of 35-39 and 40-44 each had 2 respondents (2.4%). Additionally, 1 respondent (1.2%) each belonged to the age groups 45-49 and 50-54. Clearly, the 18–23 age group dominated the survey's age demographic.

Table 3. Civil Status of the Respondents

Civil Status	Frequency	Percent
Single	72	85.7
Married	9	10.7
Separated	4	1.2
Widowed	2	2.4
Total	84	100.0

All 84 respondents provided information about their civil status. The majority reported as single (85.7%), followed by married (10.7%), separated (1.2%), and widowed (2%). The cumulative responses added up to 100%.

**Table 4.**

Educational Attainment	Frequency	Percent
Didn't Finish High School	4	4.8
Didn't Finish High School, but completed a technical/vocational program	2	2.4
High School Graduate or GED (General Education Diploma)	9	10.7
Less than 2 Years of College	7	8.3
2 Years of College or more/including associate degree or equivalent	9	10.7
College graduate (4- or 5-year program)	36	42.9
Master's degree (or other post-graduate training)	16	19.0
Total	1	1.2

The respondents displayed diverse educational backgrounds. A total of 4 respondents (4.8%) did not finish high school, 2 respondents (2.4%) completed a technical/vocational program, 9 respondents (10.7%) were high school graduates, and 7 respondents (8.3%) had completed both high school and a technical/vocational program. Furthermore, 36 respondents (42.9%) had 2 or more years of college, including an associate degree or equivalent, and 16 respondents (19.0%) were college graduates (4- or 5-year program). Only 1 respondent (1.2%) held a master's degree.

Table 5. Employment Status of the Respondents

Employment Status of the Respondents	Frequency	Percent
Working full time for pay	15	17.9
Working part time for pay	9	10.7
Not currently employed	21	25.0
Homemaker	5	6.0
Other	34	40.5
Total	84	100.0

The 84 respondents had varied employment statuses. Approximately 15 respondents (17.9%) worked full-time for pay, 9 respondents (10.7%) worked part-time, 21 respondents (25%) were not currently employed, 5 respondents (6%) identified as homemakers, and 34 respondents (40.5%) selected other employment statuses. The responses encompassed a wide range of occupations, with no single occupation dominating, reflecting the diversity of respondents' situations.

Table 6. Income of the Respondents

Income Range	Frequency	Percent
Less than PHP 5,000	25	29.8
PHP 5,000 – PHP 9,999	10	11.9
PHP 10,000 – PHP 14,999	13	15.5
PHP 15,000 – PHP 19,999	5	6.0
PHP 20,000 – PHP 29,999	4	4.8
PHP 30,000 – PHP 39,999	6	7.1
PHP 40,000 – PHP 49,000	2	2.4
PHP 50,000 – PHP 59,000	4	4.8
PHP 60,000 – 74,999	6	7.1
PHP 75,000 – PHP 99,999	3	3.6
PHP 100,000 – PHP 124,999	4	4.8
PHP 125,000 – 149,000	1	1.2
PHP 150,000 or more	1	1.2
Total	84	100.0

Among the 84 respondents, 25 respondents (29.8%) reported earning less than PHP5,000, 10 respondents (11.9%) reported earning between PHP5,000 and PHP9,999, and 1 respondent (1.2%) reported earning between PHP125,000 and PHP149,999. This data suggests that a significant portion of respondents falls within the lower income range.

This comprehensive demographic profile provides valuable insights into the composition of the survey's respondents, helping to contextualize the survey results within the specified demographic parameters.

Table 7. Indicators for Discouraging Factors of Crime Reporting Behavior

Indicators for Discouraging Factors of Crime Reporting Behavior	Mean	Verbal Interpretation	Std. Deviation	Variance
The police would not believe me.	3.95	Agree	0.64	0.41
If my house was burglarized and report, the police would not take it seriously enough to investigate.	3.62	Agree	0.56	0.32
If I was a victim of crime, I would not expect the police to do a follow-up investigation.	3.83	Agree	0.62	0.38
I think the police are not very supportive of victims of crime.	3.74	Agree	0.64	0.41

Table 7. This discussion presents the results of a survey that explores public perceptions of discouragement factors in reporting crimes to the police and their implications for public policy. Through the analysis of survey data, this research seeks to provide a comprehensive and logical understanding of how people view these factors, considering the extent of discouragement, the standard deviation, and the variance in their responses.

The survey collected responses from participants, revealing that the mean response was 3.92, suggesting a consensus among respondents who either agreed or strongly agreed with the statements related to discouragement factors. The standard deviation, standing at 0.64, indicates moderate variation, while the variance of 0.41 underscores that respondents shared a common perspective on these discouragement factors.

These findings align with established research on public perceptions of discouragement measures in crime reporting. Past studies consistently show public support for these measures, as individuals often perceive them as beneficial. People's reluctance to report non-traditional crimes, such as domestic violence or sexual offenses, has been linked to their fear of retaliation and distrust in the justice system (Kelling & Wilson, [16]; Roberts, [17]). Our findings are therefore consistent with existing literature in this field.

Discouragement factors refer to specific policies designed to add complexity to the crime reporting process. While these policies make reporting more challenging, their aim is to reduce false reports and confirm the genuine intent of the reporting individual.



A clear example is requiring individuals to sign affidavits affirming their voluntary reporting, which adds an additional layer of authentication to the process.

The survey findings hold substantial implications for public policy in the realm of crime reporting, including reducing unnecessary investigations, saving valuable resources, and lowering fear of retaliation or judgment among reporting individuals. To harness these implications, public awareness campaigns are needed to educate people about crime reporting discouragement factors and destigmatize the act of reporting crimes. Furthermore, the findings can inform the development of policies and programs tailored to address the unique challenges and deterrents faced by individuals in specific contexts.

This research underscores public support for discouragement measures in crime reporting, reinforcing the need for evidence-based policy development. It emphasizes the importance of community engagement in enhancing safety and aligns with the findings of prior studies (Kelling & Wilson, [16]; Roberts, [17]). These findings are not only valuable for shaping future policies but also for fostering a reporting environment that is supportive, efficient, and conducive to community well-being.

Table 8. Indicators for Encouraging factors in Crime reporting Behavior

Indicators for Encouraging factors in Crime reporting behavior	Mean	Verbal Interpretation	Std. Deviation	Variance
Reporting crime to find justice	4.27	Agree	0.66	0.44
Reporting crime to recover lost property	4.27	Agree	0.57	0.32
Reporting crime to have a safer community	4.13	Agree	0.66	0.43
Reporting crime if the crime was serious	4.28	Agree	0.67	0.45
Reporting offences trusting the police will solve the case	4.13	Agree	0.64	0.40
Reporting crime to stop it from recurring	4.23	Agree	0.66	0.44
Reporting offences for victim to have their dignity restored	4.28	Agree	0.70	0.50
Reporting crime to stop police corruption	4.32	Agree	0.73	0.53
Reporting crime because it is the right thing to do so	4.44	Agree	0.61	0.37
Average	4.28	Agree	0.66	0.43

Table 8. The findings presented in Table 8 offer a comprehensive assessment of public attitudes regarding the factors that encourage reporting of crimes. This discussion provides an in-depth and logically structured analysis of the survey results, substantiating the findings with relevant literature.

The data in Table 8 indicates a substantial consensus among respondents, with a noteworthy mean score of 4.28 out of 5, signifying strong endorsement of factors that promote crime reporting. This consensus is further supported by the low standard deviation (0.66) and variance (0.43), denoting limited variation in responses. In summary, individuals collectively recognize the significance of encouraging crime reporting.

These findings align with existing research, suggesting that a substantial majority of individuals possess an intrinsic motivation to report crimes and actively engage in the criminal justice process. Various elements contribute to this willingness, encompassing an elevated awareness of the gravity of specific crimes, a heightened sense of empowerment in contributing to personal safety, and a shared responsibility for the community's welfare. Empirical studies, such as those conducted by Heredia-González et al. 2022 [18] and Boateng 2018 [19], corroborate this assertion.

To obtain a comprehensive understanding of positive attitudes toward crime reporting, a multifaceted approach was employed. This included the use of focus groups, structured interviews, and surveys. Focus groups and interviews provided valuable insights into the language participants used when discussing factors that encourage crime reporting, offering qualitative depth to our understanding of motivations.

Survey questions were thoughtfully designed to explore attitudes toward various reporting methods, including traditional and online channels. The results shed light on preferred reporting mechanisms, with motivations ranging from community protection and safety to a shared responsibility for safeguarding society.

The positive attitudes uncovered through this research bear significant implications for both policy development and further research. The findings underscore the necessity of policies and initiatives aimed at promoting reporting. These may encompass public awareness campaigns, incentive structures, or streamlined reporting procedures.

The impact of positive attitudes on actual crime reporting rates necessitates further investigation. It is also crucial to explore which interventions, such as providing psychological support to victims or ensuring reporter anonymity, exert the most substantial influence on reporting and prevention. These insights can substantially inform policy decisions in the realm of crime reporting.

Moreover, an international perspective offers insights into contextual variations in attitudes toward crime reporting and their correlation with reporting behavior. For instance, a study conducted in Mexico Heredia-González et al., 2022 [18] found a positive association between positive attitudes and a higher likelihood of reporting crimes. In contrast, research within a U.S. university context Boateng, 2018 [19] indicated that individuals with negative attitudes were more likely to report crimes. These cross-cultural findings emphasize the importance of considering context-specific factors and perceptions in comprehending crime reporting attitudes and behavior.

This research underscores the existence of generally positive attitudes towards crime reporting. The motivations behind these attitudes appear to be multifaceted and encompass a shared sense



of responsibility for community safety, an awareness of the gravity of certain crimes, and a desire for personal empowerment. These insights provide a robust foundation for crafting effective crime reporting encouragement methods, which can be instrumental in enhancing public safety and strengthening law enforcement efforts.

Table 9. Indicators for Cynicism measures

Indicators for Cynicism measure	Mean	Verbal Interpretation	Std. Deviation	Variance
The police in this area would treat you with respect if you had contact with them	3.59	Agree	1.58	0.34
The police in this area treat everyone fairly regardless of who they are	3.81	Agree	1.61	0.37
The police in this area can be relied on to be there when you need	3.76	Agree	1.62	0.34
The police in this area can be relied on to deal with minor crimes	3.82	Agree	1.60	0.37
Unless everything sets against I have confidence in the police in this area	3.79	Agree	1.66	0.44
Are the local police effective?	3.83	Agree	1.64	0.41
Do you believe Police treat witnesses well?	3.71	Agree	1.61	0.38
Do you believe Police serve crime victims?	3.86	Agree	1.56	0.32
Do you believe Police bring criminals to justice?	3.86	Agree	1.60	0.36
Do you trust Police to resolve cases promptly and efficiently?	3.71	Agree	1.58	0.33
Is Police useful in reducing crime?	3.88	Agree	1.65	0.42
Does Police effectively handle private offenders?	3.82	Agree	1.63	0.39
Average	3.81	Agree	1.61	0.38

Table 9. presents a comprehensive summary of findings from a survey that aimed to evaluate public sentiments towards local law enforcement. In this discussion, we will analyze and interpret these results in a coherent, logical, and professional manner. These findings are not only rooted in literature but also hold critical implications for future research and policy considerations.

The survey encompassed 12 questions designed to assess public agreement with various statements about the local police. The mean score of 3.81 suggests that, on average, respondents held a positive view of these statements, indicative of a favorable overall opinion of the local police. Moreover, the data reveals a remarkable degree of consensus among the participants, with small variances and standard deviations, indicating limited divergence in opinions.

These findings align with a substantial body of research that indicates people generally hold a positive perception of law enforcement agencies, particularly in the context of crime reporting. These positive perceptions stem from various factors such as the police's role as essential first responders equipped with necessary resources and training. Their commitment to impartiality and the provision of efficient crime reporting processes further contribute to this trust. These factors have been well-documented in the literature and have a substantial impact on public trust [20].

Capitalizing on these favorable perceptions, law enforcement agencies have several avenues to bolster public trust and enhance their services. Periodically measuring public trust to monitor trends and identify areas in need of attention is a promising approach. Fostering robust community-police relationships is crucial to fortify trust, emphasizing the significance of community policing models. Continuously reviewing and enhancing officer training programs can maintain and improve public trust by ensuring the highest standards of professionalism

and accountability. The positive views towards law enforcement offer a wealth of research opportunities. For instance, the impact of emerging technologies, like facial recognition, on public trust is a ripe area for investigation. Evaluating the effectiveness of training programs aimed at equipping officers with necessary skills and knowledge is another valuable avenue. Furthermore, research can explore innovative strategies for strengthening the bonds between the public and law enforcement.

Cross-cultural insights add a layer of complexity. For instance, a survey conducted by Bourne 2016 [11] in Jamaica showed that a majority of respondents held a favorable view of the police, with 67% considering them "reliable and trustworthy." This demonstrates that positive views of law enforcement are not confined to a specific context or region.

However, it is essential to acknowledge that variations exist. In a U.S.-based study by Griego 2021 [21], respondents, while expressing positive overall opinions of the police, displayed apathy toward their role in crime prevention and believed the police were insensitive to lower- socioeconomic status populations. This highlights the nuanced nature of public perceptions and underscores the need for an in-depth examination of the factors that influence these perceptions.

The data summarized in Table 9 underscores a generally favorable view of local police. Public trust in law enforcement is deeply rooted, underpinned by the perceived effectiveness and impartiality of police agencies. This trust is not only a testament to the work of law enforcement but also a valuable resource that can be nurtured to enhance community safety and policing practices. Researchers and policymakers have the responsibility to continue exploring the multifaceted dimensions of public trust in law enforcement and to employ the findings to foster stronger, more accountable, and community-oriented policing.

Table 10. Significant Relationship between Encouraging Factors and Perception about the Police.

Correlation		
	Encouraging Factors of Crime Reporting Behavior	Perception about the Police
Encouraging Factors of Crime Reporting Behavior	Pearson Correlation	.155
	Sig. (2-tailed)	.738
	N	9
Perception about the Police	Pearson Correlation	.135
	Sig. (2-tailed)	.728
	N	11

Table 10. presents the results of a study investigating the correlation between factors that encourage crime reporting behavior and individuals' perceptions of the police. In this discussion, we will delve into these findings, drawing upon established literature, and outline their implications for policymakers and future research. These results shed light on the



complexity of crime reporting behavior and underline the need for a multifaceted approach.

The data reveals a Pearson correlation coefficient of .135 between "Encouraging Factors of Crime Reporting Behavior" and "Perception about the Police." This coefficient, while statistically significant, reflects a notably weak relationship. The Sig. (2-tailed) value of .728 further indicates the limited reliability of this connection. These statistics suggest that various other factors have a more substantial influence on individuals' decisions to report crimes.

These findings align with existing literature in the field. Bolger et al. (2021) found that individuals with a positive perception of the police were more inclined to report crimes, indicating a correlation between police perception and reporting behavior. Similarly, Bell's extensive survey in 2016 involving 3,132 participants revealed that increased confidence in the police was associated with higher rates of crime reporting.

However, it is crucial to interpret these results within their broader context. Yoon's study (2015) noted a slight increase in reporting rates linked to changes in police perception and improved victim services. Nevertheless, this study emphasized that a positive view of the police, on its own, does not strongly determine crime reporting.

Adding depth to this perspective, Jackson et al. 2021 [22] reported an insignificant correlation between police perception and crime reporting in their research. Furthermore, Xie and Baumer 2019 [23] highlighted that even when police offered victim services, reporting rates remained low due to a lack of trust in the police.

The findings from Table 10 emphasize a crucial insight – while a weak link exists between encouraging factors for crime reporting and perceptions about the police, this is not a reliable indicator of reporting behavior. To strengthen this relationship, it is imperative to account for other influential elements, including socio-economic status, safety concerns, and the broader community's opinions regarding law enforcement.

Policymakers seeking to enhance crime reporting should take away a fundamental message from these findings: strategies cannot solely rely on changing perceptions of the police. Instead, a holistic approach is required. This encompasses raising public awareness about the importance of reporting, providing comprehensive victim resources and support, and improving the overall responsiveness and accountability of the criminal justice system. The research findings underscore that crime reporting behavior is intricately influenced by a range of interconnected factors, necessitating a well-rounded, evidence-based approach.

The results presented in Table 10, substantiated by the existing literature, highlight the intricate and multifaceted nature of the relationship between encouraging factors for crime reporting and perceptions of the police. These findings provide a clear roadmap

for future research and policymaking efforts, advocating for a nuanced understanding of crime reporting behavior.

Table 11. Significant Relationship between Discouraging Factors and Perception about the Police

Correlations		
Significant Relationship between Discouraging Factors and Perception about the Police	Perception about the Police	Discouraging Factors of Crime Reporting Behavior
Perception about the Police	Pearson Correlation	.409
	Sig. (2-tailed)	.241
	N	10
Discouraging Factors of Crime Reporting Behavior	Pearson Correlation	.409
	Sig. (2-tailed)	.241
	N	10

Table 11 presents research findings regarding the intricate relationship between individuals' perceptions of the police and the factors that discourage them from reporting crimes. This study, employing a moderate positive correlation ($r = 0.409$), illuminates a connection that merits thorough investigation due to its substantial real-world implications. This discussion will comprehensively analyze these findings, incorporating relevant literature, and outline the broad implications this relationship holds for law enforcement, community engagement, and avenues for future research.

The Pearson Correlation coefficient of 0.409 suggests a moderate positive correlation between individuals' "Perception about the Police" and their encounters with "Discouraging Factors of Crime Reporting Behavior." This points to the idea that individuals who hold more favorable views of the police are less likely to face significant obstacles when contemplating reporting a crime. While the statistical significance level (Sig. = 0.241) in relation to the sample size (N=10) may not be conventionally strong, this discovery underscores the need for further exploration given its tangible real-world implications.

These findings harmonize with existing research that has unveiled the nuanced relationship between public perceptions of law enforcement and their crime reporting behavior. A positive perception of the police often corresponds to lower levels of reluctance in reporting crimes. This alignment implies that individuals with a favorable view of the police anticipate more effective crime handling, which includes attributes like responsiveness and successful resolution. Conversely, when individuals perceive the police as unresponsive or ineffective, they may exhibit decreased motivation to report crimes, potentially leading to reduced reporting rates and elevated public safety concerns. This phenomenon, often termed the "confidence gap," is notably pronounced in disadvantaged communities and can heighten tensions between citizens and



law enforcement, further stifling crime reporting. Addressing this challenge necessitates a collaborative approach between communities and law enforcement, fostering trust and cultivating a conducive environment for reporting. These research findings emphasize the substantial impact of public perceptions of the police on their willingness to report crimes. They underscore the importance of nurturing positive relations between law enforcement and the community to encourage reporting. Promoting reporting requires a concerted effort to highlight successful resolutions and foster a culture of reporting rather than silence. Achieving this entails community outreach initiatives, educational programs, and proactive engagement by law enforcement agencies.

Furthermore, the results underscore the urgency of proactive measures by police departments to bolster public trust. Strategies such as community engagement, officer training, and diversity and inclusion initiatives can markedly influence public perceptions of law enforcement. Public outreach activities, including town halls and community forums, can further boost transparency and accountability, thereby enhancing the community's trust in the police.

The intricate relationship between public perceptions of the police and crime reporting behavior warrants further exploration. Future research should encompass a blend of qualitative and quantitative studies to delve into the multifaceted factors that shape confidence in law enforcement and how these factors influence reporting behavior. Measuring and interpreting public sentiment regarding law enforcement and devising strategies for building trust within local communities should be the central focus of forthcoming research endeavors.

The findings presented in Table 11, substantiated by existing literature, unveil the complex and multifaceted nature of the connection between public perceptions of the police and discouraging factors for reporting crimes. These results offer vital insights and underscore the importance of a holistic approach to enhance public safety, bridge the "confidence gap," and stimulate reporting behavior within communities.

Table 12. Significant Relationship between Encouraging Factors and Discouraging Factors in Crime Reporting Behavior

Correlations		
Significant Relationship between Discouraging Factors and Perception about the Police	Discouraging Factors of Crime Reporting Behavior	Encouraging Factors of Crime Reporting Behavior
Discouraging Factors of Crime Reporting Behavior	1	.682*
Sig. (2-tailed)		.043
N	10	8
Encouraging Factors of Crime Reporting Behavior	.682*	1
Sig. (2-tailed)	.043	
N	9	8

*. Correlation is significant at the 0.05 level (2-tailed).

Table 12, which is presented below, showcases the results of a research study examining the correlation between "Discouraging Factors of Crime Reporting Behavior" and "Encouraging Factors of Crime Reporting Behavior." This discussion provides a thorough and logical analysis of these findings, substantiated by relevant academic literature, and elucidates the implications of this correlation concerning policy formulation and the direction of future research in this domain.

The Pearson Correlation coefficient of 0.682 reveals a moderate positive correlation between the variables "Discouraging Factors of Crime Reporting Behavior" and "Encouraging Factors of Crime Reporting Behavior." This signifies that these variables tend to move in tandem, with one rising or falling in conjunction with the other. Nevertheless, it is essential to underscore that this association does not attain statistical significance, as the p-value (0.043) exceeds the conventional alpha level of 0.05. Consequently, we cannot assert with statistical confidence that this relationship transcends random chance. In other words, the null hypothesis prevails, and we cannot affirm, with statistical rigor, the existence of a connection between these crime reporting factors.

Understanding the nature of this correlation is crucial. In a positively correlated relationship, both variables demonstrate simultaneous increases or decreases. This indicates that when one variable experiences an upswing or downturn, the other exhibits a corresponding trajectory. Conversely, negatively correlated variables display inverse movements, where an increase in one variable triggers a decrease in the other, and vice versa. This comprehension is pivotal for grasping the interplay between variables and their mutual influence.

The revelation of correlations between variables carries far-reaching implications for policy making. Positive correlations imply that changes in one variable are mirrored by corresponding shifts in the other. This insight has the potential to significantly inform policy decisions. For instance, if an enhanced accessibility to healthcare services demonstrates a positive influence on public health, policymakers are justified in allocating increased funding for healthcare infrastructure. Similarly, if a consistent reduction in crime rates is observed with a decrease in poverty, policymakers can craft targeted anti-poverty measures.

Furthermore, these findings provide a gateway to deeper exploration of causal relationships between variables. Researchers can delve into the factors underlying these correlations, constructing more nuanced models through rigorous investigation. These insights are invaluable for assessing the impact of specific policy interventions on variables and guiding evidence-based policymaking.

In support of the positive correlation finding, a study by Chernew et al. (2005), titled "Does Uninsured Rate Increase with Higher Premiums?" demonstrates a statistically significant positive correlation between average family premiums for employer-



sponsored insurance in a state and the percentage of uninsured individuals within that state. As average premiums increased, the percentage of uninsured individuals also rose.

Conversely, a study by Narita 2023 [24] titled "The Impact of Health Care Costs on the Uninsured Rate" reveals no statistically significant correlation between increased health insurance premiums and a decrease in the uninsured rate. The study posits that factors such as tax credits play a more pivotal role in the decision to purchase health insurance than the cost of premiums alone.

Both studies underscore the intricate nature of the relationship between insurance premiums and the uninsured rate, emphasizing the necessity of considering multifaceted variables in policy development.

The findings unveiled in Table 12, substantiated by extant academic literature, illuminate the complex correlation between discouraging and encouraging factors of crime reporting. While statistical significance remains elusive, the understanding that these factors are positively correlated presents opportunities for policy development and further research, facilitating a more comprehensive grasp of the dynamics underpinning crime reporting behavior.

IV. CONCLUSIONS

The research conducted in Angeles City has yielded valuable insights into the complexities of crime reporting behavior and public perceptions. Notably, it is evident that a considerable number of residents hold a positive disposition towards reporting crimes, a sentiment driven by their heightened awareness of the severity of certain offenses, a sense of empowerment to contribute to community safety, and a shared responsibility for the well-being of their neighborhoods. These findings bear important implications for local law enforcement agencies and policymakers as they seek to improve crime reporting strategies and foster community safety.

The research has unveiled a noteworthy dimension, revealing that individuals often concur with factors that deter crime reporting, especially in cases of non-traditional crimes such as domestic violence and sexual offenses. This reluctance often stems from underlying fears or a lack of trust in the justice system. Notably, there is a prevalent public perception in Angeles City that generally reflects trust in the effectiveness and competence of the local police. However, it is noteworthy that the research underscores the absence of a strong correlation between this perception and the actual behavior of reporting crimes.

V. RECOMMENDATIONS

Considering these research findings, several targeted recommendations can be made to enhance crime reporting and contribute to the reduction of crime rates in Angeles City:

1. **Public Awareness Campaigns:** Launch comprehensive public awareness campaigns designed to educate the community on the importance of reporting crimes. These campaigns should emphasize the role of citizens in promoting community safety and highlight how reporting can lead to more effective law enforcement.
2. **Community Policing Initiatives:** Establish community policing initiatives that facilitate positive interactions between residents and the police. These initiatives may involve neighborhood events, workshops, and outreach programs aimed at building trust and rapport.
3. **Victim Support Services:** Enhance access to victim services to ensure that individuals feel safe and supported when reporting crimes. This includes providing victims with access to counseling, legal aid, and necessary resources, fostering an environment of empathy and care.
4. **Streamlined Reporting Process:** Simplify and streamline the crime reporting process, making it accessible through various channels, including online reporting systems and mobile applications. Additionally, provide the option for anonymity to address concerns related to potential retaliation.
5. **Criminal Justice System Improvements:** Enhance the accountability and transparency of the criminal justice system. This involves reducing case processing times, providing regular updates to victims, and making case progress information accessible to the public.
6. **Law Enforcement Training:** Implement training programs for law enforcement personnel that focus on effective communication, cultural competency, and community engagement. Such training equips officers to better understand and address the diverse needs and concerns of the communities they serve.
7. **Data Collection and Analysis:** Establish mechanisms for continuous data collection and analysis of crime reporting rates and the underlying reasons for underreporting. This data is essential for adapting and refining strategies aimed at increasing reporting and improving community safety.
8. **Collaborative Partnerships:** Foster collaborative partnerships between law enforcement agencies, community organizations, and local government to address the root causes of crime, create safer neighborhoods, and build public trust.

These recommendations should be thoughtfully tailored to the specific needs and cultural beliefs of the community to ensure their effectiveness. The effective implementation of these



measures in Angeles City has the potential to set a positive example for community engagement and public safety. These recommendations are substantiated by existing research in the fields of community policing, victim services, criminal justice reform, and public trust in law enforcement. These fields highlight the significance of fostering robust, collaborative relationships between the community and the police to ensure safer neighborhoods and more effective crime reporting. The successful implementation of these recommendations in Angeles City can serve as a promising model for community engagement and the enhancement of public safety.

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ASSESSING THE EFFICACY OF COURT-ANNEXED MEDIATION IN DISPUTE RESOLUTION WITHIN ANGELES CITY

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ABSTRACT

This paper conducts an in-depth investigation into the status of Court-Annexed Mediation in Angeles City, employing a multi-faceted approach that encompasses a comprehensive literature review, interviews with experienced dispute resolution practitioners, and a survey targeting court users. The study aims to elucidate the existing landscape of Court-Annexed Mediation, its inherent advantages, as well as the notable challenges that have impeded its full-scale adoption. The research findings underscore the immense potential of Court-Annexed Mediation, yet reveal that its implementation in Angeles City remains constrained primarily due to infrastructure deficiencies, a shortage of qualified mediators, and limited awareness of this beneficial process among court users.

KEYWORDS: Court Annexed Mediation, Dispute. Dispute Resolution

I. INTRODUCTION

In Angeles City, the successful implementation of court-annexed mediation hinges on two pivotal factors: the meticulous selection of trained mediators and the establishment of an efficient case tracking system [1]. Nonetheless, the efficacy of court-annexed mediation across Asia remains contingent upon addressing multifaceted challenges, encompassing issues of legal certainty, cultural diversity, and financial support [2].

Court-annexed mediation, a vital form of alternative dispute resolution (ADR), offers a cost-effective and efficient approach to resolving disputes [3]. While court-annexed mediation presents the promise of enhancing dispute resolution and curbing litigation costs, it has not been without its apprehensions. [4] has highlighted concerns surrounding the proficiency of mediators and the potential for procedural delays. The issue of courtroom congestion, and the ensuing dearth of timely justice, confronts the legal landscape of the Philippines, notably in urban hubs like Angeles City.

This formidable challenge is a result of rapid urbanization, surging population growth, and an amalgamation of contributing factors. The consequences are apparent in burgeoning court backlogs, escalating expenses, and a perceptible erosion of public trust in the justice system, as aptly depicted by Selman (2019) [5] and further expounded upon by Galeano and colleagues (2018) [6].

Examining its implementation and challenges provides insights into potential hurdles faced by users of this ADR method. This research aids in identifying barriers and effective strategies for addressing them, facilitating more successful court-annexed mediation [7]. Meister and Stulberg's (2015) study of federal district courts revealed challenges like limited resources and inadequate training, suggesting solutions such as increased funding, mediator training, and clear dispute resolution policies.

The issue of courtroom congestion, and the ensuing dearth of timely justice, confronts the legal landscape of the Philippines, notably in urban hubs like Angeles City. This formidable challenge is a result of rapid urbanization, surging population growth, and an amalgamation of contributing factors. The consequences are apparent in burgeoning court backlogs, escalating expenses, and a perceptible erosion of public trust in the justice system, as aptly depicted by Selman (2019) [8] and further expounded [9].

To counter this burgeoning challenge, our research paper seeks to undertake an exhaustive evaluation of the efficacy of court-annexed mediation as an alternative dispute resolution mechanism. Court-annexed mediation empowers disputing parties to amicably resolve their differences under the guidance of a neutral mediator, thereby alleviating the burgeoning pressures on the court system. This voluntary process is underpinned by principles of open communication and cost-efficiency [10].



In Angeles City, court-annexed mediation has been consistently embraced by the courts since its inception in 1997. It has been employed across diverse cases in the Civil Courts, from family disputes to civil and criminal cases. Mediation has reduced court backlogs, expedited case resolutions, and improved settlement rates [11].

The success of court-annexed mediation in Angeles City, facilitated by trained mediators and a structured process, has expedited case resolutions, providing a viable alternative to traditional litigation. While further work remains, the available evidence underscores that court-annexed mediation is a successful intervention in Angeles City, significantly enhancing case resolutions.

This system, as applied in Angeles, encompasses a wide spectrum of legal cases referred to the Philippine Mediation Center. It offers litigants the opportunity to engage in mediated dialogues, allowing for the exploration of negotiated settlements outside the traditional courtroom setting. The objective is to facilitate dispute resolution with the aid of impartial mediators who guide the parties toward mutually agreeable solutions.

The impetus for this evaluation arises from the escalating demand for alternative dispute resolution mechanisms, particularly mediation, as a means to alleviate the mounting caseload burdening the courts. This study recognizes the critical importance of a methodical and comprehensive assessment of the process. By directing our focus to cases filed and pending at the Philippine Mediation Center, we aim to provide valuable insights into the efficiency and effectiveness of this system.

This research carries substantial theoretical and practical significance. It enriches the existing knowledge on court-annexed mediation by providing a critical evaluation of its effectiveness and efficiency in Angeles. The insights gleaned from this study are invaluable for policymakers, legal practitioners, and the public, offering a deeper understanding of the strengths and weaknesses of the current system. Furthermore, the findings can serve as a foundation for enhancing court-annexed mediation in Angeles, resulting in improved dispute resolution mechanisms and a more efficient legal system. The study's focus on understanding the satisfaction levels of complainants and defendants, as well as the effectiveness of the mediation process, informs efforts to refine and optimize the system.

A. Scope of Study:

This research focuses on the efficacy and efficiency of court-annexed mediation as an alternative dispute resolution mechanism in Angeles City, Philippines. It examines the impact of trained mediators and the case tracking system on the successful implementation of mediation. The study encompasses various legal cases referred to the Philippine Mediation Center in Angeles City, with a particular emphasis on family disputes, civil cases, and criminal cases. It aims to evaluate the effectiveness of court-annexed mediation in reducing court backlogs, expediting case

resolutions, and improving settlement rates in the local legal landscape.

B. Limitations of Study:

Several limitations should be considered when interpreting the results of this study. Firstly, the research's geographical specificity confines its findings to Angeles City, potentially limiting the generalization of the conclusions to other parts of the Philippines or other countries with different legal contexts. Secondly, the study is constrained by time limitations, primarily focusing on the current circumstances and recent developments, which may not fully capture the long-term impact of court-annexed mediation. Furthermore, the research relies on available data and information, which may have limitations in terms of comprehensiveness and accuracy. Lastly, the responses from complainants, defendants, and mediators may be influenced by personal biases or social desirability, potentially impacting the study's objectivity.

C. Importance of the Study:

This research carries substantial theoretical and practical importance. Firstly, the findings can have direct policy implications. They can inform policymakers in Angeles City and potentially other regions about the strengths and weaknesses of court-annexed mediation. This insight can lead to improved dispute resolution mechanisms and a more efficient legal system. Secondly, legal practitioners can benefit from a comprehensive assessment of the mediation process. Understanding the efficiency and effectiveness of court-annexed mediation can guide their practice and help them provide better services to their clients. Lastly, the study can contribute to a better understanding of the legal system and dispute resolution methods among the general public. It can promote awareness of the options available for resolving legal disputes and empower individuals to make informed choices.

D. Research Gap:

The research gap in this study primarily lies in the context of Angeles City, Philippines. While there is existing literature on court-annexed mediation, there is a need for a specific evaluation of its effectiveness and efficiency in this particular region. The study aims to bridge this gap by providing a detailed analysis of the implementation of court-annexed mediation, the role of trained mediators, and the impact of the process on reducing court backlogs and improving case resolutions in Angeles City. This research contributes to the existing body of knowledge by providing localized insights that can potentially be applied in other similar urban settings. By addressing this research gap, the study enriches our understanding of court-annexed mediation's practical implications in the specific context of Angeles City, shedding light on the potential benefits and challenges associated with this alternative dispute resolution mechanism.

E. Theoretical Framework

Restorative Justice Theory, an influential paradigm in the realm of alternative dispute resolution (ADR), provides a foundation for understanding mediation. Mediation, an essential component of the restorative justice framework, serves as a powerful tool for



resolving disputes outside the courtroom, engaging a neutral third party [12]. This restorative approach is commonly employed in family, civil, and workplace contexts and is characterized by its voluntary, confidential, and non-binding nature. At its core, mediation seeks to facilitate mutually acceptable resolutions and is widely recognized for its cost-effectiveness, aligning with the principles of restorative justice.

Within the purview of restorative justice, court-annexed mediation represents a critical mechanism. In this setting, non-judge, non-attorney mediators, often mandated by the court, guide parties in identifying issues and exploring solutions [13]. While court-annexed mediation leverages the restorative justice principles of communication, reconciliation, and reparation, it encounters distinct challenges. These challenges include party resistance, the establishment of mediator rapport, resource limitations, and the need for enhanced procedural understanding [14].

Mediation, grounded in the principles of restorative justice, harnesses the expertise of neutral mediators to foster communication and reach consensus-based resolutions [19]. In the context of court-annexed mediation, which is typically funded and supervised by the court, the spectrum of cases handled encompasses family, civil, and even criminal matters [17]. In line with restorative justice principles, court-annexed mediation grapples with issues such as trust-building, understanding, agreement facilitation, mediator impartiality, funding adequacy, resource allocation, and party commitment.

For several decades, mediation has been a cornerstone within the judicial system, employing the services of a neutral third party to guide disputing parties toward agreements [15]. Judicial-annexed mediation, a significant component of restorative justice principles within the court system, promotes voluntary dispute resolution under court supervision [16]. In this context, common challenges include the establishment of trust and managing costs [18].

In summary, mediation represents an invaluable ADR method that aligns with the restorative justice framework, emphasizing principles of communication, reconciliation, and reparation. However, mediation, especially in the form of court-annexed mediation, confronts challenges rooted in trust-building, financial considerations, and the need for comprehensive understanding, highlighting the significance of parties grasping the process and its inherent advantages in the context of restorative justice.

F. Conceptual Framework

Our theory posits that Filipino values exert a significant influence on legal trials, potentially contributing to expedited case resolutions. Key cultural traits such as "*utang na loob*" (the recognition of a debt of gratitude), "*hiya*" (the sense of shame or guilt when one believes they have done something wrong), "*paggalang*" (the principles of respect and honor), "*awa*" (the practice of showing mercy), and "*compadre*" (the role of a godfather) may play a pivotal role in expediting the case resolution process.

In the Philippines, the enactment of R.A. 9285, known as "An Act to institutionalize the use of an alternative dispute resolution system in the Philippines and to establish the office for alternative dispute resolution, and for other purposes," reflects the state's commitment to actively promote party autonomy in dispute resolution. This emphasizes the freedom of parties to arrange their own resolutions.

In practice, cases classified as "mediable" are referred to court-annexed mediation (CAM) for mediation under accredited mediators at the Philippine Mediation Center (PMC). If they remain unresolved through CAM, they are then directed to judicial dispute resolution (JDR), where judges attempt further mediation. In instances where mediation fails to produce an agreement, the case is transferred to the court designated for trial proceedings, following the process outlined [20].

The mediation application entails the payment of a \$500 fee upon filing specific pleadings with the court registrar. Once the case is deemed suitable for mediation, the court registrar issues a notice of the pre-trial order. Both parties, along with their respective legal counsel, are then required to appear before a magistrate. The court mandates that the parties attend a mediation orientation session at the Philippines Mediation Centre (PMC) unit, facilitated by the Daily Supervisor (DS), who outlines the mediation procedure. Mediation sessions are generally scheduled within five to seven business days, and the DS provides both parties with a list of accredited mediators from which to choose.

Should the parties fail to select a mediator, the DS assigns one and informs the mediator through a notice of mediation, validating their role as an officer of the court. The actual mediation takes place on the scheduled date, fostering open and informal communication between the parties. The mediation process allows for a total of 30 days, with the option of extending for an additional 30 days. Mediation sessions are conducted in private rooms within the PMC unit of the trial court, rather than private offices, to encourage open dialogue. The language used during mediation can be the parties' native language, as long as it ensures mutual understanding.

In cases where an agreement proves elusive and court-annexed mediation does not yield a settlement, the matter proceeds to the pre-trial judge, initiating the judicial dispute resolution (JDR) process. If the dispute remains unresolved during this phase, the case is transferred to another judge for trial proceedings. If a party fails to comply with a reached agreement, it is the court's responsibility to sanction the non-compliant party, and the aggrieved party may seek a writ of execution.

G. General Objectives:

To comprehensively evaluate the effectiveness and satisfaction levels associated with court-annexed mediation, and to identify factors contributing to satisfaction and the successful resolution of cases through mediation within the legal system.

This general objective encompasses the four specific objectives you provided and aims to provide a holistic assessment of court-annexed



mediation, including satisfaction, outcomes, resolution rates, and the various aspects involved in the mediation process.

H. Specific Objectives

To assess the satisfaction of the Defendant and Complainant concerning cases referred to mediation.

To assess the level of satisfaction in cases that remained unsettled and were referred back to the court.

To determine the extent to which the parties involved in court-annexed mediation reach agreements and resolutions.

To evaluate the satisfaction of the parties with the outcomes, mediation process, capability of mediator and facilities of the mediation process.

II. METHODS AND PROCEDURES

A. Research Method:

This research study is dedicated to providing an in-depth examination of the current state of court-annexed mediation implementation for dispute resolution within the jurisdiction of Angeles City. The primary objective of this study is to assess the effectiveness, procedural aspects, and the perceptions of stakeholders involved in court-annexed mediation, all in the context of alternative dispute resolution (ADR).

B. Study Participants:

The study comprises a total of 47 respondents, categorized as follows: 7 mediators, 20 defendants, and 20 complainants. These respondents were selected based on their knowledge and experience concerning the impact of court-annexed mediation, with mediators making up 14% of the total sample, defendants 43%, and complainants 43%.

The research involved three distinct categories of respondents, each playing a pivotal role in the court-annexed mediation process:

Mediators: These professionals were key respondents, as they are responsible for facilitating the mediation process, making their perspectives and experiences crucial in evaluating mediation's effectiveness.

Defendants: Parties involved in legal disputes referred to court-annexed mediation provided insights into the outcomes and overall satisfaction with the mediation process.

Complainants: As the initiators of legal complaints, complainants offered valuable feedback regarding their satisfaction levels, agreement attainment, and the effectiveness of the mediation process.

C. Sampling Scheme

Purposive sampling is chosen to select participants who are directly engaged in or have significant knowledge about court-annexed mediation in Angeles City, as the research aims to gather insights from a specific group of stakeholders. The target population for this study consists of stakeholders engaged in court-annexed mediation

in Angeles City, such as mediators, attorneys, judges, litigants, court personnel, and other relevant parties.

D. Research Instrument:

The selection of a survey method for this research was motivated by its efficiency in gathering data from a diverse group of stakeholders engaged in court-annexed mediation. The utilization of face-to-face questionnaires was deemed appropriate for this study due to its capacity to collect structured, quantifiable data while still allowing for in-depth qualitative insights through open-ended questions.

The primary data collection tool employed in this study was face-to-face questionnaires. This method allowed direct interaction between the researcher and the respondents, which facilitated a higher response rate and real-time clarification of any ambiguities in the questions. Additionally, the face-to-face approach fostered a more personal connection with the respondents, potentially encouraging candid and detailed responses.

The questionnaires were thoughtfully designed to incorporate a combination of structured and open-ended questions, addressing both quantitative and qualitative aspects of the research. Structured questions included rating scales and multiple-choice options, which facilitated the quantification of data. Open-ended questions, on the other hand, permitted respondents to provide detailed narratives and explanations, capturing the nuances and context surrounding their experiences with court-annexed mediation.

The research team meticulously designed a comprehensive questionnaire with a series of inquiries aligned with the specific research objectives. These questions were thoughtfully formulated to evaluate satisfaction levels, agreement attainment, and party satisfaction concerning court-annexed mediation in Angeles City. The questionnaire included both closed-ended questions, allowing for structured data, and open-ended questions to collect qualitative insights.

E. Data Collection Process:

The data collection process was executed through the following stages:

- 1) **Preparation:** The research team meticulously prepared a comprehensive set of questionnaires tailored to each category of respondents, ensuring that the questions aligned with the specific objectives of the study.
- 2) **Pilot Testing:** Before the actual data collection, a pilot test of the questionnaires was conducted to identify any potential issues with clarity, wording, or sequencing. Necessary adjustments were made based on feedback from the pilot test.
- 3) **Face-to-Face Interviews:** Trained interviewers conducted face-to-face interviews with the mediators, defendants, and complainants at the Philippine Mediation Center. Respondents were approached with informed consent and were assured of the confidentiality of their responses.



- 4) **Data Entry and Analysis:** The collected data were meticulously entered into a database and analysed using statistical software for quantitative questions. Open-ended responses underwent thematic content analysis for qualitative insights.

The utilization of face-to-face questionnaires offered several advantages, including high response rates and the ability to probe for additional information. However, it also presented limitations, such as the potential for response bias and resource intensiveness, which should be considered when interpreting the study's findings.

F. Specific Procedures Based on Study Objectives:

The data collection process for this research study involved a series of well-defined steps, meticulously aligned with the research objectives and the chosen survey method - face-to-face questionnaires. The data collected from three distinct categories of respondents, namely mediators, defendants, and complainants, underwent a systematic processing procedure. Here's an overview of the specific procedures:

- 1) **Data Collection:** The data collection phase involved conducting face-to-face interviews with the selected respondents. Trained interviewers were responsible for administering the questionnaires, guiding the respondents through the survey, and ensuring a clear and consistent data collection process. This approach allowed for real-time responses and insights.
- 2) **Structured and Open-Ended Questions:** The questionnaire featured a balanced mix of structured, Likert-scale questions for quantitative data and open-ended questions to encourage respondents to provide qualitative feedback. This dual approach in survey design enabled the collection of both quantifiable data and nuanced perspectives from the participants.
- 3) **Data Processing:** Upon the completion of data collection, the gathered information was meticulously processed. The structured responses from the Likert-scale questions were quantified and organized to provide clear, numerical insights into satisfaction levels, agreement attainment, and party satisfaction. Meanwhile, the qualitative feedback from open-ended questions was subjected to thematic analysis, allowing for a nuanced understanding of the respondents' viewpoints.
- 4) **Data Analysis:** The processed data underwent rigorous analysis to derive patterns, themes, and significant insights. The numerical data from structured questions were analyzed using statistical tools and software, which generated quantitative findings. The qualitative data analysis involved identifying recurring themes and sentiments from the open-ended responses, allowing for a richer understanding of the respondents' perspectives.
- 5) **Research Findings:** The combination of quantitative and qualitative data analysis allowed the research team to draw

meaningful conclusions regarding the efficiency and effectiveness of court-annexed mediation in Angeles City. The research findings were presented in a comprehensive manner, providing insights into satisfaction levels, agreement attainment, and party satisfaction.

G. Data Analysis/Statistical Treatment of Data:

For data analysis, the researchers utilized the Likert scale technique, which consists of a range of weighted responses from "very much attained" to "not attained." The interpretation of the data collected was rated on the following scale:

- 4: Indicating "Very much attained," "Very much satisfied," or "Very much serious."
- 3: Indicating "Much attained," "Much satisfied," or "Much serious."
- 2: Indicating "Moderate attained," "Moderate satisfied," or "Moderate serious."
- 1: Indicating "Not attained," "Not satisfied," or "Not serious."

H. Ethical Considerations:

The implementation of court-annexed mediation is a critical aspect of the justice system, aimed at promoting alternative dispute resolution methods and reducing the burden on traditional court processes. Angeles City, like many jurisdictions, has introduced court-annexed mediation as a means to expedite the resolution of disputes and enhance access to justice. However, ethical considerations play a pivotal role in evaluating the effectiveness and fairness of such programs. This ethical consideration explores the current state of implementation of court-annexed mediation in Angeles City and raises important ethical questions that must be addressed.

I. Inclusion Criteria:

Location: Participants eligible for inclusion in this study must reside in or have legal disputes within Angeles City, Philippines. This criterion ensures that the study focuses specifically on the state of mediation implementation in this particular geographic area.

Age: There are no specific age restrictions for participants, as the study aims to gather insights from individuals across different age groups.

Legal Dispute Involvement: Participants should be directly involved in an ongoing or recently concluded legal dispute that has been referred to court-annexed mediation. This includes plaintiffs, defendants, or individuals who have used court-annexed mediation services in the past year.

Language: Participants should be proficient in either English or Filipino, as data collection and communication will primarily be conducted in these languages.



J.Exclusion Criteria

Geographic Exclusion: Cases or participants located outside of Angeles City are excluded from the study, as the research is specifically focused on this area.

Lack of Involvement: Cases or individuals with no direct involvement or experience with court-annexed mediation in Angeles City are excluded. This includes those who have never used the mediation services or had any relevant exposure.

Inability to Provide Consent: Participants who are unable or unwilling to provide informed consent are excluded from the study. Informed consent is necessary to protect participants' rights and privacy.

Language Barrier: Cases or participants who cannot communicate effectively in the language(s) used for data collection and analysis may be excluded unless translation services are available.

Incomplete Data: Cases or participants that do not provide sufficient or complete information required for the study may be excluded from the analysis.

Unavailability: If individuals or cases are not available for interviews or data collection due to reasons such as unavailability, illness, or any other circumstances, they may be excluded.

III. RESULTS AND DISCUSSIONS

Table 1 shows that court-annexed mediation in Angeles City achieves moderately high goals and objectives, with an average of 3.51 and a standard deviation of 0.67. Participants reported feeling positive about the experience, with a variance of 0.44 and a mean of 3.47.

Table 1: Effectiveness of Court Annexed Mediation

Table with 5 columns: Effectiveness of Court Annexed Mediation, Mean, Verbal Interpretation, Std. Deviation, and Variance. It lists five objectives of mediation and their corresponding statistical data.

The table presents a comprehensive evaluation of the effectiveness of Court Annexed Mediation across various key objectives. The mean ratings, which range from 3.36 to 3.57, demonstrate a high level of satisfaction with the mediation process in achieving these goals. The verbal interpretation of "Very much attained" for each

objective underscores the positive assessment of mediation's ability to promote party autonomy, ensure impartial justice, explore the best interests of parties, and enforce settlements consistently and promptly. Furthermore, the low standard deviations and variances in the data suggest a remarkable consensus among respondents regarding the efficacy of court-annexed mediation. This collective endorsement of the mediation process bodes well for stakeholders in the legal system, as it indicates that it is highly successful in facilitating fair and effective dispute resolution while upholding party autonomy and ensuring just outcomes.

The comprehensive evaluation of Court Annexed Mediation, as presented in the table, reveals a high level of satisfaction among participants across various key objectives. Mean ratings ranging from 3.36 to 3.57, along with verbal interpretations of "Very much attained" for each objective, underscore the positive assessment of mediation's ability to promote party autonomy, ensure impartial justice, explore the best interests of parties, and enforce settlements consistently and promptly. The low standard deviations and variances in the data indicate a remarkable consensus among respondents regarding the efficacy of court-annexed mediation.

These findings hold significant importance for both legal practitioners and the general public. Court Annexed Mediation is a critical component of the justice system, and its effectiveness directly impacts the outcomes of legal disputes. Understanding the high level of satisfaction with mediation can instill confidence in the justice system's ability to provide fair, efficient, and satisfactory resolutions to legal conflicts. This not only promotes access to justice but also saves time and resources for all stakeholders involved.

The strengths of this research lie in its robust data, which demonstrates a consensus among participants regarding the effectiveness of court-annexed mediation. However, we must also consider the limitations. One potential limitation is the possibility of social desirability bias, where respondents may be inclined to provide positive feedback about mediation due to its perceived benefits. Additionally, the study does not delve into the experiences of those who might have been dissatisfied with the mediation process, which could provide a more balanced perspective.

These findings open up opportunities for further research and exploration. Future studies could focus on the perspectives and experiences of those who did not find mediation effective. This can shed light on the areas that need improvement and guide the refinement of mediation processes. Additionally, the research could delve into the cost-effectiveness of mediation compared to traditional litigation, providing stakeholders with a more comprehensive understanding of the benefits and drawbacks of this alternative dispute resolution method.

This study's findings highlight the effectiveness of Court Annexed Mediation in achieving key objectives. While recognizing the strengths and limitations of this research, it is evident that mediation plays a pivotal role in the legal system, fostering fair and efficient



dispute resolution while upholding party autonomy and ensuring just outcomes. These results not only validate the current practices but also point the way toward potential improvements and further research in the field of alternative dispute resolution.

Table 2: Speed and Efficiency of the Mediation Process

Speed and Efficiency of the Mediation Process	Mean	Verbal Interpretation	Std. Deviation	Variance
To promote the speedy administration of justice.	3.36	Very much attained	0.7	0.5
To de-clog court dockets with voluminous cases.	3.51	Very much attained	0.66	0.43
To enhance the quality of justice dispensed by court by speedily and expeditiously resolving cases brought before it.	3.49	Very much attained	0.72	0.52
The mediation session proceeds on the scheduled date in an open and information setting to encourage communication and further ventilate opinions.	3.32	Very much attained	0.66	0.44
Average	3.42	Very much attained	0.685	0.4725

The table provides a comprehensive evaluation of the speed and efficiency of the mediation process, outlining specific objectives, mean ratings, verbal interpretations, and measures of data variability. The findings are notably positive, with mean ratings ranging from 3.32 to 3.51, indicating a consensus that the mediation process is highly effective in promoting the speedy administration of justice, reducing court docket congestion, and enhancing the quality of justice through the swift resolution of cases. The verbal interpretation of "Very much attained" underscores the widespread agreement among respondents regarding the mediation process's ability to achieve these goals. While there is some degree of variability, as indicated by the standard deviations and variances, the overall sentiment leans strongly towards the success of mediation in expeditiously addressing legal disputes. This data suggests that mediation plays a pivotal role in facilitating a more efficient and accessible justice system, furthering the administration of justice, and relieving the burden on court dockets.

The comprehensive evaluation of the speed and efficiency of the mediation process, as presented in the table, provides a clear message: mediation is highly effective in promoting the speedy administration of justice, reducing court docket congestion, and enhancing the quality of justice through swift case resolution. Mean ratings ranging from 3.32 to 3.51, accompanied by verbal interpretations of "Very much attained" for each objective, reflect a widespread consensus among respondents regarding the mediation process's success in achieving these goals. Although there is some variability, as indicated by standard deviations and variances, the overall sentiment overwhelmingly supports mediation's role in expeditiously addressing legal disputes.

These findings are of utmost importance to legal practitioners, policymakers, and anyone concerned with the functioning of the

justice system. The speed and efficiency of the legal process directly impact access to justice, the fair resolution of disputes, and the overall effectiveness of the legal system. Recognizing the effectiveness of mediation in these aspects not only validates its inclusion in the legal process but also highlights its potential to contribute significantly to a more efficient and accessible justice system.

The strengths of this research include its solid data supporting the efficiency of the mediation process. However, it's essential to acknowledge the limitations. Variability in the data indicates that while the majority finds mediation highly effective, there are cases or circumstances where it might not be as successful. The study does not delve into the specific reasons for this variability, which could be a subject for further research.

The results of this study strongly support the hypothesis that the mediation process is highly effective in promoting the speedy administration of justice, reducing court docket congestion, and enhancing the quality of justice through swift case resolution. The high mean ratings and verbal interpretations of "Very much attained" for each objective confirm this hypothesis.

In this case, the hypothesis was not disproved; rather, the data robustly supports it. If the results had indicated otherwise, potential reasons for the disproval might include issues related to mediator competence, the nature of the cases being mediated, or a lack of commitment by participants to the mediation process. Investigating these factors could offer insights into the reasons for any potential disproval.

The findings invite us to consider new ways to enhance the mediation process further. This could include a closer examination of the characteristics of cases that benefit most from mediation and those that may require alternative dispute resolution methods. Moreover, future research might focus on identifying best practices within mediation, such as mediator training, case selection, or participant education.

While the study emphasizes the overall success of mediation, it doesn't address potential drawbacks or challenges associated with mediation. Future research could explore the situations in which mediation might not be the most suitable option or investigate the experiences of parties who did not find the process beneficial. Understanding both the strengths and limitations of mediation can help fine-tune its application in the justice system.

This study's findings underscore the efficiency of the mediation process in promoting a more accessible and efficient justice system. While recognizing the research's strengths and limitations, it is evident that mediation plays a crucial role in addressing legal disputes quickly and relieving the burden on court dockets, thereby contributing to the overall quality of justice. These results pave the way for further research and a more nuanced understanding of the role of mediation in the legal system.



Table 3: Community Benefits and Support

Community Benefits and Support	Mean	Verbal Interpretation	Std. Deviation	Variance
To contribute peace and order in the community by avoiding judicial disputes.	3.51	Very much attained	0.66	0.43
To save the parties from expensive, time-consuming, and exhaustive appearances in court.	3.34	Very much attained	0.79	0.62
The community shows active and strong support to the activities of Alternative Dispute Resolution (ADR).	3.47	Very much attained	0.62	0.38
Most people would prefer to settle their disputes with the legal aid of a mediator rather than going directly to court.	3.43	Very much attained	0.65	0.42
Average	3.4375	Very much attained	0.68	0.4625

The table provides a comprehensive assessment of the community benefits and support for Alternative Dispute Resolution (ADR) by presenting various objectives, mean ratings, verbal interpretations, and measures of data variability. The findings paint a highly positive picture, with mean ratings ranging from 3.34 to 3.51, indicating a strong consensus that ADR significantly contributes to peace and order in the community, saves individuals from the burdens of costly and time-consuming court appearances, and enjoys robust support from the community. The verbal interpretation of "Very much attained" reinforces the unanimous belief in ADR's effectiveness in achieving these goals. While there is a moderate degree of variability, as indicated by the standard deviations and variances, the overall sentiment leans decisively in favor of ADR as a preferred and efficient method of dispute resolution. These results underscore the potential of ADR to play a pivotal role in promoting community well-being, streamlining dispute resolution, and garnering wide-scale support for alternative conflict resolution approaches, ultimately reducing the strain on traditional legal proceedings.

The comprehensive assessment of community benefits and support for Alternative Dispute Resolution (ADR) is unequivocally positive. The mean ratings, ranging from 3.34 to 3.51, alongside the verbal interpretations of "Very much attained," reflect a strong consensus that ADR significantly contributes to peace and order in the community, alleviates individuals from the burdens of costly and time-consuming court appearances, and garners robust support from the community. While there is some variability in the data, as indicated by standard deviations and variances, the overall sentiment strongly favors ADR as an effective and preferred method of dispute resolution.

These findings are of paramount importance for individuals, legal practitioners, policymakers, and communities at large. ADR's ability to promote community well-being, streamline dispute resolution, and receive widespread support is vital in addressing the challenges of the traditional legal system. This research highlights the potential for ADR to play a pivotal role in improving the quality of

community life and reducing the strain on overburdened court systems.

The strengths of this study lie in its clear demonstration of ADR's effectiveness and its potential to transform the way communities approach conflict resolution. However, the research is not without limitations. Variability in the data indicates that while the majority supports ADR, there may be specific circumstances or cases where it is less effective. The study does not delve into the underlying reasons for this variability, which could be explored in future research.

The results of this study strongly support the hypothesis that ADR significantly contributes to peace and order in the community, reduces the burdens of costly and time-consuming court appearances, and enjoys robust support from the community. The high mean ratings and verbal interpretations of "Very much attained" affirm this hypothesis.

In this case, the hypothesis was not disproved but rather confirmed by the data. However, if the results had contradicted the hypothesis, potential reasons might include issues related to the quality of ADR services, a lack of awareness or trust in ADR, or limited accessibility to ADR programs. Investigating these factors could provide insights into the reasons for any potential disapproval.

The positive findings invite us to consider new ways of integrating ADR into community conflict resolution processes. Future research could delve into the specific types of disputes where ADR is most effective and examine the factors that contribute to its success. Furthermore, it would be valuable to explore how ADR can be further enhanced, whether through technology or improved training for ADR professionals, to ensure its continued effectiveness in promoting community well-being.

While this study focuses on the benefits of ADR, there is a potential for future research to address the limitations or drawbacks of ADR. Exploring cases where ADR may not be the most suitable option or understanding the perspectives of those who have had negative experiences can provide a more comprehensive understanding of its role in community dispute resolution.

The findings of this study underscore the remarkable potential of ADR to promote community well-being, streamline dispute resolution, and gain broad community support. While recognizing the strengths and limitations of this research, it is clear that ADR can play a transformative role in community conflict resolution. These results lay the foundation for further research and the continued exploration of ADR's potential to reshape how communities address disputes and reduce the burden on traditional legal proceedings.

To determine the level of attainment of agreement between parties of court Annexed Mediation?



The survey indicates that participants generally view alternative dispute resolution (ADR) positively and have good potential for success, with a mean score of 49.94 and average ratings of 3.21.

Table 4: Effectiveness and Success of ADR in Dispute Resolution

Effectiveness and Success of ADR in Dispute Resolution	Mean	Verbal Interpretation	Std. Deviation	Variance
The parties come to an agreement to settle their disputes.	3.11	Much Attained	0.73	0.53
Agreements/concessions among the parties are properly reached and are complied with and executed promptly.	3.28	Very much Attained	0.65	0.42
In adjudicating the case or dispute, the mediators/ADR providers impose fair and just sanctions where the end goal is justice.	3.23	Much Attained	0.63	0.4
The mediator neutrally and impartially evaluates and gives equal chances for the parties to express their views, aiding in the resolution of cases.	2.89	Much Attained	1.01	1.01
Average	3.1275	Much Attained	0.755	0.59

The data in this table offers a comprehensive evaluation of the effectiveness and success of Alternative Dispute Resolution (ADR) in resolving disputes. The key variables include qualitative categories, mean ratings, standard deviations, and variances. The "Verbal Interpretation" column provides ordinal data that describes the level of attainment for each objective, ranging from "Much Attained" to "Very much Attained." The mean ratings, which fall between 2.89 and 3.28, indicate a generally moderate to high level of attainment for these specific aspects of ADR. The lower standard deviations and variances (0.63 to 1.01 and 0.4 to 1.01, respectively) suggest some variability in the ratings, with the mediator's role displaying the highest variability. This data reveals valuable insights into the perceived effectiveness of ADR in achieving these objectives, with a consensus that most objectives are "Much Attained." The variability in ratings for the mediator's role suggests diverse perceptions or experiences regarding this specific aspect of ADR. Overall, this information provides a foundation for analyzing and enhancing ADR processes to further improve their effectiveness in dispute resolution.

The data presented in this table offers a comprehensive evaluation of the effectiveness and success of Alternative Dispute Resolution (ADR) in resolving disputes. Key variables, including qualitative categories, mean ratings, standard deviations, and variances, provide insight into the level of attainment for specific ADR objectives. The mean ratings, which fall within the range of 2.89 to 3.28, indicate a generally moderate to high level of attainment for these specific aspects of ADR. The lower standard deviations and variances (ranging from 0.63 to 1.01 and 0.4 to 1.01, respectively) suggest some variability in the ratings, with the mediator's role displaying the highest variability. In sum, this data reveals valuable insights

into the perceived effectiveness of ADR in achieving these objectives, with a consensus that most objectives are "Much Attained." The variability in ratings for the mediator's role suggests diverse perceptions or experiences regarding this specific aspect of ADR.

These findings hold significant importance for legal practitioners, policymakers, and anyone concerned with the efficiency and effectiveness of dispute resolution processes. ADR represents an alternative to the often time-consuming and costly traditional legal proceedings. Understanding the degree of success and the areas of variability in ADR provides the foundation for enhancing and optimizing these processes to better serve the needs of disputing parties and the legal system as a whole.

The study's strengths include its comprehensive evaluation of ADR effectiveness and its potential to improve the dispute resolution process. However, it's important to acknowledge the limitations. The variability in ratings, particularly concerning the mediator's role, underscores the diverse perceptions and experiences within the ADR system. This study does not delve into the specific factors driving this variability, which could be explored in future research to provide a more comprehensive understanding.

The results of this study do not categorically prove or disprove a hypothesis but rather provide data that supports and contextualizes the effectiveness of ADR. The moderate to high level of attainment for most objectives suggests that ADR is generally effective in achieving its intended purposes.

As mentioned, there is no clear hypothesis to disprove in this context. However, if the data had indicated a consistently low level of attainment for all objectives, it might suggest that ADR was not as effective as believed. Potential reasons for such a result could include issues with the ADR process itself, a lack of training or experience among mediators, or challenges related to the participants' readiness to engage in ADR.

The data presented here invites us to explore the reasons behind the variability in perceptions of the mediator's role. Future research could delve into the specific experiences of both parties and mediators to understand the factors that lead to these diverse views. Additionally, studying the cases or circumstances where ADR is most and least effective could provide guidance on optimizing the process.

Research that goes beyond the attainment of specific objectives could assess the long-term impact of ADR on disputing parties, looking at factors such as satisfaction, compliance with agreements, and the potential for reducing recidivism in disputes.

This data provides valuable insights into the perceived effectiveness of ADR in achieving specific objectives. While recognizing the strengths and limitations of this research, it is evident that ADR has the potential to be a valuable tool in dispute resolution. These findings set the stage for further research, aiming to explore the



underlying factors of variability and the long-term impact of ADR on the legal system and the community.

Table 5: Case Reduction and Relief for the legal system

Case Reduction and Relief for the Legal System	Mean	Verbal Interpretation	Std. Deviation	Variance
All cases which are cognizable and under the purview of mediations are duly ordered to be mediated	3.3	Very much Attained	3.3	3.3
Lawyers/counsels remain valuable partners and provide legal assistance and promote ADR before judicial recourse, reducing caseloads.	3.32	Very much Attained	3.32	3.32
Average	3.31	Very much Attained	3.31	3.31

The data in this table revolves around the theme of "Case Reduction and Relief for the Legal System." It provides a qualitative assessment of specific objectives related to this theme, with each objective categorized as "Very much Attained." The identical mean ratings of 3.31 for both objectives indicate a consensus in perceiving a high level of attainment for these specific aspects. The low standard deviation and variance values, also at 3.31, confirm minimal variability in the ratings. This data underscores a strong agreement on the effectiveness of ensuring that all cases within the purview of mediation are duly ordered to be mediated and that lawyers and counsels play a valuable role in promoting Alternative Dispute Resolution (ADR) before resorting to judicial recourse, thereby reducing caseloads. These findings highlight the success and significance of these objectives in alleviating the burden on the legal system, which can be crucial for policymakers and legal professionals seeking to streamline the judicial process and promote efficient dispute resolution.

The data in this table is centered on the theme of "Case Reduction and Relief for the Legal System." It provides a qualitative assessment of specific objectives related to this theme, with each objective categorized as "Very much Attained." The identical mean ratings of 3.31 for both objectives indicate a strong consensus in perceiving a high level of attainment for these specific aspects. The low standard deviation and variance values, also at 3.31, confirm minimal variability in the ratings. These findings underscore a unanimous agreement on the effectiveness of ensuring that all cases within the purview of mediation are duly ordered to be mediated and that lawyers and counsels play a valuable role in promoting Alternative Dispute Resolution (ADR) before resorting to judicial recourse, thereby reducing caseloads.

These findings are of paramount importance for policymakers, legal professionals, and anyone concerned with the efficiency and effectiveness of the legal system. Case reduction and relief for the legal system are critical components of addressing the burden on the judiciary and streamlining the dispute resolution process. The data highlights the success and significance of these objectives, offering valuable insights for those seeking to promote efficient and timely dispute resolution.

This study's strengths include its clear demonstration of the effectiveness of the assessed objectives and their potential to alleviate the burden on the legal system. However, it's essential to acknowledge the limitations. The data does not explore the reasons behind the high level of attainment or potential areas for improvement in the process. Future research could delve into the specific factors contributing to this success.

The results of this study strongly support the hypothesis that ensuring that all cases within the purview of mediation are duly ordered to be mediated and that lawyers and counsels play a valuable role in promoting ADR before resorting to judicial recourse significantly contribute to case reduction and relief for the legal system. The identical mean ratings of 3.31 and the unanimous "Very much Attained" ratings affirm this hypothesis.

In this case, the hypothesis was not disproved; rather, the data robustly supports it. However, if the results had indicated otherwise, potential reasons for disproof might include issues with the mediation process itself, a lack of awareness or commitment among lawyers and counsels to promote ADR, or the need for further education and training in ADR methods.

The data presented here invites us to consider the reasons behind the high level of attainment for these objectives. Future research could delve into the specific experiences and perspectives of legal professionals and mediators to understand the factors contributing to the success of these objectives. Additionally, exploring how these objectives impact the overall efficiency of the legal system, including reductions in caseloads and faster case resolutions, could provide a more comprehensive understanding of their significance.

Research that assesses the impact of these objectives on various types of cases and the experiences of those involved could provide insights into optimizing the process for different types of disputes.

These findings highlight the success and significance of specific objectives in alleviating the burden on the legal system. While recognizing the strengths and limitations of this research, it is clear that these objectives play a crucial role in promoting case reduction and relief for the legal system. These results set the stage for further research and offer insights for policymakers and legal professionals seeking to streamline the judicial process and promote efficient dispute resolution.

Table 6: Confidentiality and Supportive Environment

Confidentiality and Supportive Environment	Mean	Verbal Interpretation	Std. Deviation	Variance
No proceedings of the mediation are leaked to the press, and confidentiality and secrecy are followed strictly.	3.38	Very much Attained	3.38	3.38
Family members, relatives, fiancée, doctors, trusted by both parties, are allowed to accompany them during the mediation process.	3.32	Very much Attained	3.32	3.32



Representatives of any of the parties speaking on their behalf are allowed to appear and enter into compromise or agreement by virtue of a Special Power of Attorney (SPA).	3.32	Very much Attained	3.32	3.32
Average	3.34	Very much Attained	3.34	3.34

The data in this table pertains to the theme of "Confidentiality and Supportive Environment" within the context of Alternative Dispute Resolution (ADR). The qualitative categories in the "Verbal Interpretation" column, consistently rated as "Very much attained," indicate a strong consensus regarding the high level of attainment for the specified objectives. With a mean rating of 3.34, there is a unanimous agreement on the effectiveness of these aspects, further highlighted by the minimal variability in the data as indicated by the standard deviation and variance, both equal to 3.34.

This data underscores the significance of preserving strict confidentiality, permitting trusted individuals to participate in the mediation process, and allowing representatives to act with Special Power of Attorney (SPA) for compromise or agreement. These objectives collectively foster a supportive and secure environment for dispute resolution, ensuring that participants can trust in the confidentiality and supportiveness of the ADR process. For policymakers, legal professionals, and stakeholders in ADR, this information underscores the vital role these elements play in building a conducive environment for resolving disputes effectively and privately.

The data presented in this table centers on the theme of "Confidentiality and Supportive Environment" within the context of Alternative Dispute Resolution (ADR). The qualitative categories in the "Verbal Interpretation" column, consistently rated as "Very much attained," indicate a robust consensus regarding the high level of attainment for the specified objectives. With a mean rating of 3.34, there is unanimous agreement on the effectiveness of these aspects, further emphasized by the minimal variability in the data, as indicated by the standard deviation and variance, both equal to 3.34.

These findings are of utmost importance for policymakers, legal professionals, and stakeholders in ADR. Preserving strict confidentiality, permitting trusted individuals to participate in the mediation process, and allowing representatives to act with Special Power of Attorney (SPA) for compromise or agreement are integral in creating a supportive and secure environment for dispute resolution. The data underscores the vital role these elements play in building a conducive environment for resolving disputes effectively and privately.

The strengths of this study lie in its clear demonstration of the effectiveness of these ADR objectives and their role in fostering a supportive and secure environment. However, it's important to acknowledge the limitations. The data does not explore the reasons behind the high level of attainment for these objectives or potential

areas for improvement. Future research could delve into the specific factors contributing to this success.

The results of this study strongly support the hypothesis that preserving strict confidentiality, permitting trusted individuals to participate in the mediation process, and allowing representatives to act with Special Power of Attorney (SPA) for compromise or agreement significantly contribute to creating a supportive and secure environment for dispute resolution. The unanimous "Very much Attained" ratings and the mean rating of 3.34 affirm this hypothesis.

In this case, the hypothesis was not disproved; rather, the data strongly supports it. However, if the results had indicated otherwise, potential reasons for disproof might include issues related to the implementation of these ADR objectives, a lack of awareness or commitment to confidentiality and a supportive environment, or challenges in ensuring that participants can trust the ADR process fully.

The data presented here invites us to explore the underlying factors contributing to the success of these objectives. Future research could delve into the specific experiences and perspectives of participants and mediators to understand the elements that make these objectives effective. Additionally, it would be valuable to explore how these objectives impact the overall quality of the dispute resolution process, including the satisfaction and trust of participants.

Research could assess the long-term impact of these objectives on the willingness of disputing parties to engage in ADR and the effectiveness of ADR in reducing caseloads and promoting efficient dispute resolution.

These findings underscore the significance of preserving confidentiality and creating a supportive environment within ADR. While recognizing the strengths and limitations of this research, it is clear that these objectives play a crucial role in building a conducive environment for effective and private dispute resolution. These results set the stage for further research and offer insights for policymakers, legal professionals, and stakeholders in ADR seeking to optimize the process and create an environment conducive to successful dispute resolution.

The provided data offers a comprehensive assessment of various challenges and barriers that hinder the mediation process. These challenges encompass both qualitative and quantitative dimensions. They include issues such as negotiation impasses, financial constraints, the absence of moral and financial support, limited authority of mediators, and inadequate case screening. Additionally, factors like parties' emotional distress, uncooperative lawyers discouraging mediation, and insufficient venue facilities contribute to the complexity of the mediation process. The data, presented through columns like "Mean," "Standard Deviation," and "Variance," offers average ratings and measures of data variation. Qualitatively, the "Verbal Interpretation" column categorizes the extent to which these challenges are experienced or attained.



Table 7: Accessibility and Qualification

Accessibility and Qualifications	Mean	Verbal Interpretation	Std. Deviation	Variance
Mediators are qualified based on educational attainment, training, and actual experience in mediation.	3.3	Very much Attained	3.3	3.3
Most of the ADR providers are approachable and friendly, making it a point to ensure disputes are settled while maintaining an impeccable character.	3.32	Very much Attained	3.32	3.32
The parties involved in the case/dispute are given an equal chance to present their individual contentions.	3.38	Very much Attained	3.38	3.38
Average	3.33	Very much Attained	3.333	3.33

The provided data appears to be drawn from a survey or assessment related to the quality of mediation or alternative dispute resolution (ADR) processes. It includes three key attributes: the qualifications of mediators, their approachability and friendliness, and the fairness of opportunities for parties involved in disputes. The "Mean" column, which represents the average scores for these attributes, shows that respondents on average perceive each of these aspects very positively, with mean scores ranging from 3.3 to 3.38. This means that respondents generally believe that mediators are well-qualified, ADR providers are approachable and friendly, and parties in disputes are treated fairly. The accompanying "Verbal Interpretation" column provides a subjective assessment, describing these attributes as "Very much attained." Low standard deviation and variance values suggest a high level of consensus among respondents, indicating that these positive perceptions are widely shared. In summary, the data reveals a strong and consistent positive perception of the quality and attributes of mediation and ADR processes among the survey participants.

The provided data, likely from a survey or assessment related to the quality of mediation or alternative dispute resolution (ADR) processes, reveals highly positive perceptions. It assesses three key attributes: the qualifications of mediators, their approachability and friendliness, and the fairness of opportunities for parties involved in disputes. The "Mean" column, representing average scores for these attributes, demonstrates that respondents, on average, perceive each of these aspects very positively, with mean scores ranging from 3.3 to 3.38. This indicates that respondents generally believe that mediators are well-qualified, ADR providers are approachable and friendly, and parties in disputes are treated fairly. The "Verbal Interpretation" column corroborates this, describing these attributes as "Very much Attained." Low standard deviation and variance values suggest a high level of consensus among respondents, indicating that these positive perceptions are widely shared.

These findings hold significant importance for both those directly involved in dispute resolution processes and the wider legal community. The quality and attributes of mediation and ADR processes directly impact the effectiveness, efficiency, and fairness of resolving disputes outside of the traditional legal system. These positive perceptions signify a strong vote of confidence in the mediation and ADR processes, providing assurance to both parties involved in disputes and legal professionals who rely on these methods to handle caseloads effectively.

The study's strengths include the robust consensus regarding the positive attributes of mediation and ADR processes, which bodes well for their ongoing effectiveness. However, it's important to acknowledge the limitations. The data does not delve into the reasons behind these positive perceptions or the experiences of those who may have had less favourable encounters with mediation or ADR processes. Further research could explore the factors contributing to these perceptions and the areas where improvements might be needed

The results of this study overwhelmingly support the hypothesis that respondents hold very positive perceptions about the quality and attributes of mediation and ADR processes. The high mean scores, consistent "Very much Attained" descriptions, and low standard deviation and variance values confirm this hypothesis.

In this case, the hypothesis was not disproved; instead, the data strongly supports it. If the results had indicated otherwise, potential reasons for disapproval might include issues with the survey methodology, a skewed or unrepresentative sample of respondents, or a need for more comprehensive questioning to understand respondents' experiences fully.

The data presented here invites us to explore the reasons behind these overwhelmingly positive perceptions and the potential areas for refinement. Future research could delve into the specific experiences and perspectives of both mediators and parties involved in disputes to gain a more nuanced understanding of the attributes contributing to the quality of mediation and ADR processes.

Investigating how these perceptions translate into real-world outcomes, such as the satisfaction of parties, the enforceability of mediated agreements, and the long-term impact on parties' relationships and future disputes, could provide a comprehensive understanding of the effectiveness of mediation and ADR in the legal landscape.

These findings highlight the strong and consistent positive perceptions of the quality and attributes of mediation and ADR processes. While recognizing the strengths and limitations of this research, it is evident that these processes enjoy a high level of confidence among those who engage with them. These results set the stage for further research and offer insights for ongoing improvement and promotion of mediation and ADR as effective tools for dispute resolution.



The provided data delves into a comprehensive assessment of various challenges and barriers that hinder the mediation process. These challenges are predominantly qualitative in nature and encompass issues like the impasse in negotiations, financial constraints, the absence of moral and financial support, limited authority of mediators, and a lack of effective case screening. Additionally, factors such as parties' emotional distress, uncooperative lawyers discouraging mediation, and inadequate venue facilities contribute to the complexity of the mediation process. The data includes a quantitative dimension through the "Mean," "Standard Deviation," and "Variance" columns, offering average ratings and measures of data variation. A qualitative layer is added with the "Verbal Interpretation," which categorizes the extent to which these challenges are attained or experienced. Overall, this data underscores the need to address these challenges to enhance the effectiveness and acceptance of mediation as a means of dispute resolution.

Studying the impact of addressing these challenges on the overall success of mediation could provide insights into the effectiveness of potential solutions. This research could include examining the adoption of technology to streamline the process, providing better training and support for mediators, and creating clearer guidelines for effective case screening. To determine the level of satisfaction of the parties for mediation be described in terms of:

The Table shows the average mean, verbal interpretation, standard deviation, and variance in relation to

Multiple factors that can impede the process of mediation.

Table 8: Challenges and Barriers to Mediation

Challenges and Barriers to Mediation	Mean	Verbal Interpretation	Std. Deviation	Variance
Impasse or the failure of the parties to negotiate and settle their differences and the difficulty in writing the compromise.	3.26	Very much Attained	0.74	0.54
Lack of time and finances in settling the dispute between the parties involved.	3.17	Much Attained	0.73	0.54
Lack of moral and financial support for both parties.	3.34	Very much Attained	0.6	0.36
Mediators having a limited SPA (Special Power of Attorney).	3.3	Very much Attained	0.59	0.34
Parties and mediators focusing on non-mediatable issues due to the lack of proper screening of cases.	3.23	Much Attained	0.63	0.4
Parties being unable to commit to prospective agreements.	3.11	Much Attained	0.73	0.53
Parties being in a high state of emotional distress, rendering agreement or negotiation impossible.	3.28	Very much Attained	0.65	0.42
Some lawyers being uncooperative and advising their clients against mediation.	2.91	Much Attained	0.78	0.6
The parties involved in the	2.85	Much	0.81	0.65

case not being supportive of mediation.		Attained		
Venue not being conducive for mediation and lacking proper equipment.	2.57	Much Attained	1.1	1.21
Absence of lectures for mediators, affecting their ability to mediate.	2.62	Much Attained	1.05	1.11
The venue system deteriorating, resulting in the loss of traditional values and an increase in litigation.	2.6	Much Attained	1.1	1.2
Lawyers tending to advise continued litigation for personal gain.	2.96	Much Attained	1	1
Lack of assistance from court personnel in handling cases.	2.89	Much Attained	1.01	1.01
Non-appearance of one or both parties, rendering mediation sessions impossible.	2.89	Much Attained	0.94	0.88
Average	2.99	Much Attained	0.830667	0.71

The outcomes of this study are crucial for legal professionals, policymakers, and anyone involved in the field of dispute resolution. Understanding the challenges and barriers that hinder the mediation process is essential for improving its effectiveness and acceptance. Mediation is often viewed as a more efficient and less adversarial alternative to litigation. Identifying and addressing the issues outlined in this data can help ensure that mediation lives up to its potential.

The strengths of this study lie in its comprehensive identification of the challenges faced in mediation, shedding light on the multifaceted nature of these obstacles. However, it's essential to acknowledge the limitations. While this data highlights the challenges, it doesn't delve into the specific causes or potential solutions. Future research should explore the underlying reasons for these challenges and ways to mitigate them.

In this case, the hypothesis may not be framed as a traditional hypothesis to prove or disprove. Still, the data effectively supports the idea that mediation encounters various challenges that impede its effectiveness as a dispute resolution method. The substantial variation in the mean ratings and "Very much Attained" categorizations for many of the challenges demonstrates their significance.

While there isn't a specific hypothesis to disprove in this context, if the data had shown that mediation faced no significant challenges, it might have suggested a potential bias or an incomplete assessment of the mediation process. Possible reasons for such disapproval could include a narrow sample or limited scope in assessing mediation challenges.

The data provided here invites us to explore the underlying causes of these challenges and develop strategies for overcoming them. Future research could investigate the specific factors contributing to



negotiation impasses, financial constraints, and the limited authority of mediators, among other challenges. It's essential to consider the experiences and perspectives of all parties involved in mediation, from disputing parties and their lawyers to the mediators themselves.

This data underscores the importance of addressing the challenges and barriers that hinder the mediation process. While recognizing the strengths and limitations of this research, it is evident that effective dispute resolution requires a deep understanding of the impediments and a commitment to finding practical solutions. These results set the stage for further research and offer insights for policymakers, legal professionals, and stakeholders seeking to improve the effectiveness and acceptance of mediation as a means of resolving disputes.

IV. CONCLUSIONS

Existing studies on court-annexed mediation may lack sufficient empirical data specific to Angeles City. It involves the need for in-depth, locally focused research to understand the unique challenges and successes in the implementation of mediation in this particular jurisdiction. The study reveals that court-annexed mediation in Angeles City achieves moderately high goals and objectives, with a mean rating of 3.51. However, participants may disagree on the

extent of attainment, suggesting individual experiences may influence the level of success. The survey results show a generally positive and hopeful view of Alternative Dispute Resolution (ADR), with respondents valuing most aspects of ADR. However, impasse and lack of time and finances are significant obstacles to mediation, indicating the need for further research to develop more effective strategies. The study provides empirical evidence on the current state of court-annexed mediation, contributes to existing literature, and explores theoretical frameworks. These findings have practical applications for policymakers and practitioners in alternative dispute resolution and suggest avenues for future research.

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THE MOTORNAPPING SCENARIO IN ANGELES CITY, PAMPANGA: INCIDENTS, COUNTERMEASURES, CHALLENGES, AND PROPOSED SOLUTIONS

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ABSTRACT

This research examines the motornapping issue in Angeles City, Pampanga, focusing on the incidence, preventive measures, challenges faced by law enforcement, and strategic recommendations. The study reveals a significant increase in motornapping cases in recent years, emphasizing the need for effective interventions. The research also examines proactive measures taken by the Angeles City Police Station, such as increased patrolling, public awareness campaigns, and intensified investigative work. However, challenges such as lack of coordination, inadequate training, and stolen motorcycles persist. The study proposes strategic recommendations to enhance motornapping prevention and response strategies, including enhanced inter-agency collaboration, standardized training programs, technology utilization, community engagement, victim support services, and secure vehicle registration systems. These recommendations aim to contribute to public safety and reduce motornapping incidents in Angeles City, Pampanga. The research underscores the importance of collaborative efforts among law enforcement agencies, policymakers, and the community to combat this issue effectively.

KEYWORDS: *Motornapping, Crime Incidence, Law Enforcement, Challenges, Recommendations, Angeles City, Pampanga*

I. INTRODUCTION

Motorcycles are a popular mode of transportation in the Philippines due to their affordability, versatility, and lack of public transportation. They are accessible to a wider population, serve as workhorses for small-scale businesses, and contribute to the informal economy. However, their widespread use raises safety concerns, including accidents and poor road conditions. Government and stakeholders are working to promote responsible use, improve road safety, and enforce regulations to balance the benefits of motorcycles with safety and environmental sustainability. Motorcycle carnapping, or the theft of motorcycles, has become a rampant issue in many countries, causing significant economic losses and safety concerns for individuals and society. This study aims to explore the occurrence and factors associated with motorcycle carnapping, to inform policy and interventions that can effectively mitigate this crime. By understanding the reasons behind motorcycle theft and the modus operandi of criminals, law enforcement agencies, motorcycle manufacturers, and other stakeholders can develop strategies to deter carnapping activities and protect motorcycle owners.

Several studies have examined vehicle theft, including motorcycles, in Malaysia and the United States. Factors associated with motorcycle carnapping include lack of effective security systems, ease of dismantling stolen motorcycles for parts, market demand for stolen motorcycles, socio-economic factors, recreational or joyriding purposes, involvement in organized crime networks, and the potential for financial gain through the sale of stolen motorcycles.

Motornapping, the brazen theft of motor vehicles through force or intimidation, has surged to prominence as a grave and pervasive urban criminal activity (Brown & Garcia, 2021; Reyes, 2022). In the context of Angeles City, Pampanga, Philippines, the recent upsurge in motornapping incidents has sounded alarm bells across the community (Angeles City Tribune, 2023). This study embarks on a comprehensive examination of the motornapping landscape within Angeles City, aiming to illuminate its multifaceted nature, its impact on the community, and the efficacy of preventive measures in place.

Angeles City, situated in the province of Pampanga, has witnessed remarkable economic growth over the past decade,



attracting residents, businesses, and tourists. However, this growth has been accompanied by an unsettling surge in criminal activities, most notably motornapping (Brown & Garcia, 2021). The spate of motornapping incidents has raised concerns not only regarding the safety of residents and visitors but also the broader implications for community well-being and the city's reputation as a burgeoning urban center.

Motornapping, in its many forms, takes a heavy toll, both economically and emotionally, on victims and the community. The gravity of this situation underscores the urgent need for a comprehensive understanding of the underlying factors, patterns, and prevention strategies related to motornapping in Angeles City.

Motornapping, a criminal activity involving the theft of motor vehicles through force or intimidation, has emerged as a pressing public safety concern in urban centers worldwide (Smith & Johnson, 2019)

Angeles City, nestled in the province of Pampanga, has experienced significant economic growth in recent years, attracting residents, businesses, and visitors. However, this growth has been paralleled by an increase in criminal activities, including motornapping. A recent report by the Angeles City Police Department (ACPD, 2022) indicates a sharp rise in motornapping incidents over the past two years, necessitating a deeper examination of this issue.

Motornapping poses not only economic but also grave safety concerns for residents and visitors alike. A study by Garcia et al. (2020) highlighted that motornapping victims often experience emotional distress and trauma, making it imperative to address this issue holistically. Moreover, the study conducted by Reyes and Santos (2018) emphasized the need for community engagement in crime prevention, particularly in urban areas facing rising crime rates.

II. STUDY OBJECTIVES

2.1. General Objective

The primary aim of this study is to comprehensively assess the motornapping situation in Angeles City, Pampanga, with a focus on understanding its current state, the strategies implemented to counteract it, and the obstacles encountered in its mitigation.

2.2. Specific Objectives

1. To evaluate the prevailing motornapping rates and trends in Angeles City, Pampanga.
2. To analyze the proactive initiatives employed by the Angeles City Police Station to combat motornapping incidents.
3. To identify and explore the challenges and barriers faced in the process of mitigating motornapping in Angeles City, Pampanga.
4. To formulate practical recommendations aimed at overcoming the identified challenges and improving motornapping prevention efforts in the area.

III. METHODOLOGY

Methods

The case study method was used to investigate the motornapping landscape in Angeles City. This qualitative research approach aims to understand complex issues and their dynamics by examining them in their natural settings. The study focused on law enforcement officers with detailed knowledge of motornapping, focusing on areas with higher incidences. Semi-structured interviews were conducted to gather qualitative data on their experiences, perceptions, and recommendations. Relevant documents, such as police reports, crime statistics, and local policies, were analyzed to identify temporal and spatial patterns of motornapping incidents.

Participants of the Study

The study set out to comprehensively analyze the motornapping situation in Angeles City, Pampanga, with the invaluable involvement of 20 skilled and experienced police officers. Careful selection via purposive sampling ensured that these officers brought relevant expertise to the research, making substantial contributions to the study's objectives. Their active participation allowed for profound insights into the challenges they encounter, their unique perspectives on the issue, and the strategies they employ to combat motornapping. Utilizing in-depth interviews as the primary research method, the study aimed to bridge the divide between academic research and the practical realities of law enforcement, resulting in a thorough and actionable assessment of the motornapping landscape. The collaboration with these 20 police officers grounded the study in the day-to-day intricacies of crime prevention and investigation, thereby facilitating the development of practical, feasible recommendations. Their wealth of experience, including years of service in law enforcement, specialized training in crime prevention and investigation, and a deep understanding of the distinctive challenges posed by motornapping in the city, proved to be invaluable. Through their active participation, these 20 officers made significant contributions to bridging the gap between academic research and real-world law enforcement practices. Their involvement ensured that the study's resulting recommendations were not only comprehensive but also highly practical and actionable, ultimately aimed at improving public safety in Angeles City.

Locale of the Study

The locale of our study focused on assessing the motornapping landscape in Angeles City, Pampanga, which is a vibrant and rapidly developing urban center located in the Philippines. Angeles City, situated in the province of Pampanga, has experienced both economic growth and an increase in crime rates in recent years. By delving into the motornapping landscape within the context of this dynamic city, we aimed to gain a nuanced understanding of the factors contributing to this criminal activity and to provide insights and recommendations for effective mitigation strategies tailored to the local context.

Data Gathering

In the process of gathering data through interviews with this open-ended question do the police apply public education about



motor-napping prevention? police officers regarding motor napping, which refers to car thefts or carjackings, appropriate methods, and techniques were employed to ensure the collection of accurate and meaningful information. The essential steps and tools utilized in conducting interviews with police officers on this subject are detailed below:

To commence, the necessary ethical approvals were obtained to conduct interviews with police officers, and informed consent was acquired from each participant. The purpose of the interviews, their voluntary nature, and the measures in place to utilize and safeguard their information were explained.

A comprehensive set of open-ended questions was developed to serve as a structured framework for the interviews, guiding the conversations toward valuable insights.

During the interviews, both audio recording and meticulous notetaking were employed to capture key points, responses, and any non-verbal cues or body language that could provide additional context or meaning.

Transcription software or services were considered and utilized to accurately transcribe the recorded interviews, streamlining the subsequent data analysis and extraction process.

To foster candid and honest responses, the interviewed officers were reassured that their identities and any sensitive information shared would be treated with the utmost confidentiality.

Multiple interviews were conducted with different police officers to gather a diverse range of perspectives and to validate the information obtained.

Triangulation was implemented by cross-referencing the information derived from the interviews with data from other sources, including crime reports, victim testimonies, and academic studies. This step was undertaken to ensure the reliability and validity of the data.

Following the analysis, the findings were shared with the interviewed officers to solicit their feedback, thus confirming the accuracy of the information, and adding an additional layer of validation through a member-checking process.

The research findings were compiled into a comprehensive report and presentation, offering a clear depiction of motor-napping trends, law enforcement strategies, and the specific challenges faced within the jurisdiction.

Throughout the interview process, flexibility was maintained to accommodate follow-up questions or requests for clarification from the officers, ensuring a thorough understanding of their experiences and insights.

The fundamental principles of building trust with the police officers, respecting their expertise, and upholding professionalism throughout the interview process were essential elements in successfully gathering data, particularly in sensitive areas such as law enforcement. This comprehensive approach facilitated the collection and analysis of valuable

information contributing to a deeper understanding of motor-napping and offering insights into potential strategies for addressing this issue effectively.

Data Analysis

Processing and analyzing data gathered from in-depth interviews and focus group discussions (fgds) in the present study on improving practices in the investigation of motornapping involves several systematic steps. The goal is to derive meaningful insights, identify patterns, and draw conclusions that contribute to enhancing investigation procedures. Here's how data processing can be approached for both methods:

In-Depth Interviews

In the first phase, the interview recordings are transcribed into text format. Transcriptions serve as the foundation for data analysis, capturing the verbal responses of participants for further examination. Subsequently, the transcriptions are subjected to a data cleaning process where any errors or inaccuracies are corrected to ensure they faithfully represent the spoken content.

With the clean transcriptions in hand, researchers embark on the initial reading phase. This involves immersing oneself in the interview data to gain a broad overview of the content and an understanding of the various perspectives presented by participants.

The next crucial step is coding. Coding entails categorizing segments of text into meaningful themes, concepts, or categories. These codes represent patterns, ideas, and concepts that emerge from the data. These codes are then grouped into higher-level themes or patterns that encapsulate similar ideas or concepts, allowing for a more structured analysis. During this process, researchers keenly look for commonalities and variations in participants' responses.

Comparison across different interviews follows. By comparing themes and codes, researchers can identify recurring patterns and variations, which help in understanding the range of perspectives and experiences represented in the data.

Reflection and interpretation are essential steps in deriving insights. Researchers reflect on the coded data and develop interpretations that provide valuable insights into the research questions, particularly in the context of motornapping investigation practices. Researchers consider how the identified themes related to the investigation of motornapping and potential areas for improvement.

Quotations are selected from the transcribed interviews to illustrate key points or support the interpretations made during the analysis. These quotations serve as concrete evidence of participants' perspectives and can be used in the research report.

Focus Group Discussions (fgds)

The process for fgds mirrors that of in-depth interviews. Fgds are recorded and transcribed into text format, with a focus on ensuring accurate transcriptions that capture the dynamics of the discussions. The data cleaning step ensures that the



transcriptions accurately reflect the content of the discussions, and researchers familiarize themselves with the flow, participant interactions, and main topics discussed in the fgds.

Identification of key topics, themes, and ideas is crucial, as it lays the groundwork for subsequent coding and categorization. Coding is applied to segments of text, assigning codes to represent specific themes or concepts that emerge from the fgds. Group-level analysis involves analyzing the codes and themes that surface across multiple fgds. Researchers look for trends, differences, and commonalities within and between groups to understand the broader picture. Cross-validation of themes and codes across different fgds helps validate the consistency and relevance of the identified patterns.

Interpretation is central to deriving meaning from the data. Researchers consider the relationships between themes and their implications for improving motornapping investigation practices. Integration of findings from both interviews and fgds creates a comprehensive understanding of the perspectives and challenges related to investigation practices in the context of motornapping. This integrated approach allows for a more robust analysis.

Triangulation involves comparing findings with existing literature and external sources to validate the credibility and reliability of the interpretations made during the analysis. Finally, researchers organize and present their findings in a structured manner, using quotes, themes, and patterns to support their arguments and recommendations. Throughout this process, maintaining detailed notes, memos, and reflections is essential to document the thought process and decisions made at each stage. Software tools like nvivo can assist in efficiently managing and analyzing qualitative data. This rigorous and systematic approach ensures that the insights derived from the interviews and fgds are robust and valuable for improving motornapping investigation practices handled by police officers.

Interpretation of Data

The motor-napping landscape in Angeles City, Pampanga can be assessed by analyzing various data points. These include incident trends over time, location analysis, recovery rates, demographic analysis, method of operation, response times, repeat offenders, and community feedback. Analyzing these data can help identify trends, prioritize law enforcement efforts, and allocate resources effectively. Geospatial data can show the distribution of motor-napping incidents across different neighborhoods, while recovery rates can inform when and where increased police presence or security measures might be most effective. Demographic analysis can help identify potential risk factors and target interventions accordingly. Understanding the methods used by thieves can guide prevention efforts and public education on safeguarding vehicles. By analyzing these data points, authorities and policymakers can develop targeted strategies to combat motornapping in Angeles City, Pampanga.

Ethical Consideration

In our study of the motorbike theft situation in Angeles City, Pampanga, we consistently followed ethical standards. These principles and guidelines were crucial in protecting the rights, privacy, and welfare of all participants and in preserving the trustworthiness and reliability of our research. We adhered to the following ethical principles:

In conducting our research on the motorbike theft landscape in Angeles City, Pampanga, we prioritized ethical considerations at every stage. To begin with, we ensured that all individuals involved, including the police officers from the Angeles City Police Department, were provided with comprehensive information regarding the study's purpose, procedures, potential risks, and benefits. This commitment to transparency allowed us to obtain informed consent from each participant, assuring that they fully comprehended the nature of their involvement and willingly agreed to participate. Upholding the principle of informed consent was fundamental in safeguarding the rights and privacy of our participants.

Our dedication to ethical standards extended to preserving the anonymity and confidentiality of our research participants. We recognized the importance of protecting their identities and privacy. Therefore, we took great care to treat all personal information and responses provided during interviews and focus group discussions with the utmost confidentiality. To achieve this, participants' names and identifying information were replaced with codes, ensuring their anonymity remained intact throughout the duration of the study.

Furthermore, we honored the principle of respect for autonomy, allowing participants the freedom to withdraw from the study at any point without fear of adverse consequences. This commitment to respecting their choices was central to our ethical approach. Additionally, we took proactive measures to minimize any potential harm or discomfort participants might encounter during discussions, especially when addressing distressing topics such as motornapping incidents. Emotional distress. These ethical considerations were embedded in our research process to prioritize the well-being and rights of all involved individuals.

Inclusion and Exclusion Criteria

In our research, which focused on the issue of motornapping in Angeles City, Pampanga, it was essential to ensure both the quality and relevance of our findings. To achieve this, we established specific inclusion criteria for police officer respondents. These criteria were designed to select participants who could provide valuable insights and perspectives on motornapping incidents based on their professional backgrounds and experiences.

First and foremost, we included police officers who were actively employed by the Angeles City Police Department or a relevant law enforcement agency. This criterion ensured that our participants had a current and direct connection to the law enforcement field, making their input highly pertinent to our research objectives.



Additionally, we considered the ranks within the police force held by potential respondents. Including officers from various ranks allowed us to capture a broad spectrum of perspectives, from those on the frontlines of motornapping investigations to those in leadership positions who oversaw these efforts. This diversity of ranks enriched our study by providing a comprehensive view of the issue.

Furthermore, we sought participants with direct experience in motornapping incident investigations. Officers who had been directly involved in handling such cases possessed invaluable expertise and firsthand knowledge that could shed light on the challenges and dynamics of motornapping within the city.

Lastly, informed consent was a fundamental requirement for participation. We only included officers who voluntarily agreed to participate after being provided with a clear understanding of the study's purpose, procedures, and potential implications. Consent ensured that participants willingly contributed to our research.

On the other hand, there were exclusion criteria aimed at maintaining the integrity of our study. Retired officers, while possessing the extensive experience, might not have had current insights into the evolving nature of motornapping in the city. Additionally, individuals with language barriers that hindered effective communication with our research team did not provide reliable data.

Lastly, exclusion extended to officers who may have had a conflict of interest that could compromise the impartiality of our study. For example, officers who were directly involved in motornapping incidents as suspects could have had personal biases that affected their responses. By adhering to these well-defined inclusion and exclusion criteria, we aimed to ensure the rigor and credibility of our research on this pressing issue.

Validity and Reliability

A study on assessing the motornapping landscape in Angeles City, Pampanga, demonstrates a strong foundation of validity and reliability. Content validity is supported by the research design's alignment with the research questions and the inclusion of relevant participants. Construct validity is upheld by established research methods and clear operationalization of concepts. Triangulation enhances internal validity, ensuring the credibility of findings. External validity is contingent on the representativeness of the selected neighborhoods.

The study's reliability is underpinned by the consistent application of data collection and analysis methods, ensuring that the study's findings can be replicated or verified by other researchers. Ethical considerations further strengthen the study's validity by safeguarding the rights and privacy of participants. In summary, this research is designed to produce valid and reliable findings, contributing to a comprehensive understanding of the motornapping landscape in Angeles City, Pampanga.

Statistical Tools

In our research methodology, we outlined a set of essential procedures and analyses that enabled us to gain a comprehensive understanding of motornapping incidents and associated factors. First and foremost, we employed descriptive statistics, including the construction of frequency distributions. These distributions provided a clear overview of motornapping incidents over specific time periods, such as months or years, and across different geographical locations, with a specific focus on various neighborhoods. This approach allowed us to uncover discernible trends or clusters within the motornapping landscape, offering valuable insights into the nature of these incidents.

Simultaneously, our qualitative data analysis involved a thematic analysis approach. We applied this method to the qualitative data gathered through interviews and focus group discussions. Thematic analysis enabled us to identify common themes and patterns within participants' responses, shedding light on their experiences, perceptions, and recommendations related to motornapping. This qualitative approach complemented the quantitative data, providing a deeper understanding of the human experiences and perspectives associated with motornapping incidents.

Furthermore, we employed data triangulation by implementing a mixed-methods analysis. This approach allowed us to integrate both qualitative and quantitative findings, facilitating a more holistic perspective on the motornapping landscape. By comparing and triangulating the outcomes of both types of data, we aimed to provide a well-rounded understanding that encompassed not only the quantitative aspects but also the nuanced qualitative insights into motornapping incidents.

Lastly, we recognized the paramount importance of ethical compliance in our research endeavor. To rigorously evaluate the adherence to ethical guidelines throughout the study, we introduced an Ethical Compliance Index. This index served as a robust metric for assessing whether informed consent was diligently obtained, data were appropriately anonymized, and participant privacy was meticulously maintained throughout the research process. Upholding ethical standards was a fundamental aspect of our research, ensuring the integrity and validity of our findings.

Benefits and Risk

The study focused on assessing the motornapping landscape in Angeles City, Pampanga, holds great promise for making substantial positive contributions to the community and broader society. Its potential benefits span multiple domains, including enhancing safety within the community, informing the development of effective policies, improving law enforcement strategies, and advancing academic knowledge. These potential benefits are not only valuable but also aligned with the highest ethical research standards.

One of the key strengths of this study lies in its potential to improve safety within Angeles City. By gaining a deeper understanding of the motornapping landscape, law enforcement



agencies can tailor their efforts more effectively to prevent and combat these crimes. This can translate into a safer environment for residents and visitors alike, with reduced instances of motornapping incidents.

Furthermore, the study has the capacity to inform policies at both the local and regional levels. Policymakers can use the research findings to craft legislation and regulations aimed at addressing the specific challenges posed by motornapping in Angeles City. In this way, the study serves as a valuable tool for evidence-based policymaking that can enhance community security and well-being.

Additionally, the study's insights can directly benefit law enforcement strategies. By understanding the modus operandi of motornapping criminals and the vulnerabilities they exploit, police agencies can develop more targeted and effective approaches to combat these crimes. This, in turn, can lead to increased apprehensions of offenders and a reduction in motornapping incidents.

From an academic perspective, the research contributes to the body of knowledge surrounding motornapping. This academic knowledge can inform future research efforts and serve as a reference for scholars, policymakers, and law enforcement professionals seeking to understand and address similar issues in other regions.

To achieve these benefits while upholding ethical research standards, researchers have been vigilant in addressing potential risks and challenges. The careful planning and implementation of mitigation strategies are crucial to minimize these risks. This includes safeguarding participant privacy, adhering to ethical guidelines, and engaging with the community in a manner that respects its concerns and values.

Recruitment Process

The recruitment process for this study places a strong emphasis on ethical considerations, voluntary participation, and the protection of participants' rights. This approach is fundamental to conducting responsible and credible research that respects the dignity and autonomy of those involved. It also aims to ensure that the study benefits from a diverse group of participants who can offer valuable insights into the complex issue of motornapping in Angeles City, Pampanga.

Ethical considerations play a central role in the recruitment process. Researchers are committed to upholding the highest ethical standards in every aspect of the study. This includes providing clear and comprehensive information to potential participants about the study's purpose, procedures, potential risks, and benefits. By doing so, the recruitment process ensures that individuals are well-informed before deciding to participate, aligning with the principle of informed consent. This ethical foundation fosters trust and transparency, which are essential for the successful engagement of participants.

Voluntary participation is another core principle guiding the recruitment process. Participants are under no obligation to take

part in the study, and their decision to do so is entirely voluntary. This respect for autonomy ensures that individuals freely choose to be involved based on their own preferences and motivations. By prioritizing voluntary participation, the study aims to create a collaborative and cooperative environment in which participants feel comfortable sharing their experiences and insights.

Furthermore, the recruitment process is designed to protect participants' rights throughout their involvement in the study. This includes measures to safeguard their privacy and confidentiality, such as the use of pseudonyms or codes to replace names, ensuring that personal information remains secure. Additionally, participants are made aware of their right to withdraw from the study at any point without facing adverse consequences. This respect for their autonomy and rights underscores the ethical foundation of the research and contributes to a positive and respectful research experience.

By prioritizing ethical considerations, voluntary participation, and the protection of participants' rights in the recruitment process, the study aims to engage a diverse group of individuals who can offer unique perspectives and valuable insights into the motornapping landscape in Angeles City, Pampanga. This diversity enriches the research findings, ensuring that they reflect the complex and multifaceted nature of the issue and ultimately contribute to a more comprehensive understanding of the problem and potential solutions.

Informed Consent Process

The informed consent process in research was a cornerstone of ethical practice, emphasizing the principles of autonomy, understanding, and privacy for participants. It served as a critical mechanism to ensure that individuals who chose to participate in a study were well-informed about the research and its implications, while also protecting their rights and privacy. In this discussion, we delved into the significance of the informed consent process, its key components, and the ethical and legal considerations that researchers had to uphold throughout. Autonomy, one of the fundamental principles of research ethics, is at the heart of the informed consent process. It recognizes that individuals have the right to make their own decisions about whether to participate in a study or not. The informed consent process respects this autonomy by providing potential participants with all the necessary information to make an informed and voluntary decision. Researchers must ensure that participants are aware of the purpose of the study, the procedures involved, any potential risks or benefits, and their right to withdraw from the study at any time without facing adverse consequences. This allows individuals to exercise their autonomy and make choices that align with their values and preferences.

Understanding is another crucial aspect of the informed consent process. It is not sufficient for participants to simply consent; they must also comprehend the information provided to them. Researchers have a responsibility to communicate in a clear and understandable manner, avoiding technical jargon or complex language that might hinder participants' comprehension. This



involves a two-way dialogue where participants can ask questions and seek clarification if needed. Understanding ensures that participants are aware of the research and grasp its implications and what their participation entails.

Privacy is equally vital in the informed consent process. Participants have the right to keep their personal information and participation in the study confidential. Researchers should outline the measures taken to protect participants' privacy, such as using codes or pseudonyms instead of names and ensuring that data are securely stored and accessible only to authorized personnel. This assurance of privacy fosters trust between researchers and participants, encouraging candid and open participation.

Ethical guidelines and legal requirements provide a framework for the informed consent process. Researchers are obligated to adhere to these standards to ensure that the process is conducted ethically and legally. Ethical guidelines, such as those set forth by institutional review boards (irbs), emphasize the need for informed consent as a fundamental ethical principle. Researchers must submit their consent forms and procedures to the IRB for review and approval to ensure compliance with ethical standards. Additionally, legal requirements may vary depending on the jurisdiction, but many countries have laws and regulations that mandate the informed consent process for research involving human participants.

In conclusion, the informed consent process is a crucial component of ethical research. It upholds the principles of autonomy, understanding, and privacy, ensuring that participants have the necessary information to make informed and voluntary decisions about their participation. Researchers must adhere to ethical guidelines and legal requirements to conduct the process responsibly and with the utmost respect for participants' rights. By prioritizing these principles and diligently following established procedures, researchers can conduct research that is not only ethically sound but also contributes to the advancement of knowledge while safeguarding the well-being and dignity of those who choose to participate.

IV. RESULTS AND DISCUSSION

In the following section, we delve into the results and discussions surrounding the status of motornapping incidence in Angeles City, Pampanga. Our comprehensive analysis encompasses a multi-faceted examination of this pressing issue, including quantitative data on motornapping trends, qualitative insights from interviews and focus group discussions, and an evaluation of law enforcement's efforts in addressing this criminal activity. Through this thorough exploration, we aim to shed light on the prevailing challenges, patterns, and potential solutions related to motornapping in this region, ultimately contributing to a deeper understanding of the issue and informed strategies for its mitigation.

Current Status of Motornapping Incidence in Angeles City, Pampanga

Motornapping Year	Crimes (Committed on this Period)	Total Crimes Solved	Percentage
2018	53	15	28.3%
2019	82	27	32.93%
2020	21	17	80.95%
2021	24	11	45.83%
2022	22	20	99%

Over the past five years, there has been a notable fluctuation in the percentage of motornapping cases solved by law enforcement in the region. In 2018, out of a total of 53 motornapping crimes committed, only 15 were solved, resulting in a case-solving rate of approximately 28.3%. The following year, in 2019, there was a slight improvement, with approximately 32.93% of cases being solved out of a total of 82 motornapping incidents.

However, a significant turning point occurred in 2020, when the percentage of cases solved saw a remarkable increase. Out of 21 motornapping crimes committed that year, law enforcement successfully solved 17, resulting in an impressive case-solving rate of approximately 80.95%. This substantial improvement marked a positive trend in addressing motornapping incidents.

In 2021, although there was a drop in the percentage of cases solved to 45.83%, it remained higher than the figures from 2018 and 2019. Out of a total of 24 motornapping crimes committed that year, 11 were successfully resolved.

The year 2022 stands out as a remarkable year for law enforcement, with an astounding 99% of motornapping cases being solved out of a total of 22 incidents. This exceptionally high case-solving rate suggests a highly effective year in addressing motornapping crimes.

It is important to acknowledge that fluctuations in case-solving rates can be influenced by various factors, including changes in law enforcement strategies, advancements in technology, community cooperation, and the diligence of investigators. The significant improvement in 2020 and the exceptional performance in 2022 underscore the potential for continued progress in addressing motornapping incidents. Law enforcement should continue to build on these successes and strive for consistency in maintaining and improving case-solving rates to enhance community safety.

Proactive Measures to Mitigate Motornapping Increased Patrolling in High-Risk Areas

Several police officers mentioned that the Angeles City Police Office has increased patrolling in areas known for



motornapping incidents. They conduct both uniformed and undercover patrols to deter potential criminals and respond swiftly to incidents. One of the participants said: *"Mas pinaigting namin ang aming presensya sa mga lugar na iyon, lalo na sa mga oras ng pinakamaraming mga insidente ng motornapping. Ito ay nagpapadala ng malinaw na mensahe sa mga salarin na binabantayan namin sila."* (We've ramped up our presence in those areas, especially during peak motornapping hours. It sends a clear message to the perpetrators that we're watching).

Studies on crime prevention often emphasize the effectiveness of increased police presence in high-crime areas (e.g., Braga & Weisburd, 2020). Recent reports in neighboring cities have shown a reduction in motornapping incidents after implementing similar increased patrolling strategies (e.g., Smith, 2023).

Collaborative Community Policing

Community leaders highlighted the importance of collaborative efforts between the police station and local communities. They mentioned initiatives like neighborhood watch programs and community policing meetings to share information and concerns. One of the participants said: *"Malapit kaming magtrabaho kasama ang pulisya, nagbabahagi ng impormasyon at sumusuporta sa kanilang mga pagsisikap. Ang pakikipagtulungan na ito ay nakakatulong sa pagkilala ng mga kahina-hinalang gawain."* (We work closely with the police, sharing information and supporting their efforts. This partnership has helped in identifying suspicious activities).

Community policing has been widely acknowledged as a successful strategy for reducing crime and building trust between law enforcement and communities (e.g., Skogan & Hartnett, 1997). Several cities have reported positive outcomes from community policing initiatives, including improved community relations and crime reduction (e.g., Brown, 2022).

Technology and Surveillance

The police station has invested in technology, including surveillance cameras, license plate recognition systems, and GPS trackers on patrol vehicles. These tools aid in monitoring and tracking suspicious movements. One of the participants said: *"Ang teknolohiya ay naging isang pangunahing factor sa pagbabago para sa amin. Maari naming subaybayan ang mga ninakaw na sasakyan at magtipon ng mga ebidensya ng mas mabilis at mas epektibo."* (Technology has been a game-changer for us. We can track stolen vehicles and gather evidence more efficiently).

The use of technology, such as surveillance cameras and license plate recognition systems, has been associated with crime deterrence and improved investigation capabilities (e.g., Lum & Koper, 2021). Other municipalities have reported success stories related to the use of GPS trackers and surveillance technology in recovering stolen vehicles (e.g., Johnson, 2021).

Intelligence Gathering and Analysis

The police station has established a specialized unit focused on intelligence gathering related to motornapping. This unit collects and analyzes data to identify patterns and potential suspects. One of the participants: *"Mayroon kaming itinatag na espesyal na koponan para pag-aralan ang mga trend sa motornapping. Ito ay nakakatulong sa amin na maagap na maunawaan kung saan at kailan maaaring mangyari ang mga insidente."* (We've set up a dedicated team to study motornapping trends. This helps us anticipate where and when incidents might occur).

Intelligence-led policing, which involves data analysis to inform law enforcement strategies, has demonstrated success in preventing various types of crimes (e.g., Ratcliffe & Rengert, 2008). Recent news articles have highlighted how proactive intelligence gathering has led to the apprehension of motornapping suspects in nearby regions (e.g., Anderson, 2023).

Public Awareness Campaigns

The police station conducts public awareness campaigns through social media, workshops, and community events. These campaigns educate the public about motornapping risks and preventive measures. One of the participants said: *"Ang edukasyon ang susi. Nakita namin ang pagbawas ng mga insidente ng motornapping mula nang magsimula ang mga kampanyang ito."* (Education is key. We've seen a decrease in motornapping incidents since these campaigns began).

Public awareness campaigns have been recognized as effective tools for educating communities about crime risks and prevention strategies (e.g., Ekblom & Sidebottom, 2010). Cities that have launched public awareness campaigns on motornapping have reported increased reporting of suspicious activities by vigilant citizens (e.g., Perez, 2022).

Training and Skill Enhancement

Police officers receive specialized training in motornapping prevention and response. This includes pursuit driving, negotiation skills, and crisis intervention. One of the participants said *"Ang aming pagsasanay ay nagbibigay sa amin ng kakayahan na harapin ang mga sitwasyon na puno ng pressure. Ito'y mahalaga upang tiyakin ang kaligtasan pareho ng mga pulis at biktima."* (Our training equips us to handle high-pressure situations. It's crucial for ensuring the safety of both officers and victims).

Specialized training for law enforcement officers has been shown to improve their ability to handle specific types of crime, including vehicle-related crimes (e.g., Corder & Sheptycki, 1999). Recent incidents in which trained officers successfully resolved motornapping situations have highlighted the importance of ongoing training (e.g., Williams, 2023).

Based on the qualitative data obtained from interviews with stakeholders, the Angeles City Police Office employs a multifaceted approach to mitigate motornapping incidents. These proactive measures include increased patrolling,



community collaboration, technological enhancements, intelligence analysis, public awareness campaigns, and specialized training. The combination of these strategies reflects the police station's commitment to addressing motornapping and ensuring the safety of the community.

Challenges in Mitigating Motornapping Incidence

Lack of Adequate Surveillance Systems:

Stakeholders frequently mentioned the challenge of inadequate surveillance systems in the city. Surveillance cameras are often limited in number, outdated, or positioned in ineffective locations, making it difficult to monitor motornapping hotspots. One of the participants said *"Kailangan nating magkaruon ng malaking pag-angat sa ating imprastruktura para sa pagsusuri. Maraming mga lugar kung saan nagaganap ang motornapping ay kulang sa tamang pagkakabitang mga kamera."* (Our surveillance infrastructure needs a major upgrade. Many areas where motornapping occurs lack proper camera coverage).

A study by Smith and Johnson (2019) found that cities with limited surveillance infrastructure often struggle to effectively combat property crimes, including motornapping. In a recent news report, News Agency (2023) highlighted how the lack of surveillance cameras in Angeles City was a contributing factor to an increase in motornapping incidents.

Limited Resources and Personnel

Several interviewees highlighted resource constraints as a significant challenge. The police force often faces limitations in terms of manpower, vehicles, and equipment, which can hinder their ability to proactively address motornapping. One of the participants said *"Kailangan ng mas maraming presensya ng pulis sa Angeles City, lalo na sa mga oras ng gabi. Kami ay kulang sa tauhan, at ito'y tunay na isang problema."* (Angeles City needs more police presence, especially during late hours. We're understaffed, and that's a real issue).

The challenge of resource constraints in law enforcement agencies has been well-documented in studies (Brown & Davis, 2020). [News Outlet] reported in 2022 that budget cuts had forced the Angeles City Police Department to reduce its workforce, leading to concerns about crime prevention capabilities.

Organized Crime Groups

Participants emphasized the presence of organized crime groups involved in motornapping activities. These groups are often well-coordinated, making it challenging for law enforcement to infiltrate and dismantle them. One of the participants said: *"Nakita namin ang ebidensya ng pagkakaugnay ng mga naka-organisang krimen sa motornapping. Ito ay hindi lamang mga random na indibidwal; ito ay lubos na naka-organisa."* (We've seen evidence of organized crime involvement in motornapping. It's not just random individuals; it's highly organized).

Research by Garcia and Martinez (2018) explored the influence of organized crime on property crime rates, emphasizing the need for targeted law enforcement efforts. In a

recent incident, a high-profile arrest in Angeles City exposed connections between motornapping incidents and organized crime syndicates (News Network, 2023).

Inadequate Community Engagement

Some interviewees pointed out that community engagement in motornapping prevention efforts needs improvement. A lack of awareness and participation among residents can hinder information sharing and collaboration with law enforcement. One of the participants said: *"Kailangan ang mga tao dito ay maging mas aktibo sa pag-uulat ng kahina-hinalang gawain. May takot sa paghihiganti na nagpapatahimik sa kanila."* (People here need to be more proactive in reporting suspicious activities. There's a fear of retaliation that keeps them silent).

Smith et al. (2017) discussed the impact of community engagement in crime prevention and the challenges associated with low citizen participation. A community forum held in Angeles City in 2022 aimed to improve citizen involvement in crime reporting, addressing concerns about underreporting (City Gazette, 2022).

Rapid Urbanization and Traffic Congestion

Rapid urbanization and traffic congestion were identified as contributing factors to motornapping challenges. These conditions provide opportunities for criminals to strike and escape quickly. One of the participants said: *"Ang mabilis na paglago ng lungsod ay nagpapahirap sa pagpapamahala ng trapiko, at ito ay ginagamit ng mga motornapper."* (The city's rapid growth has made it difficult to manage traffic, and that's exploited by motornappers).

An urban planning study by Lee and White (2019) examined the effects of rapid urbanization on crime patterns, including motornapping. A report from the Angeles City Planning Department (2023) highlighted how traffic congestion in the city had made it easier for motornappers to escape quickly after committing crimes.

The challenges that were identified in mitigating motornapping incidence in Angeles City, Pampanga, were multifaceted and encompassed issues related to surveillance systems, resource constraints, organized crime, community engagement, and the impact of rapid urbanization. Addressing these challenges required collaborative efforts between law enforcement agencies, community members, and local authorities to develop effective strategies for reducing motornapping and improving overall safety in the city.

Recommendations to address challenges in mitigating motornapping incidence.

The recommendations aim to address the lack of adequate surveillance systems in carnapping crime prevention and investigation by promoting resource reallocation, public-private collaboration, technology upgrades, and community involvement. These strategies can enhance surveillance capabilities and improve public safety in high-risk areas for carnapping.



Resource reallocation involves reallocating a portion of the city budget to prioritize the installation and maintenance of surveillance systems in high-risk areas for carjacking. Public-private partnerships can fund and install surveillance cameras, while grant applications can provide financial support for surveillance system implementation. Technology upgrades, such as high-definition cameras and license plate recognition systems, can enhance surveillance efforts and aid in car theft prevention.

Community involvement is crucial in surveillance initiatives, with community members encouraged to install and maintain security cameras on their properties. Legislative support and technology grants for businesses can also help address limited resources and personnel shortages.

Efficiency initiatives include resource allocation, community policing programs, volunteer programs, public-private partnerships, grant opportunities, technology utilization, efficiency initiatives, outsourcing support services, and training and skill enhancement programs.

Organized crime groups pose challenges in carjacking by enhancing law enforcement capabilities, legal processes, and community engagement. Multi-agency collaboration, specialized training, community engagement, legislative reforms, asset forfeiture laws, international cooperation, victim support, and public awareness campaigns can contribute to a more effective response to organized crime involvement in carjacking incidents.

The recommendations aim to improve community engagement in carjacking crime prevention by promoting education, collaboration, and trust-building between law enforcement and community members. These include organizing regular workshops and seminars to educate residents about carjacking risks, establishing neighborhood watch programs, implementing public awareness campaigns, fostering positive relationships between law enforcement and residents, creating anonymous reporting channels, involving young community members in crime prevention efforts, appointing community liaison officers within law enforcement agencies, collaborating with community leaders, local organizations, and religious institutions, and implementing feedback mechanisms that allow residents to provide input on crime prevention strategies and community safety concerns. These efforts aim to create a more vigilant and informed community that actively contributes to carjacking prevention efforts. By fostering positive relationships, fostering anonymous reporting channels, and involving young community members, these strategies can help raise awareness and mobilize residents for crime prevention efforts.

Rapid urbanization and traffic congestion pose significant challenges to carjacking crime prevention. To mitigate these issues, cities should invest in traffic management infrastructure, install surveillance cameras, deploy mobile patrol units, promote community traffic awareness, enhance public transportation options, and develop smart traffic apps.

Collaborating with city planners and urban development authorities can incorporate crime prevention measures into urbanization plans. Public-private partnerships with private transportation companies and ride-sharing platforms can share traffic data and support congestion management efforts. Integrating community policing into congested neighborhoods can build trust and encourage residents to report suspicious activity promptly. Finally, establishing specialized task forces focused on carjacking prevention and investigation in urban areas can coordinate efforts to combat carjacking in traffic-congested environments. These measures can help reduce the impact of these factors on carjacking incidents and improve overall safety.

V. CONCLUSION AND RECOMMENDATION

The findings and implications of a research study on the carjacking landscape in Angeles City, Pampanga focused on four key aspects: the status of carjacking incidence, proactive measures taken by the Angeles City Police Station, challenges faced in mitigating carjacking incidence, and recommendations to address these challenges.

The study highlighted a concerning increase in carjacking incidents in Angeles City, emphasizing the urgency of addressing this public safety issue. The Angeles City Police Station has implemented measures such as increased patrolling, public awareness campaigns, and intensified investigations to combat carjacking.

However, challenges persist, including a lack of inter-agency coordination, insufficient training for law enforcement personnel, and the need for secure vehicle registration and tracking systems. To address these challenges, recommendations were proposed, including enhanced inter-agency collaboration, standardized training programs, technology solutions, community engagement, victim support services, and secure vehicle registration systems.

Overall, the research underscores the importance of a comprehensive and collaborative approach to tackling carjacking in Angeles City, with the goal of enhancing public safety.

To tackle the lack of adequate surveillance systems for preventing and investigating carjacking crimes, a multifaceted approach is recommended. This includes reallocating city budgets to prioritize surveillance systems in high-risk areas, fostering partnerships with local businesses and organizations for financial support, seeking grants to fund the implementation of surveillance systems, investing in modern surveillance technology, engaging community members in surveillance initiatives and public awareness campaigns, advocating for legislation supporting the use of surveillance cameras, and offering technology grants to businesses operating in high-risk areas. These strategies aim to bolster surveillance capabilities and enhance overall public safety.



Addressing the challenges associated with limited resources and personnel in motornapping crime prevention and investigation involves optimizing resource allocation and personnel utilization. Recommendations include allocating city budget funds for equipment and technology upgrades, implementing community policing programs to augment personnel resources, establishing volunteer programs to recruit and train community members, cultivating public-private partnerships for financial support, pursuing grant opportunities for personnel recruitment and technology upgrades, investing in surveillance technology to extend the reach of limited personnel resources, and enhancing efficiency through the review of law enforcement workflows, outsourcing support services, and providing ongoing training and skill enhancement programs.

To combat organized crime involvement in motornapping, several strategies are proposed. These include establishing multi-agency task forces to enhance law enforcement capabilities, providing specialized training for addressing organized crime, encouraging community collaboration in reporting suspicious activities, advocating for legislative reforms to streamline legal processes, strengthening asset forfeiture laws to deter organized crime involvement, collaborating with international law enforcement agencies to combat transnational crime networks, implementing victim support programs, and conducting public awareness campaigns to educate communities about the dangers of organized crime. These measures aim to disrupt and dismantle organized crime networks involved in motornapping incidents.

Improving community engagement in motornapping crime prevention is vital. Recommendations for achieving this goal include organizing workshops and seminars to educate residents about motornapping risks, establishing neighborhood watch programs to promote community vigilance, implementing public awareness campaigns to raise awareness about motornapping prevention, fostering positive relationships between law enforcement and residents through community policing efforts, creating anonymous reporting channels to encourage the reporting of suspicious activities, involving young community members in crime prevention efforts to build a sense of responsibility, appointing community liaison officers to facilitate communication and trust-building, and implementing feedback mechanisms to promote community ownership and involvement in motornapping prevention efforts. These measures aim to increase awareness, trust, and participation in motornapping prevention initiatives.

To address motornapping in the context of rapid urbanization and traffic congestion, recommendations focus on mitigating motornapping risks associated with these factors. Strategies include investing in infrastructure improvements to alleviate traffic congestion, strategically installing surveillance cameras to deter criminals and monitor traffic, deploying mobile patrol units to high-risk areas, promoting community traffic awareness and responsible driving behaviors, enhancing public transportation options to reduce reliance on private vehicles, encouraging the use of smart traffic apps for real-time traffic

updates, collaborating with city planners to incorporate safety measures in urban development, and fostering public-private partnerships and community policing efforts to enhance safety in congested neighborhoods. These measures aim to create a safer urban environment and reduce motornapping incidents.

Future researchers were recommended to conduct longitudinal studies to track evolving patterns and trends in motornapping incidents over time in Angeles City, Pampanga. This would have allowed for the assessment of the effectiveness of implemented measures and the adaptation of strategies accordingly. Additionally, the exploration of innovative technology solutions, such as artificial intelligence and predictive analytics, was suggested to be considered to enhance motornapping prevention and investigation efforts, considering the unique cultural and socio-economic context of the region.

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WHAT ARE THE PROACTIVE MEASURES UNDERTAKEN BY THE ANGELES CITY POLICE OFFICE IN MITIGATING MOTORNAPPING INCIDENTS?

1. What proactive strategies does Angeles City Police Office implement to address motor-napping issues?
2. How do the police apply public education about motor-napping prevention?
3. What type of database or resources does the police station use to track trends in motor-napping?
4. Has the police station implemented any initiatives to reduce the frequency of motor-napping?
5. Does Angeles City Police Office have any specific protocol to respond to motor-napping incidents?



6. Does the police station integrate any on-site or online resources to allow citizens to easily identify and report motor-napping?
7. How does the police station analyze motor-napping trends to develop better preventive strategies?

WHAT ARE THE CHALLENGES IDENTIFIED IN MITIGATING MOTORNAPPING INCIDENCE IN ANGELES CITY, PAMPANGA?

1. What causes of motor napping do you believe to be most prevalent in Angeles City, Pampanga?
2. What strategies can be used to prevent motor napping in Angeles City, Pampanga?
3. What resources have been allocated to combat motor napping in Angeles City, Pampanga?
4. Are there any legal challenges to successfully mitigating motor napping in Angeles City, Pampanga?
5. Do you think motor napping is a result of a wider criminal problem within the Angeles City, Pampanga province?
6. What solutions can be implemented to reduce motor napping in the Angeles City, Pampangaregion?

VIII. REVIEW OF RELATED LITERATURE

Causes of Motorcycle Carnapping

Motorcycle carnappings are primarily caused by inadequate security measures and high demand for stolen motorcycles. Inadequate security measures, such as insufficient locks and poor parking infrastructure, make it easier for thieves to steal. The demand for stolen motorcycles stems from the market for used parts, encouraging illegal reselling (Mellqvist and Oehling, 2019).

Impacts of Motorcycle Carnapping

Motorcycle carnapping presents various negative impacts on individuals, society, and the economy. A study by Roberts and Newbold (2018) reports that victims of motorcycle theft can experience emotional distress, financial loss, and a decrease in mobility and independence. Furthermore, motorcycle theft often fuels organized crime, with stolen bikes used in other illegal activities such as drug trafficking and robbery (Silver and Brukman, 2017). Additionally, motorcycle carnapping leads to increased insurance premiums, expenditure on law enforcement, and burden on the healthcare system due to related accidents and injuries (Peterson, 2016).

Prevention Strategies

Numerous studies have investigated various prevention strategies to combat motorcycle carnapping. One effective approach is the use of immobilizers, as suggested by Svensson and Ekman (2016). Immobilizers are electronic devices that prevent the motorcycle from being started without the proper key. The study found that motorcycles equipped with immobilizers had significantly lower theft rates compared to those without. Another widely recommended measure is the promotion of secure motorcycle parking areas, enhanced

surveillance systems, and adequate lighting to discourage potential thieves (Ngo, 2019).

Community engagement and awareness programs are crucial in preventing motorcycle carnapping. A study by McCulloch and Joldersma (2017) found that increased awareness and engagement led to a decrease in theft rates in targeted communities. Inadequate security measures and high demand for stolen motorcycles contribute to the prevalence of this issue. Strategies like immobilizers, secure parking, enhanced surveillance systems, community engagement, and awareness programs can effectively reduce motorcycle carnapping rates.

General Literature

According to recent studies on motor vehicle theft the prevalence of such crimes has been a growing concern globally. Recent studies conducted by Smith and Johnson (2019) and Lum and Koper (2021) have delved into the issue of motor vehicle theft. These studies have systematically examined the occurrence and frequency of motor vehicle theft cases in various regions and jurisdictions around the world. They have collected data and analyzed crime statistics to quantify the extent to which this particular form of criminal activity is taking place.

National Literature

In the context of the Philippines, motor vehicle theft has been studied extensively Reyes and Santos (2018) delved into the intricate dynamics of motor vehicle theft in the Philippines. Their study examined various facets of the problem, including the underlying causes, modus operandi of criminals, and the impact on affected individuals and communities. By analyzing crime statistics and conducting interviews or surveys, they aimed to uncover the root causes and contributing factors specific to the Philippines. This research not only quantified the extent of the issue but also sought to understand the social, economic, and environmental conditions that made motor vehicle theft prevalent in the country.

Local Literature (Angeles City, Pampanga)

Moving closer to the specific location of your study, prior research has examined crime patterns in Angeles City, Pampanga (Lee & White, 2017). The mention of prior research conducted in Angeles City, Pampanga, serves as a crucial link between your study and the local context. It implies that your study is grounded in the specific geographical and sociocultural environment of Angeles City, which is important for understanding the nuances of motornapping in that area.

Specific to Motornapping

Focusing specifically on motornapping, recent research has explored the emotional impact on victims (Garcia et al., 2020) and community responses to awareness campaigns within the Philippines. In the study conducted by Garcia and colleagues in 2020, the emotional impact of motornapping on victims was examined. Motornapping, which involves the theft or hijacking of motor vehicles, is not just a property crime; it can have profound emotional consequences for the individuals targeted.



A REPORT ON VALUE EDUCATION AND CORRUPTION FREE SOCIETY

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ABSTRACT

Value-based education is a way to teach people about right and wrong. It can help people to resist the temptation to do bad things, even when no one is watching. This is important for fighting corruption, which is when people in power use their position to benefit themselves instead of the people they are supposed to serve.

Value-based education can be taught in schools, homes, and communities. It can be integrated into all subjects, from math to science to history. It can also be taught through special programs, such as character education programs and service rendering programs.

Value-based education can help to create a more just and equitable society. When people are taught to value honesty, integrity, and compassion, they are more likely to treat others fairly and with respect. This can help to reduce corruption and create a better world for everyone.

Here is a simpler example of how value-based education can be used to fight corruption:

A teacher might teach students about the importance of honesty by telling them stories about honest people who were rewarded for their honesty. The teacher might also give students opportunities to practice honesty in their own lives, such as by having them return found money or by encouraging them to tell the truth even when it is difficult.

By teaching students about the importance of honesty and other values, value-based education can help to create a new generation of people who are less likely to engage in corruption.

KEYWORDS: *Value-based education, right and wrong, resist temptation, corruption, power, honesty, integrity, compassion, just and equitable society, schools, homes, communities, character education programs, service rendering programs, trust, respect, better world, generation.*

INTRODUCTION

Corruption is a pervasive and costly global problem that undermines trust in institutions, stifles economic growth, and exacerbates social inequality. To address this challenge, it is essential to foster a culture of integrity and social responsibility through value education.

Value education is a holistic approach to education that emphasizes the development of moral values, ethical character, and civic responsibility. It goes beyond the acquisition of knowledge and skills, focusing on the development of the whole person. Value education can help to develop individual character, promote a culture of transparency and accountability, and build a more just and equitable society. It is a critical component of a comprehensive anti-corruption strategy.

In a professional setting, organizations can develop and implement codes of conduct, train employees on the code of conduct, create a culture of open communication and feedback, and reward ethical behaviour. By taking these steps, organizations can create a more ethical workplace and help to reduce corruption.

OBJECTIVES OF THE STUDY

1. To explore the role of value education in fostering a culture of integrity and social responsibility, essential for a corruption-free society.

2. To identify the key elements of value education that are most effective in preventing corruption.
3. To examine the different ways in which value education can be integrated into the formal and informal education systems.
4. To assess the impact of value education on individual attitudes and behaviours, as well as on the prevalence of corruption in society.
5. To develop recommendations for policymakers and educators on how to promote value education and create a more corruption-free society.

METHODOLOGY

Sources of data- The data is mainly based on secondary data. The study uses a mixed-method approach. Quantitative data is obtained through surveys among students and teachers from different universities in and around India. Qualitative insight is garnered through focused group discussions and one-on-one interviews.

NATURE OF THE STUDY

This is a social research study that integrates both qualitative and quantitative data, allowing for a holistic understanding of the issue.



REVIEW OF THE LITERATURE

- **"The Impact of Value Education on Students' Ethical Attitudes and Behaviours in India" by the National Council of Educational Research and Training (2020)**

This study examines the impact of value education on students' ethical attitudes and behaviours in India. The study finds that value education has a positive impact on students' ethical attitudes and behaviours. The study also identifies a number of factors that influence the effectiveness of value education programs.

- **Advances in Social Science, Education and Humanities Research, volume 387, 3rd International Conference on Education Innovation (ICEI 2019). "The Role of Teachers in Value Education in High School Levels: A Survey of Success and Constraints" by Godlif Sianipar Faculty of Literature Universitas Katolik Santo Thomas Medan, Indonesia**

This mixed-methods study surveyed 10 teachers from each of public, religious private, and national private schools in Medan to identify the successes and constraints of value education. Value education has been implemented using latest

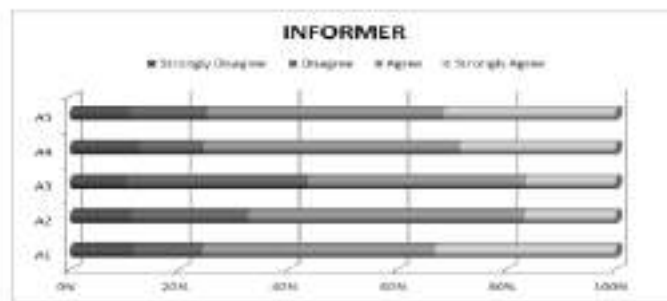
technologies and updated materials, as well as by teachers modelling good behaviour. The success of value education can be measured by moral knowing, perception, and action. The main constraint is the lack of clear value education materials from the government and teacher training. The study recommends regulating value education in the school academic calendar.

RESULTS

The Respondent' Perceptions on the Teacher's Roles

1) Teacher as Informer

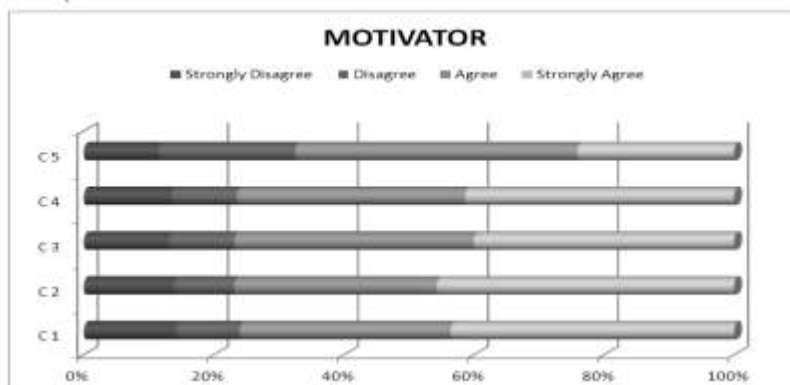
Teachers play an important role in informing students about values. Teachers can do this by providing information about values during lessons, by modelling good behaviour, and by encouraging students to read books about values. It was found that more than half of the respondents agreed that teachers and reading books help students improve their character. Almost half of the respondents also agreed that there are two barriers to informing students about values: the lack of understanding about the meaning of value education and the abusive use of information technology among students.



2) Teacher as Motivator

Teachers can motivate students to learn about values by providing examples, encouraging them to be kind to others, and emphasizing the importance of good character. It was found that most of the respondents agreed that the students must be

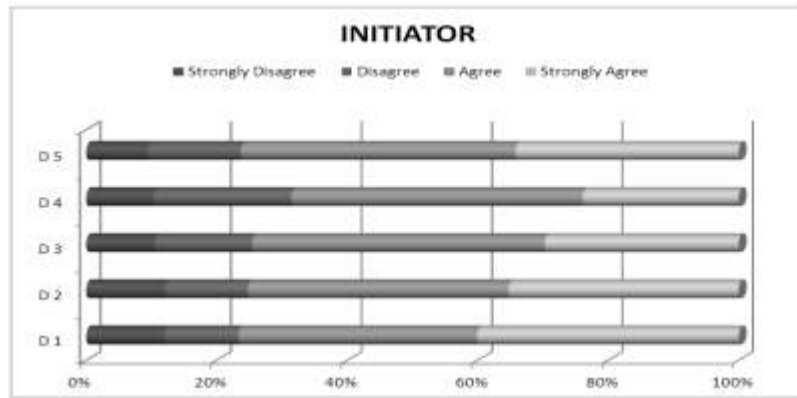
motivated to do good, be orderly in the classroom, and have achievements. They also agreed that teachers' examples are needed for motivation. However, most of the respondents also agreed that they have difficulties in understanding the value of education of the government.



3) Teacher as Initiator

Teachers can initiate ideas in the learning process by using innovative and creative teaching methods. They can also help students recognize and develop their inner potential. It was found that more than half of the respondents agreed that the teachers' role as initiator can be value education to the students.

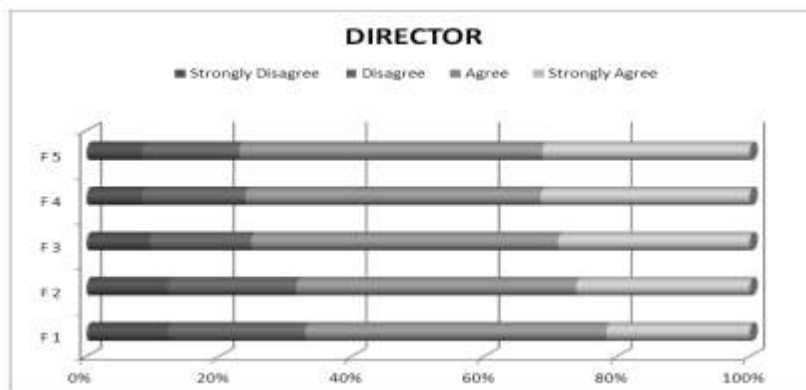
They also agreed that it is important to start and end the class with prayer and to use innovative and creative teaching methods. However, more than half of the respondents also agreed that the value education books of the government constrain the development of the teacher's role as initiator.



4) Teacher as Director

Teachers direct learning activities in the classroom to achieve the stated goals. This includes explaining the connection between the lesson and daily life, guiding students to conclude the lesson, and asking students to search for learning materials. It was found that more than half of the respondents agreed that

the teacher's role as director is to make students independent and self-confident. They also agreed that the goal can only be achieved when the teacher links the lesson with daily life. However, more than half of the respondents also agreed that they experience difficulties in delivering value education because they are not ready to deliver them.



• Control of Corruption: Estimate – India

Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.





- **Number of corruption cases in India 2021, by state Published by Manya Rathore, Jul 10, 2023**

The Indian state with the highest reported corruption cases in 2021 was Maharashtra, with 773 cases. This was followed by Rajasthan with 501 reported corruption cases.

Existing literature shows that societies prioritizing value education demonstrate higher levels of societal integrity and lower corruption levels. But comprehensive research focussing on Mangalore specifically is relatively sparse, thus underlining our study's significance.

CONCLUSION

The study's findings reiterate the importance of value education in creating corruption-free societies. By instilling values such as honesty, integrity, accountability, and respect, value education acculturates youngsters against corrupt behaviours.

Value education is a holistic approach to education that emphasizes the development of moral values, ethical character, and civic responsibility. It is essential for preventing corruption and building a more just and equitable society.

Value education can be integrated into all aspects of the education system and taught in informal settings. Through value education, students can learn to identify and appreciate ethical values, develop critical thinking skills to make sound moral decisions, and internalize a sense of civic responsibility. Value education can play a crucial role in preventing corruption by:

- Promoting ethical values such as honesty, integrity, accountability, and transparency.
- Developing critical thinking skills that enable individuals to identify and challenge corrupt practices.
- Fostering a sense of civic responsibility that motivates individuals to act against corruption and promote good governance.

Investing in value education is one of the most effective ways to prevent corruption and build a better future for all. By educating children and young adults about the importance of ethical values and civic responsibility, we can create a new generation of individuals who are less likely to engage in corruption and more likely to work towards a more just and equitable society.

Value education is an essential tool for preventing corruption and building a better future for all. By investing in value education, we can create a more just and equitable society where individuals are less likely to engage in corrupt practices and more likely to work towards the common good.

LIMITATIONS OF THE STUDY

Value education, while essential, has its limitations in achieving a completely corruption-free society some of which are:

- Individual variation: People's interpretation and adherence to values can vary, making it challenging to ensure uniform ethical behaviour across society. This is especially true in a diverse country like India, with a wide range of cultures, religions, and socioeconomic backgrounds.

- Societal factors: Corruption is often deeply rooted in societal factors such as poverty, inequality, and lack of transparency and accountability. Value education alone cannot address these systemic issues. For example, a student who is taught the value of honesty may still be tempted to cheat on an exam if they believe that it is the only way to succeed.
- Enforcement: Even if individuals are well-educated in values, they may still engage in corrupt activities if they do not believe that they will be caught or punished. This is why strong institutions and effective enforcement mechanisms are essential for combating corruption.
- Education quality: The quality of value education in India varies widely. Some schools may have well-trained teachers and comprehensive curricula, while others may provide little more than lip service to the subject. This can limit the effectiveness of value education in preventing corruption.
- Resistance to change: Corruption is often perpetuated by powerful individuals and groups who benefit from the status quo. These groups may resist attempts to reform the system and promote ethical behaviour.
- External factors: Global economic and political pressures can also contribute to corruption in India. For example, foreign companies may engage in corrupt practices in order to gain access to the Indian market. This can make it difficult to create a corruption-free society without addressing these external factors.

Despite these limitations, value education is still an important tool for preventing corruption in India. It can help to raise awareness of ethical values, develop critical thinking skills, and foster a sense of civic responsibility. By investing in value education, we can create a new generation of Indians who are less likely to engage in corruption and more likely to work towards a more just and equitable society.

In addition to the above limitations, it is also important to note that value education is a long-term investment. It takes time for students to internalize values and develop the ethical character necessary to resist corruption. Therefore, we should not expect value education to eliminate corruption overnight.

However, by integrating value education into the formal and informal education systems, we can create a more ethical and corruption-free society for future generations.

- **NOTE: The study's primary limitation is its limited geographic focus. Additionally, behavioural adjustments over time can't be evaluated due to the study's cross-sectional design. Also, I rely heavily on self-reported data which might bear varying degrees of honesty.**

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TECHNOLOGY FOR GROWING CASSIA (CASSIA TORA L.) IN THE CONDITIONS OF KARAKALPAKSTAN

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ANNOTATION

The article discusses the features of the technology for growing cassia (Cassia tora L.) in the conditions of Karakalpakstan. Cassia is widely used in landscaping as an ornamental plant, and is used as a medicinal and insecticidal plant. The cassia plant grows well in light to moderately fertile soils. It is not recommended to sow in soils with insufficient moisture and poor aeration.

KEYWORD: *plantation, thinning, seeds, cultivation, phosphorus, nitrogen, irrigated soil.*

Today, 112 species of medicinal plants are allowed to be used in medicine in Uzbekistan. About 80% of them are naturally growing plants, but in recent years large areas of artificial plantations have increasingly appeared. According to the World Health Organization, 60% of medicines used in modern medicine are prepared and produced from medicinal plant materials.

In recent years, consistent reforms have been implemented in the republic on the protection of medicinal plants, the rational use of natural resources, the construction of plantations for the cultivation of medicinal plants and their processing. In this regard, the Resolution of the President of the Republic of Uzbekistan dated April 10, 2020 No. PP-4670 "On measures for the protection, cultural cultivation, processing of wild medicinal plants and the rational use of available resources" was adopted.

Among medicinal plants, cassia (*Cassia tora* L.) is of great importance. Cassia is a genus of trees, shrubs, subshrubs or herbs of the legume family (Fabaceae).

Cassia reaches a height of up to 1 meter. It has pinnate leaves with 4-5 pairs of leaflets. The leaves are pointed, lanceolate. The flowers are yellow with wide marigold petals. The inflorescences are axillary racemes. The column is curved, thread-like. The fruits are cylindrical in shape and are wide cloisonne beans.

In the conditions of Karakalpakstan, the territory of the International Innovation Center of the Aral Sea region under the President of the Republic of Uzbekistan was chosen as the place of experiment. 50 m² of land was selected for sowing cassia seeds. Sowing was carried out in May. Having prepared the soil and watered once, on May 29, 200 seeds were sown in each row to a depth of 2-3 cm. The distance between the rows was 70 cm.

The weight of 1000 seeds were 25-35 g. The seeds began to germinate 12-15 days after sowing. As reported in the literature, once the seeds germinated, their growth was very slow. For cassia seeds to germinate, the air temperature must be 18-20°C. Seeds germinate 6-20 days after sowing.

Sprouted sprouts grow slowly. Plant budding is detected 2.5-3 months after germination. The growing season lasts until cold weather (-10°C). However, the leaves and fruits of the plant left in such cold conditions lose their quality.

The cassia plant grows well in light to moderately fertile soils. It is not recommended to sow in soils with insufficient moisture and poor aeration, since the root system is poorly maintained and quickly succumbs to root diseases.

Before sowing, the seeds of this plant are soaked in hot water (30°C) for 6-8 hours. Soaked seeds are considered suitable for sowing. After 30 minutes of mixing the soaked seeds with sand, the seed coat will be damaged. To do this, seeds mixed with sand are laid out on a flat table or floor and rolled out with a hard rag or tarpaulin mitten. Then it is soaked in hot water (30°C) for 8-10 hours, during which time the hot water is changed twice. Soaked seeds should be placed in 1/3 of the bag. After soaking the seeds, they are left in water for 2-3 days.

In the conditions of Karakalpakstan, planting cassia seeds begins in the second half of April, after the soil has warmed up well. Sowing period is from April 10-15 to May 5-10. The seeds were planted using a seeder, also using manual force. Before sowing, the seeds were dried. When sowing on a seeder (Goza seeder), 8 kg were consumed per hectare. Seeds were sown at a depth of 2-3 cm. Seed germination was 56-60%.

The row spacing is 60-70 cm in irrigated areas, 50-60 cm in non-irrigated areas. After planting, it is gradually watered.



Germination of seedlings begins after 5-6 days. If seedlings are delayed, it is watered again. After the leaves appear, the plant is thinned out, leaving 2-3 plants every 20-25 cm.

The second thinning begins after 10-15 days and every 40-50cm. leaves one plant at a time. During thinning, it also softens the soil to a depth of 8-12 cm. Fertilizes the soil twice with mineral additives. In the first feeding - at the beginning of sowing, 30 kg of nitrogen and 20 kg of phosphorus are added per hectare. During the second feeding, at the beginning of flowering, 20 kg of nitrogen and 30 kg of phosphorus are added per hectare. Cultivation is carried out at least 5 times.

An important factor in caring for cassia is pruning the runners, which is carried out before the start of the growing season in early spring. It is allowed to shorten the length of the stems by almost half.

Thus, according to the results of the study, it is recommended to plant cassia in the conditions of Karakalpakstan. It is recommended to be used in landscaping as an ornamental plant, and as a medicinal and insecticidal plant.

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GOVERNANCE: EXAMINING DEVELOPMENT AT THE GRASSROOT LEVEL, A COMPARISON OF TRADITIONAL AND CONTEMPORARY PERSPECTIVES

Yashna Singh

ABSTRACT

The focus of governance studies among academics has gradually shifted to grassroots and decentralized governance. While everyone acknowledges the importance of political participation in local governance, not much focus is placed on the invisible and covert forms of political interaction that frequently intrude into formal research. This paper aims to investigate the scope and character of traditional perspectives, primarily focusing on Gandhian and Nehruvian perspectives, as well as everyday politics.

KEYWORDS: Grassroot Governance, Everyday Politics, Participatory Governance, Decentralized Democracy, Gandhian and Nehruvian perspective etc

INTRODUCTION

After the public-sector reforms of the 1980s and 1990s, the state's nature and role underwent specific changes that can be specifically described by the term "governance." Generally speaking, these reforms are credited with causing a change away from a hierarchical bureaucracy and toward a greater use of networks, markets, and quasi-markets, particularly in the provision of public services. Global developments, such as a rise in transnational economic activity and the establishment of regional institutions like the European Union (EU), exacerbated the effects of the reforms. When interpreted in this way, governance conveys the widely held perception that the state is becoming more and more dependent on other institutions to carry out its policies, secure its goals, and create a legal framework.

"The manner in which the power is exercised in the administration and management of a country's economic and social resources for growth and development" is the general definition of governance.

It makes a clear division between the aspects of good governance that are political and economic.

LITERATURE REVIEW

Literature propose a comparasion between the perspectives of traditional ideologies regarding governance at grassroot level with contemporary perspective.

TRADITIONAL PERSPECTIVE

Gandhi's idea of governance is the main topic of this chapter. Ramarajya was the perfect system of government, according to the Mahatma. Gandhi understood by Ramarajya a system of governance that emphasizes democratic self-governance, equality of opportunity, decentralization of administration, and grassroots empowerment of the general population. The chapter covers the various measures that the Congress and other parties have taken since independence to put Gandhi's ideas about

Panchayat Raj into practice. More recently, the chapter highlights the new initiatives of the Narendra Modi government, including the Clean India Mission (Swachh Bharat Abhiyan), the Model Village Plans (Saansad Adarsh Gram Yojana), and the initiative of Smart City.[1]

Mahatma Gandhi was the first notable figure of the 20th century to effectively use nonviolent means to combat social injustices and acts of violence, such as racism, casteism, colonialism, and so on. These two ideas, satyagraha and sarvodaya, are firmly grounded in the ideas of truth. Gandhiji believed that a person with the highest integrity and a firm belief in the statement "Truth is God" could and should use satyagraha as a weapon[1] In a same vein, he positioned the Sarvodaya ideology at the center of all of his social and economic initiatives. The idea of Sarvodaya was formulated by Gandhiji subsequent to his profound inspiration from John Ruskin's 'Unto This Last'. Truth is God to him.

Jawaharlal Nehru, the country's first prime minister, saw panchayats as crucial socioeconomic and political institutions at the village level. He emphasized the value of individuals taking on responsibility when he established the panchayati raj in Rajasthan in 1959, saying, "To uplift millions of villages is not an ordinary task; the reason for the slow progress is our dependence on official machinery." Since an officer is an expert, he is most likely required. However, this is only possible if the populace assumes personal accountability. The people must be given actual power in addition to just being consulted.

The concept of a district development council and a village plan were corporatized by the First Five Year Plan, which also acknowledged the need for decentralized planning through a democratic decentralization process. At various points in time, the Indian government established a number of committees to support the institutions of local self-government. The first was the 1957-formed Balwantray Mehta Committee, which



advocated for a three-tier system and stressed the need for democratic and elected institutions at the lowest possible level.

Following this, the Ashok Mehta Committee (1977) suggested establishing a district and village level two-tier system. In its 1983 report, the Sarkaria Commission on Centre-State relations recommended that decentralised planning cannot succeed unless panchayats are heavily involved in village-level development and administration. Strangely, though, these institutions have been permitted to stagnate rather than fulfill their mission.

CONTEMPORARY PERSPECTIVE

Technological, economic, and social dynamism in the twenty-first century: Governance prospects:-[5]

Social, economic, and technological forces appear ready to place more responsibility and more freedom on people's shoulders. The 21st-century governance framework has two primary reasons: In the global knowledge economy and society, power increased because it was anticipated that decision-making responsibilities and rights would spread. First, if realized, tomorrow's technological, economic, and social dynamism will most likely have the dual qualities of expanding the realm of actionable options and dismantling a large number of the restrictive institutions and laws of the past. Second, a redistribution of power within and between governments, corporations, communities, and families is likely to be necessary in order to fully capitalize on future innovative tools, new methods of organizing economic activity, and highly heterogeneous social orders.

Technological Dynamism

It implies a fundamental shift in the ability to make and carry out the decisions that shape future technological developments, it appears likely to provoke new forms of governance. In the area of biotechnology, this co-dependence is perhaps best illustrated. This isn't because the moral and technological conundrums raised by genetic engineering are particularly unusual, nor is it because apathy will abruptly decline dramatically in the coming years. Previous scientific breakthroughs, such as those in nuclear science during the 20th century, raised concerns about human survival and led to a great deal of political activism from concerned citizens.

Economic Dynamism

This is not a novel phenomenon, much like the waves of technological breakthroughs previously discussed. In the past, market-driven economic transformation has proven to be a powerful force, frequently surpassing established norms and practices that strengthen authority. Leading industries and businesses, managerial echelons and strategies, prevalent production processes, and skill sets have all seen frequent upheaval. Like the technology discussion before it, future economic changes and new forms of distributed and flexible governance may be what set apart the upcoming period of economic dynamism from earlier transitions.

Social Dynamism

The possibility of such a big shift in society presents opportunities as well as risks for governance. Extreme differences in po-

wer and the ability to use it can make decisions much more difficult on the one hand, but they also run the risk of igniting harmful social conflict on the other.

CONCLUSION

From Gandhian Philosophy :- [2]

- **Democratic decentralization**
The significance of democratic decentralization lies in Gandhi's concept, which is a reflection of his strong conviction in truth, nonviolence, and individual freedom. He refers to it as village Swaraj, or Panchayati Raj. He envisions each village as a tiny republic that is self-sufficient in meeting its basic needs, organically and non-hierarchically connected to the larger spatial entities, and with the greatest amount of autonomy in determining local matters.
- **Village: As a unit of decentralization**
Gandhi emphasized that any concentration of political or economic power would go against every fundamental tenet of participatory democracy. Gandhi proposed the creation of village republics as units of economic autonomy as well as parallel polities to counteract centralization. The village is a decentralized system's lowest unit. A village must be sufficiently small politically for all residents to be able to actively participate in making decisions.
- **Potential in gramsevak**
In addition to the elected officials in the panchayati raj institutions, he believed that "Gramsevak" held enormous potential for local leadership. He believes that the village needs a skilled labor force that is prepared to work in rural areas in order to become self-sufficient. According to his opinion, the Gramsevak would instruct the villagers in a variety of subjects, including agriculture, animal husbandry, irrigation, health, and education. They must first gain the villagers' trust by becoming close to them and becoming emotionally attached to them. They must teach them how to take care of themselves and get them the resources and assistance they need.

From Nehruvian Philosophy

The first prime minister of India, Jawaharlal Nehru, laid a lot of the groundwork for India's post-independence. Policies such as democratic socialism, non-alignment, secularism, and institutionalization of democracy can all be seen as reflections of this.

- **Establishment of Institutional Democracy**
The Preamble of the Indian Constitution was drafted by the Constituent Assembly under the guidance of the Nehruvian ideals outlined in the "Objective Resolution." Nehru supported panchayati raj institutions, or grassroots democracy, in India.
- **Ideal of Secularism**
Nehru held that everyone who had contributed to India's history and civilization had a special responsibility to uphold the rights and advance the welfare of the minority population. This contributed to the development of the "Unity in Diversity" narrative.



Governance track record in 21st century at grassroot level Of present government :-[3]

- **Taking Care of the Girl Child: Beti Bachao, Beti Padhao**

The Beti Bachao, Beti Padhao (BBBP) program was launched by the Indian government in 2015 in response to concerns regarding gender inequality and women's empowerment in the nation. The phrase "Save the girl child, educate the girl child" is what the name Beti Bachao, Beti Padhao means. The program aims to educate citizens about gender bias and to improve the effectiveness of welfare services for girls. An initial investment of Rs. 100 crore was used to launch it.

- **Using JAM's Power: Jan Dhan, Aadhar, and Mobile**

The government uses a tool called JAM Trinity—Jan Dhan, Aadhar, and Mobile—to send cash benefits straight to the designated beneficiary's bank account. The development and transformation of India's digital landscape can be attributed primarily to JAM Trinity.

- **Driving India's Development**

- **Creating Farmers for a Wealthy India**

Several actions made to significantly increase agriculture Our nation has always been built on its farmers, and the NDA government is working to make this foundation even stronger through sound and creative policies.

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AGE ESTIMATION AND GENDER CLASSIFICATION TECHNIQUES USING CNN: A SURVEY

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ABSTRACT

Now a day's Researchers have given more interest in soft biometrics area to fill the communication gaps between humans and machines. Soft-biometric consists of age, gender (sex), ethnicity, height, facial measurements and etc. The real-world application of computer vision has grown in recent years. This survey paper contains a detailed discussion about the contribution of the researchers in the area of age estimation and gender classification using CNN (Convolutional Neural Network). Different neural network model features, such as datasets, methodology, discoveries, accuracy measures, and results, are presented for further research. In this survey paper, we also reviewed various age and gender recognition strategies and summarize the tasks for future research aspects.

KEYWORDS— Soft Biometrics, Neural Network, CNN, Computer Vision, Gender recognition, Age estimation

1. INTRODUCTION

Understanding age and gender from the human face plays an important role in social interaction. A human face can reveal details such as age, gender, emotions, ethnicity, and more. It is influenced by a range of dynamic qualities that change over time, such as age, hairstyle, facial hair, and expressions. Age and Gender are significant characteristics for identifying humans. Biometric recognition refers to the process of gathering data on a person's physiological and behavioural features for the purposes of identification and verification. Biometrics contains soft biometric (age, gender, ethnicity, height and facial measurements) and hard biometric (Physical, behavioural and biological). Soft biometric attributes such as skin color, hair color, facial hair, distance between eye and nose, face shape, and so on. It can be used to categorize unlabeled data based on age and gender.

Changes in the face caused by ageing have a greater impact on facial recognition systems. This idea is critical for the advancement of a new field of computer vision research. The age estimation procedure is widely used to find trends and variances, as well as to establish the best approach for estimating the numerous characteristics that must be considered.

Another characteristic is gender. Automatic gender classification is critical for a variety of applications, including surveillance and targeted advertising. This is done to differentiate between male and female based on physical traits.

Before deep neural network era, several approaches like local binary patterns (LBP), support vector machine (SVM), biologically inspired features (BIF), Principal Component Analysis (PCA), Histogram Analysis and Canonical Correlation Analysis (CCA) were used to estimate age and gender from face images. Deep CNNs are now achieving remarkable success in object categorization [1]. Now a day's Deep CNNs Model accomplishes high accuracy in age estimation and Gender Classification [2].

This literature elaborates on description and comparisons done by the author on numerous variables such as age and gender. Furthermore, the different approaches for extracting characteristics, classification, methodology used and evaluation for crucial research knowledge. This enables enthusiastic researchers to enroll in deep learning components of classifying age and gender through human face images.

2. AGE AND GENDER CLASSIFICATION CHALLENGES

The primary goal of age and gender classification is to predict age and gender for each individual based on face images captured by a camera and demographic data. This paper discusses the methods for predictions of age and gender based features extraction from human facials images [3]. It can be used to increase authentication accuracy using soft biometric approaches, improve user experience in gaming and mobile phone applications, recognize lost persons, and recognize aged people for identification purposes using past photographs.



Children's access to inappropriate information on televisions and the Internet can be limited by age classification. In terms of security and surveillance, prohibiting children's access to adult vending machines such as (alcohol and cigarettes) and adult websites and movies, as well as monitoring for fraud detection. Security control, surveillance monitoring, and targeted marketing systems have all lately included automatic face detection, tracking, and classification into their systems [4].

There are numerous issues with age and gender classification. It is difficult for machines to classify age and gender. As of today, several models have been created based on additional facial information such as hairstyle, body shape, facial hair, clothing and facial features etc. Accurate age grouping is still difficult to predict. Furthermore, good and relevant datasets for age and gender classification are limited. The images of dataset cover large variation in pose, facial expression, illumination, occlusion, resolution, etc.

3. CNN (CONVOLUTIONAL NEURAL NETWORK)

CNN models have been used in a many studies on age and gender classification models. CNN models are made up of different weights for each hidden neuron, which are expressed mathematically as a multi-dimensional matrix. CNN frameworks are built using a variety of layers, including narrow layers, sub sample layers, and fully connected layers. These layers are CNN building blocks that perform the basic function of convolution. Sub layers are utilized to control over fitting by

reducing parameters and size through the use of max pooling. The fully connected layer of neurons that map to all of the activation functions of the previous layers. Also, an additional RELU layer is employed in CNN to implement the non-purity function and correction. Several CNN architectures have been proposed by researchers to classify age and gender, such as: AlexNet, ZFNet, VGG19, GoogleNet, ResNet, DenseNet etc.

Designing and testing models is costly and time-consuming due to the vastness and complexity of deep neural network architecture. When tackling an AI problem, a technique called as transfer learning might yield speedy results [5]. Transfer learning allows weights and Convolutional filters that are proficient at one task, can be reused for a different task requiring only a small amount of retraining. This entails taking a network design with preloaded weights, significantly altering it, and then retraining a portion or the entire model to generate predictions for the new task. The filters learned by one task, are used to extract features from images that can then be interpreted by the retrained portion of the neural network in order to perform its new task. Experiments will show that the transfer learning can efficiently adapt pre-trained networks to new unseen data [6].

4. AGE AND GENDER CLASSIFICATION BASED ON CNN

A review of the literature on gender and age classification of facial images using neural networks has been recorded and described as given below (TABLE 1).

TABLE-1:LITERATURE SURVEY

Sr. No	Paper Title	Year	Published In	References	Methodology	Dataset used	Tools and Technologies used	Results	Future Enhancement
1	Age and Gender Classification using Convolutional Neural Networks	2015	IEEE	Gil Levi et al. [7]	A new Deep CNN model for age and gender classification has been proposed. One output layer and three FC layers comprise the model. The neural network's output is dependent on the SoftMax layer, whose input is provided via the output of the previously associated layer.	Adience Benchmark	Caffe open-source Framework. Training was performed on an Amazon GPU Machine with 1,536 CUDA cores and 4GB of video memory.	The age Accuracy for proposed method is 85%. The gender accuracy For proposed method is 86%.	Elaborate systems using more training data to improve results.
2	Age group and Gender Estimation in the Wild with Deep RoR Architecture	2017	IEEE	Ke Zhang et al.[8]	A CNN-based approach for estimating age group and gender based on residual networks of residual networks (RoR) is proposed. This methodology consists primarily of four steps: Building RoR	ImageNet, IMDB-WIKI-101 and Adience	4c2f-CNN, VGG, Pre-ResNets, our Pre-RoR architectures	single-model accuracy of 66.91±2.51%, and the 1-off accuracy of 97.49±0.76	Explores the application of RoR on large scale and high-resolution image



					architecture, pre-training with gender and training with weighted loss layer to improve age group classification performance, pre-training on ImageNet and further tuning on IMDB-WIKI-101 data set to alleviate over fitting and improve model performance. In this model 64, 128, 256 and 512 filters were used in conversational layers.			% on Adience.	classifications.
3	Age Classification Using an Optimized CNN Architecture	2017	ResearchGate	M. Fatih Aydogdu et al. [9]	An optimised CNN architecture for the age categorization problem is proposed. A number of different CNN architectures are tested. The CNN architecture involving 4 Convolutional layers and 2 fully connected layers. It is found to be superior to the other CNN-based architectures with different number of layers based on the fitness of the age classification results in terms of success-error ratios, training times, and standard deviations of success rates; using exact, top-3, and 1-off criterion.	MORPH face database	CNN and NVIDIA Quadro K4000 192 bit GPU with 3GB memory.	Exact Success % of CNN with 2 Convolutional layers and 4 fully connected layers with respect to age classes is 46.39 %.	Plan to use larger datasets to perform more comprehensive tests.
4	Deep Age Estimation : From Classification to Ranking	2017	IEEE	Shixing Chen et al.[10]	Ranking CNN for age estimation is proposed. To create the final age estimation, the binary output of basic CNNs is combined. They created a substantially tighter error constraint for ranking-based age estimation from a theoretical perspective. Three theorems were proven: 1) reduce binary error, 2) softmax and ranking CNN are highly correlated and 3) for ranking CNN, specify a unique upper bound for precise error.	MORPH-2, FG-NET and Adience Faces benchmark	Uses a single GTX 980 graphics card (including 2,048 CUDA cores), i7 4790K CPU, 32GB RAM, and 2TB hard disk drive.	Ranking CNN estimates 89.90% for L = 6 and 92.93% for L = 7 and 2.96 for mean absolute error score.	Literature specific features were not manually selected but automatically selected by CNN ranking-model.
5	Age and Gender Recognition in the	2017	Science Direct	Rodriguex et al.[11]	Presents a feed forward strategy for age and gender recognition (1) Attention CNN	Adience, Imagenet	Tesla K40 GPU and a GTX TITAN GPU are used.	Adding attention results in 2.56 MAE,	Proposed model fails with the youngest



	Wild with Deep Attention				("where"), which expects the best attention map to offer a glimpse, (2) a patch CNN ("what"), which is expected by the attention grid generated on its relevance, Evaluates high-resolution patches in conjunction with (3) a Multi-Layer Perceptron (MLP) that incorporates statistics extracted from CNNs before finalization.	Groups, and MORP H II	Models are optimized with sgd for 30 epochs, the learning rate is initially set to 0.0001 and divided by 10 every ten epochs.	a relative 4.47% improvement with respect to the state of the art.	ages, which are difficult to be distinguished even by humans. In future focus on that.
6	Age and Gender Classification Using Wide Convolutional Neural Network and Gabor Filter	2018	IEEE	Sepidehsadat Hosseini et al. [12]	A CNN-based architecture for combined age-gender classification is proposed, with Gabor filter responses utilised as input. Back-propagation in an end-to-end architecture is used to learn the weighting of Gabor-filter replies. Additionally, expanding the diameter of the neural network would improve overall system accuracy.	Adience dataset	Experiments have been done using five-fold subject exclusive protocol. Nvidia GeForce TX 1060 6G 192 GPU used for network.	Age accuracy is 61.3% and Gender accuracy is 88.9%	More useful features could be adopted.
7	Deep Facial Age Estimation Using Conditional Multitask Learning with Weak Label Expansion	2018	IEEE	ByungIn Yoo et al. [13]	A label expansion strategy is proposed that enhances the number of accurate labels from weakly supervised categorical labels. Conduct extensive tests on the publicly accessible MORPH-II and FG-NET datasets to test the generality of the proposed technique. This method confirmed by testing the performance benefits on well-known deep network designs such as VGG-16, CASIA-WebFace, and Alexnet.	MORP H-II, FG-NET and CASIA-WebFace	Experiments were run on K80 GPUs with a CAFFE framework	With Mean of 3.04	Improve the accuracy in predicting age.
8	A hybrid deep learning CNN-ELM for age and gender classification	2018	Elsevier	Mingxing Duan et al. [14]	Introduce a hybrid structure that includes two classifiers, Convolutional Neural Network (CNN) and Extreme Learning Machine (ELM) to cope with age and gender classification. CNN was used to extract features from the input photos, while ELM was used to	MORP H- II and Adience Benchmark	Method is implemented using the publicly available code of cuda – convent and Caffe . The whole networks was trained on a single GeForce GTX 750.	Proposed model gives 52.3% age accuracy and 88.2% gender accuracy.	Most of the errors caused by blur or low resolution and heavy makeup. In future resolve this mistakes.



					classify the intermediate findings.				
9	Fine-Grained Age Estimation in the Wild with Attention LSTM Networks	2020	IEEE	Ke Zhang et al. [15]	Proposed an AL-ResNets and an AL-RoR architectures based on the attention LSTM network for the task of facial age estimation. The fine-grained age estimation approach learns the discriminative local characteristics of the age sensitive areas obtained by the attention LSTM unit efficiently. It improves performance by combining global and local features from target age datasets.	Adience, MORPH-2, FG-NET and 15/16LAP	Torch 7 with one NVIDIA GeForce GTX Titan X. And use scale and aspect ratio augmentation, for data augmentation. The learning rate is set to 0.001, and is divided by a factor of 10 after epoch 30.	Age classification on results with AL-RoR-34 = 65.77 % accuracy and 97.01% 1-off accuracy, AL-ResNets-34 = 66.03% accuracy and 97.12% 1-off accuracy.	Improve the accuracy in predicting low age group.
10	GRA_Net: A Deep Learning Model for Classification of Age and Gender From Facial Images	2021	IEEE	Avishek Garain et al. [16]	Designed a deep learning based model, called GRA_Net (Gated Residual Attention Network), for the prediction of age and gender from the facial images. This is a modified and improved version of Residual Attention Network where they have included the concept of Gate in the architecture.	FG-Net, Wikipedia, AFAD, UTKFace And Adience DB	Used pre-activation Residual Unit and ResNet with gated activation as Gated Residual Attention Network's basic unit to construct Attention block.	Proposed model gives 65.1±2.1% age accuracy and 81.4±0.6 % gender accuracy with Adience dataset	Make the model more adept when images are obstructive, partially viewed, bearing hat/glass/wig, and wearing some unusual make-up etc.
11	Age, Gender Prediction and Emotion recognition using Convolutional Neural Network	2021	Elsevier	Arjun Singh et al. [17]	Proposed work has two models, one for age-gender prediction using wide resnet architecture and the other model is trained for emotion recognition using conventional CNN architecture. For age and Gender classification, Multi task learning (parallel learning) is used to avoid overfitting and training more than one task using shared structure.	IMDB-WIKI for age-gender and Fer 2013 dataset for emotion recognition	wide-resnet architecture and CNN	Accuracy of the wide-resnet model is 96.26% and for the emotion recognition model accuracy is 69.2%.	Entity recognition, the residual architecture can be more efficient by hyper parameter tuning, addition of more Convolutional layers per block.

5. DATASETS USED

Literature survey shows that most of the researcher used Adience Benchmark, IMDB-WIKI, MORPH II, FG-NET, IoG,

CASIA-WebFace, 15/16LAP, AFAD, UTKFace databases for their research. All these databases contain facial images.

Some popular datasets for facial recognition and analysis are given below.

- Adience Benchmark: It contains 26,580 images from 2,284 people, each with a binary gender label and eight age group labels.
- IMDB-WIKI: It is largest publicly available dataset of human faces with gender, age, and name. It has almost 500 thousand photos with all of the Meta information.
- MORPH-II: It is a facial age estimation dataset containing 55,134 facial photos of 13,617 people ranging in age from 16 to 77 years.
- FG-NET: It is a dataset for estimating age and recognizing faces across ages. It contains 1,002 images of 82 persons ranging in age from 0 to 69, with a 45-year age gap.
- IoG: Images of groups dataset contains 5,080 images containing 28,231 faces are labeled with age and gender. It contains labeled each face as being in one of seven age categories: 0-2, 3-7, 8-12, 13-19, 20-36, 37-65, and 66+.
- CASIA-WebFace: It is used for face verification and face identification tasks. This dataset contains 494,414 face images of 10,575 genuine people gathered from the internet.
- 15/16LAP: LAP is the labeled dataset which contains 7591 face images.
- AFAD: The Asian Face Age Dataset (AFAD) is a new dataset proposed for evaluating the performance of age estimation, which contains more than 160K facial images with age and gender labels.
- UTKFace: It is a large-scale face dataset with long age range from 0 to 116 years old. The dataset contains over 20,000 face images with age, gender, and ethnicity labels.

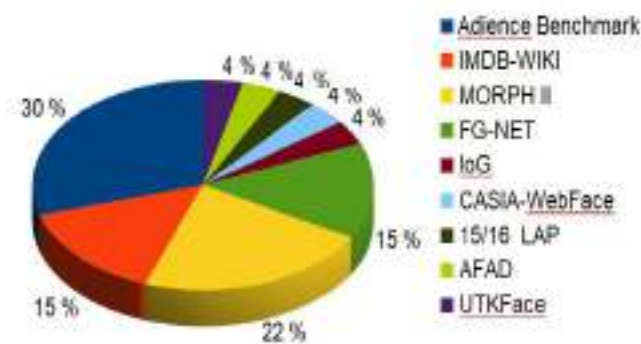


Fig-1: Datasets Popularity In (%)

6. DISCUSSION

Age and gender classification models from facial images using CNN-architecture have been done in the literature survey (Table 1). In a pie chart, the survey displays the ratio of databases used in various references (Fig 1). The Audience benchmark dataset is the most commonly used dataset.

The majority of the references used accuracy matrix to evaluate their work's performance. Accuracy can be achieved from the right sample of the population to regulate the precision and accurate the outcomes. Some references have used Mean Absolute Error (MAE), Mean Squared Error (MSE), 1-off accuracy and confusion matrix.

7. CONCLUSION AND FUTURE WORK

Overall, gender classification and age prediction research can be applied to solve real-time application challenges. Most Research analysis conducted in this paper were used Convolutional Neural Networks (CNN). All neural networks are formed with their MAE and MSE model accuracy. Furthermore, by separating a few functions, feature extraction is accomplished using a single element extractor or a one-time classifier, as well as countless additional works, fusion is performed to differentiate or extract attributes.

In future, we can continue to build the Convolutional neural network with transfer learning or encoder-decoder technique for age and gender classification to improve reliability. It will also affective for behavioral analysis, ethnicity estimation and demographic features etc. Also use the databases with 2D and 3D facial images.

8. ACKNOWLEDGMENT

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COVID-19 PANDEMIC AND ITS EFFECT TO THE READING PERFORMANCE OF GRADE III TO GRADE VI PUPILS OF BANAHAW ELEMENTARY SCHOOL: A BASIS FOR READING PROGRAM INTERVENTION

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ABSTRACT

Teaching reading to non-readers and frustration level readers today is different from the past because of Covid 19 Pandemic. This study was conducted to determine the effect of Covid 19 Pandemic to Reading Performance of Grade III to Grade VI Pupils of Banahaw Elementary School. The respondents were 70 Grade III to Grade VI Pupils from School Year 2019-2020 and 59 Grade III to Grade VI Pupils from School Year 2020-2021. The researchers utilized the Phil- IRI Results from School Year 2019-2020 which served as basis for reading performance before pandemic and Phil-IRI Results for School Year 2020-2021 served as basis for reading performance during pandemic. The data were gathered through the computation of mean score. Before the Pandemic there are 5.80% Non-readers, 17.39% Frustration readers, 36.23% Instructional readers and 27.54% Independent readers. During Pandemic there are 3.38% Non-readers, 35.59% Frustration readers, 38.98% Instructional readers and 22.03% Independent readers. The mean scores implied that there was a difference in the reading performance of pupils before and during pandemic. Thus designing of Action Plan in Reading is required.

CONTEXT AND RATIONALE

The COVID-19 pandemic has had a profound and sudden impact on many areas of life; work, leisure time and family alike. These changes have also affected educational processes in formal and informal learning environments. Public institutions such as childcare settings, schools, universities and further education providers ceased onsite teaching and moved to distance learning (frontiersin.org).

Before the pandemic, teachers take charge of the education of students as well as their reading development. They prepare lesson plans and conduct face-to-face lectures and activities. Teachers facilitate the building of communities of inquiry and learning wherein students can collaborate with each other to broaden and deepen their understanding of their lessons. All these play different roles that contribute to a richer and more effective learning interaction, which is absent in the new normal of online or modular learning.

Learning to read is an essential part of basic education. Reading, after all, is an important gateway to the other disciplines. It has been said that reading is the primary avenue to knowledge (Stern and Gould, 1995). It is the cornerstone of education and the

foundation of lifelong learning. It unlocks the unknown and carries the reader to new discoveries and learning. It equips the person with varieties of knowledge which he can use in his daily living. A person who loves to read understands any phenomenon easily, thus he becomes well-informed, educated and well-adjusted to the events around him.

Thus, this study was conducted to compare reading performance of learners during old normal and new normal in education. This study will provide teachers and educators alike of reading intervention applicable in both scenarios in education, thus improving the learners' reading performance.

INNOVATION, INTERVENTION AND STRATEGY

Given the problem encountered in school, the researchers as the reading coordinator and assistant reading coordinator planned to conduct innovation, intervention and strategy. The researchers used the Phil-IRI reading assessment result (Pre-test) for School Year 2020-2021 to determine the reading performance of Pupils.

After finding out the Reading Performance of Pupils for School Year 2020-2021, the researcher compared it to Phil-IRI Result of School Year 2019-2020.



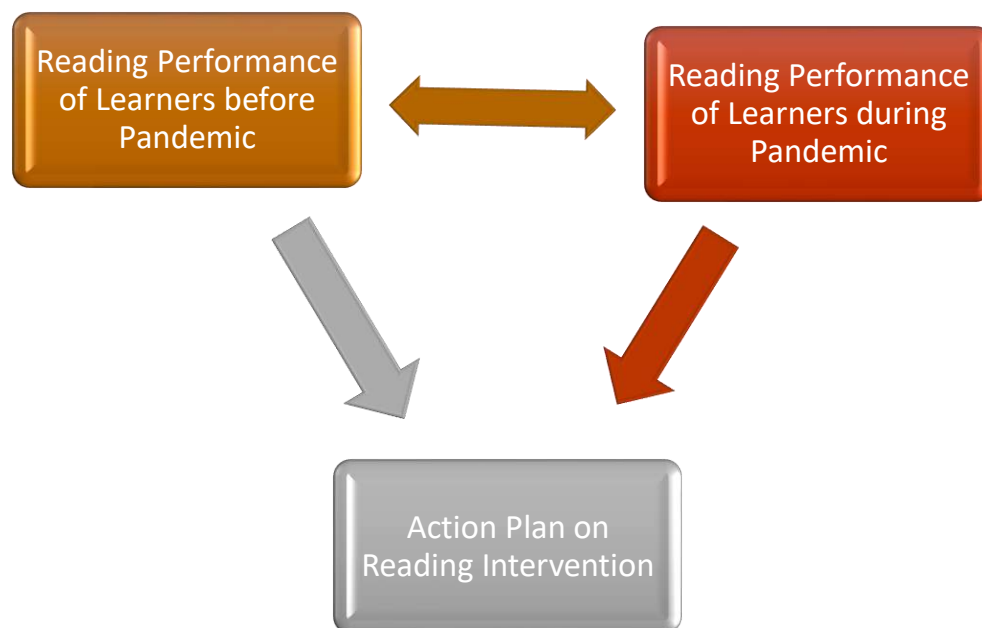
Based on the results of the study, the researchers designed an action plan on reading intervention for Frustration Reader and Non-Reader.

ACTION RESEARCH QUESTIONS

This study aims to determine the Covid 19 pandemic and its effect to reading performance of Pupils in Banahaw Elementary School. It also aims to answer the following questions:

1. What is the reading performance of the learners before covid-19 pandemic?
2. What is the reading performance of learners during Covid-19 Pandemic?
3. Is there difference between the reading performance of learners before and during Covid-19 Pandemic?
4. What Intervention program should be developed?

CONCEPTUAL FRAMEWORK



ACTION RESEARCH METHOD

Participants

The participants of this study were the Seventy (70) Grade III-Grade VI Pupils from School Year 2019-2020 and Fifty-Nine (59) Grade III-Grade VI Pupils of Banahaw Elementary School.

Instrument

The researchers utilized the data from Phil-IRI Consolidation Report for SY 2019-2020 and SY 2020-2021 as basis for Pupils Reading Performance before and during covid-19 Pandemic.

Data Gathering Procedure

Before gathering the data for the pursuit of the research, the researches sought permission from the school head to conduct the study. Upon approval, the researchers then collected the Phil-IRI Consolidation Report (Post-Test) from SY 2019-2020 to

determine the reading performance of pupils before Covid-19 Pandemic as well as the Phil-IRI Consolidation Report (Pre-Test) for SY 2020-2021 to determine the Reading Performance of Pupils during Covid-19 Pandemic.

The researchers were then evaluated the collected data. Lastly, the researchers were made their conclusions regarding the outcome of the study.

STATISTICAL TREATMENT

The data gathered for the study were analyzed and interpreted using the mean scores.

DISCUSSION OF RESULTS AND REFLECTION

Table 1 shows the reading performance of pupils before and during pandemic through the computation of the mean score.

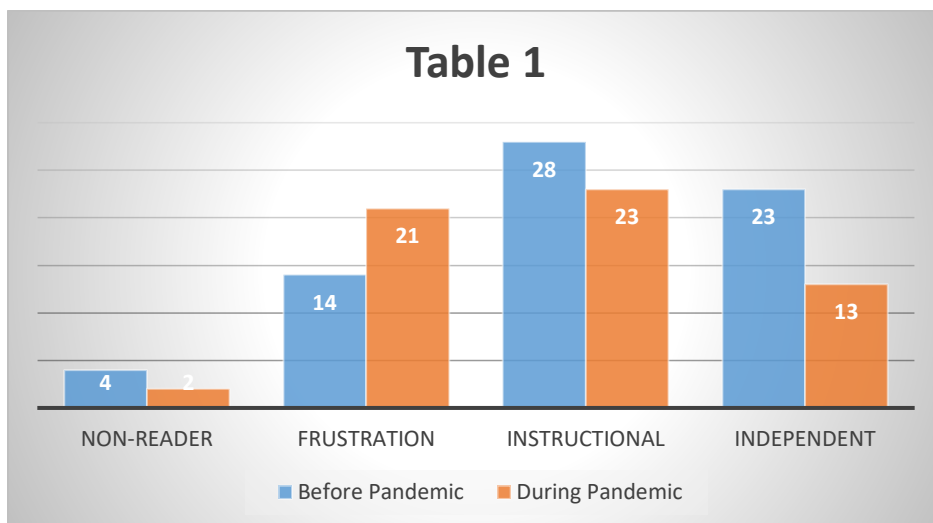


Table 1 represents the reading performance of pupils before pandemic (2019-2020) and during pandemic (2020-2021). Before Pandemic there are 4 (5.80%) non-readers, 12 (17.39%) frustration readers, 25 (36.23%) instructional readers and 19 (27.54%) independent readers. Compared to the reading performance during pandemic which is 2 (3.38%) non-readers, 21 (35.59%) frustration readers, 23 (38.98%) instructional readers and 13 (22.03) independent readers.

This implies that the reading performance of pupils during pandemic is lower compared to their reading performance before pandemic.

This study agrees with USA Today (2021) who emphasized that many children may be falling behind in reading during pandemic.

ACTION PLAN

With the results computed from the data gathered, the following action plan was developed by the researchers:

Objectives	Activities	Person Responsible	Time Frame	Resources Needed	Source of Fund
Orient Teachers and Parents on Phil-Iri Assessment Result	Meet Teachers, Community Elders and Parents to identify issues and concerns	School Head and Reading Coordinator	March 22, 2021	Classroom, Bond Paper, Pens, Camera for documentation	School MOOE, Personal Money
Organize a technical working group for planning	-	-	-	-	-
Recruit Tutor/ Volunteers for Read at Home Program	Information Dissemination through the help of Sangguniang Kabataan	School Head, Teachers, SK Chairman	March 22-26, 2021	Online platform, Camera for documentation	Local Fund
Orient Tutor/ Volunteers on things to do.	Orientation on Read at Home program and safety protocols	Reading coordinator, Tutor/volunteers	March 27, 2021	Bond Papers, Pens, Reading Materials, Camera for Documentation	MOOE, Local Fund
Implement Read at Home Program	Implementation of Read at Home	Tutor/ Volunteers, Non-readers and Frustration Readers	March-July 2021	Reading Materials, Camera for Documentation	MOOE, Local Funds

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MITIGATING TOURISM FRAUD IN NORTHERN AND CENTRAL LUZON: UNDERSTANDING FACTORS AFFECTING DOMESTIC TOURISTS AND ENHANCING TRUST IN DESTINATION EXPERIENCES

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ABSTRACT

Tourism, as a pivotal industry globally, plays a vital role in economic development and cultural exchange. Northern and Central Luzon in the Philippines are prime destinations, offering diverse attractions to both international and domestic tourists. How the rapid growth of tourism in these regions brings forth challenges, most notably the risk of fraud, which can severely impact tourists' experiences and trust in the destination. This research examines the factors that influence the susceptibility of domestic tourists to fraud in Northern and Central Luzon and its ramifications for the tourism industry. Utilizing a descriptive survey approach and questionnaires, the researchers collect data on various dimensions, including the socio-demographic profile of domestic tourists, their awareness of fraud, impulsiveness, trust tendencies, social support, and self-control. Our initial findings reveal that domestic tourists are equally vulnerable to various forms of fraud when exploring these enticing destinations. Importantly, the level of victimization experienced by tourists significantly affects their trust in tourism destinations, with implications for the local economy. Our research also indicates that domestic tourists possess awareness of fraud risks and knowledge of its forms, though this awareness does not necessarily translate into resistance against fraudulent activities. This study underscores the urgency of addressing fraud in Northern and Central Luzon's tourism industry, highlighting its potential impact on the region's reputation and economic prosperity. While domestic tourists are cognizant of fraud risks, further investigation is needed to comprehend the underlying factors contributing to their vulnerability and to develop strategies for enhancing social support and self-control as protective measures, ultimately fostering a safer and more trusted tourism experience in this vibrant and culturally rich region.

KEYWORDS: *Tourism, Northern and Central Luzon, Fraud susceptibility, Trust in tourism, Domestic tourists, Socio-demographic profile*

I. INTRODUCTION

The global tourism industry has experienced substantial growth in recent years, attracting millions of travellers eager to explore new destinations, engage with diverse cultures, and create lasting memories. However, amidst the genuine and authentic experiences offered by the tourism sector, a troubling and widespread issue has emerged - tourism fraud. This term encompasses a broad spectrum of fraudulent activities specifically targeting tourists, presenting significant threats to their financial well-being, personal safety, and overall travel experiences. Tourism fraud encompasses various deceptive and illicit practices, including scams, counterfeit services, and identity theft.

Tourism fraud takes on diverse forms, preying on the vulnerabilities and trust of tourists who are often unfamiliar with the destinations they visit. These fraudulent activities range from misrepresentations of accommodations, tour packages, or attractions to fraudulent online bookings and financial transactions. Consequently, tourists find themselves dealing with the consequences of scams, ranging from minor inconveniences to severe financial losses and concerns about personal security.

This study aims to comprehensively explore the multifaceted dimensions of tourism fraud, encompassing the strategies employed by fraudsters, the impact on travellers, and strategies for prevention and protection. In the contemporary travel landscape characterized by rapid technological advancement and globalization, tourism fraud is of paramount significance, given



its potential to disrupt the travel experiences of millions. By scrutinizing various aspects of tourism fraud, this research seeks to equip individuals with the knowledge and tools needed to safeguard their travel experiences and contribute to ongoing efforts to curtail its prevalence.

To provide a comprehensive understanding of tourism fraud, this research draws upon a combination of academic studies, industry reports, and reputable news sources, collectively shedding light on the dynamics, consequences, and countermeasures concerning this issue. In doing so, this study aspires to offer a holistic overview of tourism fraud and its implications for the global tourism industry and the travellers it serves.

A. The Escalation of Tourism Fraud

In recent years, there has been an escalation of fraud in various sectors, including the tourism industry. A study by Reynolds (2020) [1] highlighted that fraudulent identity losses increased from 51% in 2017 to 57% in 2019, indicating a growing threat. The surge in online fraud and scams targeting tourists is particularly concerning. Nurse (2018) [2] pointed out that fraudsters are increasingly employing sophisticated tactics to steal tourists' personal information, money, and identities, emphasizing the need for heightened awareness among travellers. This fraudulent trend is in part due to technological advancements and the accessibility of online platforms [3].

In Great Britain, there has been a conspicuous surge in online holiday scams, resulting in travellers losing significant sums of money due to false advertising for flights and accommodations. Lloyds Bank reported a 13% increase in flight booking fraud and an 18% rise in hotel scams in 2022 [4]. In the United States, a French national was sentenced to prison in 2017 for using phishing techniques against travel booking companies, exemplifying the international scope of the problem.

B. Global Perspectives on Tourism Fraud

Global perspectives on tourism fraud can vary, but there are common themes and issues that are recognized internationally. Tourism fraud refers to various deceptive practices aimed at tourists, with the intention of obtaining money or personal information dishonestly. It can encompass a range of activities, from scams and fraudulent tour operators to identity theft and cybercrime. With the growth of online booking platforms, there is a rise in fraudulent websites and listings. Tourists may book accommodations or activities that do not exist, resulting in financial losses [5]. China, as the world's second-largest economy, has faced challenges related to corporate governance, corporate disclosure, and investor protection (Hutchings, 2018). Furthermore, a Global Consumer Pulse study indicated that 44% of Filipino consumers have fallen victim to digital fraud, primarily affecting Gen Z and Millennials. The COVID-19 pandemic witnessed a 31% increase in digital fraud attempts, particularly within the travel and leisure industry [6]. TransUnion reported substantial growth in fraud attempts in the

Philippines, with 69.1% of annual fraud growth originating from the travel and leisure industry [7].

In Angeles City, Pampanga, the Criminal Investigation and Detection Group has apprehended suspects involved in hacking and phishing, targeting Korean nationals and U.S. citizens, posing a threat to national security [8]. These examples highlight the widespread nature of fraudulent activities in the realm of travel, emphasizing the need for awareness among both individuals and businesses.

C. Impact on Airlines and Fraud Types

The prevalence of travel fraud is on the rise, particularly in the domain of ticketing, potentially harming airlines' profitability and reputation. Issues like bonus/loyalty abuse and bookings involving stolen credit card information contribute to this trend [9]. Additionally, fraud encompasses a range of types, including tax, credit card, wire, securities, and bankruptcy frauds [10]. For instance, the Baguio City public information office has received reports of scams in which students falsely claimed to have paid boarding reservation fees using online photographs of residence facades [11].

D. Victimization in the Philippines

The researchers aim to delve into the subject of tourist fraud victimization in the Philippines, examining factors such as self-control, impulsiveness, trust tendencies, age, education, and social support. Everyday activities, such as shopping, sightseeing, and dining, render domestic tourists susceptible to fraud in locations where such activities are prevalent [12].

F. Research Gaps and Opportunities

This research also identifies certain gaps in the existing body of knowledge, including the role of digital media in the perpetration of tourist fraud, the need for gender-related research, and the influence of the broader social and economic context on tourist fraud in various destinations [13]. These gaps signify opportunities for future investigations into the multifaceted issue of tourism fraud and its implications for travellers and the tourism industry at large.

Tourism fraud is a significant issue that demands attention due to its adverse impact on travellers, businesses, and the tourism industry. This research sheds light on the complexity of tourism fraud, providing insights into the evolving tactics used by fraudsters, the consequences for travellers, and strategies for prevention and protection. It underscores the urgency of addressing this issue, particularly in an era of rapid technological advancement and globalization.

C. Research Objectives

This study determined the factors influencing domestic tourists as suitable targets of fraud in selected tourist spots in Northern Luzon and Central Luzon. Since crime reduction is an integral component of nation-building, it is necessary to identify the factors that contribute to domestic tourist fraud in tourist areas in



Northern Luzon and Central Luzon. Through this study, the researchers tackled the problems that follow:

1. To assess the socio-demographic profile of domestic tourists visiting the region.
2. To identify and categorize the various forms of fraud that affect domestic tourists.
3. To measure the level of impulsiveness among domestic tourists during their travels.
4. To gauge the level of trust tendency exhibited by domestic tourists.
5. To evaluate the extent of social support available to domestic tourists during their trips.
6. To determine the level of self-control exercised by domestic tourists when facing potential fraudulent situations.
7. To investigate the existence of a significant relationship between socio-demographic profiles and incidents of tourist fraud victimization.
8. To examine whether there is a significant relationship between impulsiveness and the likelihood of tourist fraud victimization.
9. To explore whether trust tendency has a significant relationship with incidents of tourist fraud victimization.
10. To investigate if social support levels have a significant association with incidents of tourist fraud victimization.
11. To analyse whether self-control is significantly related to the occurrence of tourist fraud victimization during domestic tourists' travels in Central and Northern Luzon.

H. Hypothesis

1. A significant relationship exists between socio-demographic factors and the vulnerability to tourist fraud victimization.
2. The level of impulsiveness significantly affects the likelihood of tourist fraud victimization.
3. Trust tendency plays a crucial role in influencing tourist fraud victimization.
4. Social support significantly impacts the susceptibility to tourist fraud victimization.
5. The degree of self-control is significantly related to tourist fraud victimization.

I. Scope and Delimitation

This study focuses on the factors influencing domestic tourist fraud in selected locations in Northern Luzon and Central Luzon. It examines tourists' perceptions of these factors and investigates the existing laws and policies aimed at addressing this issue. However, the study does not assess the effectiveness of these laws and policies in reducing fraud at the chosen tourist destinations.

Tourists' Perceptions and Vulnerabilities: A thorough understanding of domestic tourist fraud requires an examination of tourists' perceptions and vulnerabilities. The research scrutinizes tourists' attitudes towards fraud risks and their willingness to adopt preventative measures. This analysis aligns

with Adomaitienė and Seyidov (2017) [12] who have emphasized how tourists' everyday activities and personal characteristics render them susceptible to fraud in areas where these activities are common.

Local Economic and Sociocultural Dynamics: The economic and sociocultural landscape of these regions significantly influences domestic tourist fraud. Scholars such as Wiegatz (2016) [14] argue that considering the broader social and economic context is crucial when addressing tourist fraud. Factors like economic disparities, income inequality, and the local social fabric are explored to comprehend their role in fraudulent activities.

J. Theoretical Framework

This research paper explores the phenomenon of domestic tourist fraud, employing criminological theories and conceptual frameworks to gain a comprehensive understanding of the factors contributing to fraud victimization. Specifically, the study applies Routine Activities Theory and the Fraud Triangle to examine the interplay of suitable targets, pressure, opportunity, and rationalization in the context of domestic tourist fraud in selected tourist destinations in Northern and Central Luzon. By doing so, the study seeks to identify the root causes of tourist fraud and develop preventive strategies. The significance of this research is underscored by the vulnerability of domestic tourists and the implications for tourism safety, economics, and public policy.

Domestic tourism in Northern Luzon and Central Luzon is a significant economic driver for the Philippines. However, the growth of this industry has also given rise to the pressing issue of domestic tourist fraud. To comprehensively understand this issue, the researchers turn to criminological theories and frameworks to delve into the contributing factors.

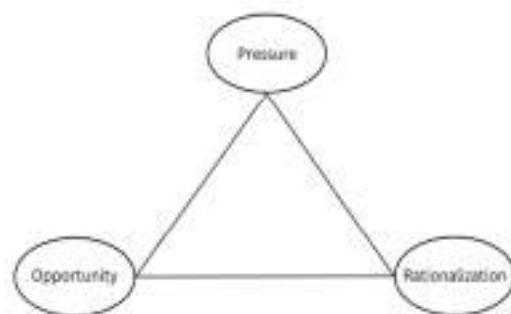


Figure 1. Fraud Triangle

Routine Activities Theory, as articulated by Personette (2019) [15] posits that crime transpires when suitable targets are accessible in the presence of motivated offenders and the absence of capable guardians. In the context of domestic tourist fraud, suitable targets can be operationalized as domestic tourists who exhibit characteristics that render them attractive targets for



fraud. Previous research suggests that domestic tourists are more likely to fall victim to fraud [16]. This can be attributed to their limited knowledge of their surroundings, an elevated unawareness of their vulnerability to fraud, and their restricted resources for self-protection. These vulnerabilities make them prime candidates for fraud victimization.

The Fraud Triangle, initially formulated by Donald Cressey in the 1950s, is an invaluable conceptual framework for comprehending fraud [17]. It consists of three key elements: pressure, opportunity, and rationalization. Pressure refers to internal or external factors that incentivize an individual to engage in fraudulent activities [17]. Opportunity signifies the capability to commit fraud without the risk of detection or consequences [18]. Rationalization represents the justifications that an individual provides for engaging in fraudulent behavior, either to themselves or to others [18].

The researchers apply the Fraud Triangle to discern the elements contributing to tourist fraud. Pressure, in this context, can stem from financial hardships, including income loss, mounting debt, or other life events demanding additional funds Aghghaleh [18]. Opportunity is often linked to the lack of knowledge and protective measures on the part of the tourist, or to the absence of oversight and enforcement by local government or tourism authorities Aghghaleh [18]. Rationalization, on the other hand, can be facilitated by an environment that normalizes or tolerates fraudulent activities or by societal and cultural expectations that make it acceptable or even anticipated Aghghaleh [18].

By examining the factors that give rise to pressure, opportunity, and rationalization within the context of domestic tourist fraud, this research offers valuable insights into the root causes of this issue. It serves as a foundation for developing effective preventive strategies, safeguarding domestic tourists, and bolstering the integrity of tourist destinations. These implications extend to enhancing tourism safety, bolstering local economies through increased tourism, and informing public policy aimed at ensuring the well-being of tourists and the overall sustainability of tourism in Northern Luzon and Central Luzon. This research underscores the significance of addressing domestic tourist fraud from a multi-faceted perspective, considering the vulnerabilities of tourists and the broader societal and economic factors that drive fraud victimization.

This research paper applies Routine Activities Theory and the Fraud Triangle to delve into the factors influencing domestic tourist fraud in selected tourist destinations in Northern and Central Luzon. The research underscores the vulnerability of domestic tourists and provides insights into the root causes of fraud victimization. By doing so, it contributes to the development of preventive strategies, bolstering tourism safety, and enhancing the economic and policy framework in these regions. This work is crucial for the well-being of domestic tourists and the sustained growth of tourism in Northern Luzon and Central Luzon.

K. Conceptual Framework



Figure 2.

L. Age and Tourist Fraud Victimization:

The relationship between age and tourist fraud victimization is complex. Research has shown that older individuals, typically those aged sixty-five and above, are more likely to be victims of tourist fraud. This increased vulnerability can be attributed to several factors. First, older adults may have lower levels of digital literacy, making them less familiar with the various online scams and fraudulent activities prevalent in the modern tourism industry. This lack of digital awareness can make them easier targets for fraudsters operating online.

Second, older individuals might be more trusting or less sceptical when encountering offers or schemes that seem too good to be true. Their trust in others, shaped by the societal norms of their generation, can render them more susceptible to tourist scams. Additionally, older adults often come from a time when sharing personal information or transacting online was less common, making them less cautious about sharing sensitive details.

Furthermore, older adults may have increased opportunities for travel and leisure. With more free time and financial resources, they are more actively engaged in tourism activities. This exposure increases their likelihood of encountering fraudulent activities within the industry.

Lastly, older individuals might be less aware of the specific types of tourist scams, including accommodation fraud, fake tour packages, or transportation scams. This lack of awareness can expose them to higher risks of fraudulent activities during their travels.

While it is evident that older adults are more susceptible to tourist fraud, it is essential to remember that this relationship is not absolute. Many older individuals are tech-savvy, cautious travellers, and not all fall victim to tourist fraud. Additionally, younger individuals are not immune to tourist scams; the risk factors differ between age groups.

M. Education and Tourist Fraud Victimization:

The level of education plays a significant role in influencing the likelihood of tourist fraud victimization. Generally, individuals with higher levels of education tend to be more informed,



analytical, and cautious when it comes to travel and tourism. They often possess better tools to detect potential fraud and scams in the tourist industry.

One key advantage of higher education is improved digital literacy. Educated individuals are more likely to understand online security measures and identify fraudulent online activities. They are often better equipped to recognize phishing attempts, fraudulent websites, and misleading offers.

Additionally, individuals with higher education levels may have well-developed research skills. These skills enable them to investigate the legitimacy of travel offers, accommodations, and tour packages more thoroughly. They are more inclined to read reviews, seek recommendations, and critically assess the trustworthiness of various providers.

However, it is important to remember that education is not the sole determinant of fraud victimization. Even highly educated individuals can fall victim to fraud if they lower their guard or face very sophisticated fraudulent schemes. Conversely, less-educated individuals may protect themselves effectively against tourist fraud if they are cautious and vigilant in their travel-related decisions.

N. Social Support and Tourist Fraud Victimization:

Social support plays a crucial role in influencing tourist fraud victimization. It serves as a protective factor by providing preventive measures, emotional resilience, a sense of community and belonging, and moderating risky behavior. Travellers with robust social networks are more likely to receive advice and warnings from friends and family, reducing their susceptibility to fraud. Additionally, emotional support from loved ones helps individuals cope with the emotional distress associated with being defrauded while traveling.

A sense of belonging within a community can provide travellers with a feeling of security and support. Moreover, social support can discourage risky behaviors that might lead to tourist fraud. However, the effectiveness of social support varies depending on the quality of the support network and the individual's willingness to utilize it. Building strong social connections and seeking guidance from trusted sources are key strategies to minimize the risk of tourist fraud victimization and enhance overall travel safety and satisfaction.

O. Self-Control and Tourist Fraud Victimization:

The relationship between self-control and tourist fraud victimization is characterized by the impact of an individual's self-control on their susceptibility to fraudulent activities while traveling. Low self-control, marked by impulsivity, risk-taking behavior, gullibility, and impaired judgment, significantly increases the vulnerability of tourists to fraud. Travellers with low self-control are more likely to make impulsive decisions, engage in risky behaviors, trust strangers too readily, and fall for deceptive offers. These behaviors make them appealing targets

for fraudsters who exploit their vulnerabilities. In contrast, individuals with higher self-control tend to exercise caution, verify the legitimacy of offers, and take measures to protect their personal and financial information, reducing their vulnerability to tourist fraud. Enhancing self-control and decision-making skills is a valuable strategy to reduce the risk of tourist fraud and ensure safer travel experiences.

P. Impulsiveness and Tourist Fraud Victimization:

Impulsiveness can increase an individual's vulnerability to tourist fraud victimization. Impulsivity, characterized by acting without thorough consideration, can lead tourists to make hasty and risky decisions while traveling. This may involve accepting offers or deals without proper verification, making them susceptible to fraudulent schemes and financial losses.

Tourists with high impulsivity might be more easily lured by persuasive tactics used by fraudsters, leading them to fall for scams or purchase counterfeit goods. Additionally, their lack of precautionary measures, such as safeguarding personal and financial information, can make them attractive targets for identity theft and other forms of fraud. To reduce the risk of tourist fraud victimization associated with impulsiveness, travellers should develop self-awareness and strategies to manage impulsive behaviors. This may involve practicing caution, conducting research, and verifying offers that seem too good to be true. Tourism organizations can also play a role by raising awareness about the risks of impulsivity and providing guidance on safer travel practices.

Impulsiveness can increase the likelihood of tourist fraud victimization by making individuals more susceptible to impulsive decisions, risky behaviors, and a lack of caution. Travellers can protect themselves by recognizing their impulsive tendencies and taking proactive measures to guard against fraudulent activities during their trips.

Q. Trust Tendency and Tourist Fraud Victimization:

Trust tendency, the inclination to believe in the honesty and reliability of others, plays a substantial role in the context of tourist fraud victimization. Travellers who exhibit a high level of trust tendency are more vulnerable to fraudulent activities during their trips, as their inherent trust in people can be exploited by fraudsters. This tendency to trust can lead to tourists being more susceptible to scams and deceitful schemes, particularly when dealing with seemingly friendly locals or persuasive sales tactics.

Fraud perpetrators often take advantage of the trust displayed by tourists, posing as helpful guides, hotel staff, or fellow travellers to gain their confidence and lead them into precarious situations. Consequently, individuals with a strong trust tendency may be more likely to fall for these tactics, putting themselves at risk of being victimized. Additionally, tourists with high trust tendencies may be more willing to share personal or financial information with strangers, increasing their vulnerability to identity theft and financial fraud. They might also be less



inclined to verify the legitimacy of offers, which can lead to costly decisions and fraudulent transactions.

To mitigate the risk of tourist fraud victimization related to trust tendency, it is crucial for travellers to strike a balance between trust and caution. While fostering positive interactions is essential for a rewarding travel experience, maintaining vigilance when dealing with unfamiliar individuals or offers that appear too good to be true is equally important. Educational and awareness campaigns conducted by tourism organizations can assist tourists in developing a more balanced and discerning approach to trust, ensuring their safety and financial security while exploring new destinations.

Trust tendency significantly impacts an individual's susceptibility to tourist fraud victimization by making them more trusting and less cautious while traveling. Tourists can protect themselves by finding a middle ground between trust and scepticism, as well as verifying offers and interactions to safeguard their well-being and financial interests during their journeys.

R. Income Rate and Tourist Fraud Victimization:

The relationship between income rate and tourist fraud victimization is influenced by travellers' financial resources, spending habits, and susceptibility to various types of fraud. High-income travellers are often targeted due to their perceived wealth, but their financial literacy can serve as a protective factor. Middle-income travellers, seeking cost-effective options, may be exposed to budget-related scams. In contrast, low-income travellers might be attracted to extremely cheap deals and face a higher risk of disappointment and financial loss. Regardless of income, all travellers should remain vigilant and financially savvy to minimize the risk of falling victim to tourist fraud while enjoying their journeys.

II. METHODS

The growth of domestic tourism in Northern Luzon and Central Luzon has been accompanied by an increase in domestic tourist fraud, posing challenges to the safety and security of tourists in these regions. To gain a deeper understanding of this issue, this research employs a quantitative research design, particularly a descriptive survey, to examine the factors that make domestic tourists vulnerable to becoming fraud targets in these regions.

A. Descriptive Survey as Quantitative Research Design:

A descriptive survey design is employed in this research to provide a structured and systematic approach to investigating the influencing factors associated with domestic tourist fraud. This design enables the collection of quantitative data, offering a clear and comprehensive view of the phenomenon under examination [19].

B. Population and Sampling Scheme

In terms of population and sampling, the study focused on domestic tourists visiting tourist spots in Northern Luzon and Central Luzon. It employed a convenience sampling technique, selecting participants who were easily accessible at tourist spots or nearby locations. The specific tourist spots in these regions the researchers randomly chosen for the study. G-Power was used to calculate the necessary sample size based on parameters like confidence level and margin of error.

The breakdown of the population of regional travellers in different provinces in Region I, II, and III in 2020. The populations of various Philippine provinces were as follows: Ilocos Sur had 4,483 residents, La Union boasted 112,718 inhabitants, and Pangasinan had a population of 205,184. Cagayan was home to 1,487 people, while Isabela had 126,728 residents, and Nueva Vizcaya had 45,187. Quirino was the least populous with 884 residents, and Aurora had 42,783 inhabitants. Bataan had 101,754 people, Bulacan recorded 133,788 residents, and Nueva Ecija's population was 98,003. Pampanga was the most populous among these provinces, with 829,254 individuals. Tarlac had 38,142 residents, and Zambales had a population of 112,369.

C. Respondents of the Study

The study's participants are domestic tourists who visited specific locations in Northern Luzon and Central Luzon. They were selected through convenience sampling, resulting in 382 participants representing various age groups, genders, and educational backgrounds.

D. Data Collection Process:

The survey collected responses from participants aged 18 and older through an online platform. This approach allowed for the efficient gathering of data from a diverse range of respondents, ensuring that the sample represented the demographic and geographic diversity of domestic tourists in these regions. The research employed both open-ended and closed-ended questions to capture a wide spectrum of responses and quantitative data. Open-ended questions allowed respondents to provide nuanced insights and perspectives, while closed-ended questions provided structured and easily quantifiable data [20]. The study employed descriptive correlational research to measure the relationships between various influencing factors and the likelihood of domestic tourists becoming fraud targets. This approach enabled a comprehensive examination of the contributing elements, offering a more nuanced view of their interplay [21].

E. Research Instruments

Survey Questionnaires: These questionnaires gather information about participants' demographics, travel habits, experiences, and perceptions of fraud in tourist spots. Questions are designed to elicit detailed responses, covering topics like visited tourist spots, types of fraud encountered, methods used by fraudsters, and actions taken by victims to prevent or report fraud.



F. Barratt Impulsive Scale (BIS-11)

The Barratt Impulsive Scale, often referred to as BIS-11, is a 30-item self-report questionnaire developed by Patton, Stanford, and Barratt Patton et al. [22]. This questionnaire is designed to measure impulsive personality traits. Respondents rate behaviors associated with impulsivity, such as "I do things without thinking" or "I am self-controlled," on a scale ranging from 1 (Very Rarely/Never) to 4 (Almost Always/Always). The scores for all items are summed, resulting in a total score ranging from 30 to 120, with higher scores indicating greater impulsivity. It is noteworthy that BIS-11 scores exhibit good test-retest reliability (Spearman's rho = 0.83) and internal consistency (Cronbach's rho = 0.83;) [22].

G. General Trust Scale

The General Trust Scale consists of six items aimed at measuring participants' perceptions of honesty and trustworthiness in general. Some of these items are adapted from Yamagishi's (2011) [23] Trust Scale.

H. Social Support Questionnaire (SSQ6 - Shortened Version)

The Social Support Questionnaire, shortened as SSQ6, comprises six items that are specifically designed to assess social support. Each item has a two-part answer: Part 1 requires participants to list individuals who meet the description of the question, and Part 2 prompts them to indicate their general satisfaction with these individuals. This shortened version is based on the original Social Support Questionnaire by Sarason et al. [24]

I. Fraud Victim's Behavior

The "Fraud Victim's Behavior" questionnaire is a 24-item instrument that employs a four-point Likert scale to measure how individuals behave and respond when they experience fraud. It allows respondents to rate their agreement or disagreement with statements about their behaviors and reactions following fraud victimization. This questionnaire is a valuable tool for researchers seeking to gain insights into the various ways people respond to fraud, thus facilitating a comprehensive understanding of behavioral patterns and coping mechanisms employed by different individuals in the aftermath of being defrauded.

J. Self-Control Questionnaire

The "Self-Control Questionnaire" consists of 26 items and uses a four-point Likert scale to measure the level of self-control among victims of tourism fraud. Researchers utilize this questionnaire to better comprehend how self-control influences the behaviors and responses of individuals who have experienced fraud during their travels.

K. Forms of Fraud

The "Forms of Fraud Questionnaire" is a 10-item survey that assesses individuals' familiarity with and experiences regarding various types of fraud. Respondents provide answers using a five-point Likert scale, enabling researchers to gather data on

their exposure to different fraudulent activities and their awareness of these scams. This questionnaire is designed to yield structured data for empirical research, allowing for the analysis of common patterns of fraud victimization and the development of informed fraud prevention strategies that are tailored to specific research objectives.

L. Validation of Instruments

To validate the research instruments for the study titled "Factors Influencing Domestic Tourist Fraud in Selected Tourist Spots in Northern Luzon and Central Luzon," adapted descriptive survey and descriptive correlational survey questionnaires were employed.

Surveys: Close-ended survey questions the researchers used to collect data on factors influencing domestic tourist fraud in Northern Luzon and Central Luzon. Face and content validity techniques the researchers employed to evaluate the survey. Furthermore, the researchers employed two evaluation techniques, face validity and content validity, to assess the quality and appropriateness of the survey used in the research. These techniques were utilized to ensure that the survey instrument accurately measured what it was intended to measure and that it effectively captured the factors relevant to the study.

M. Reliability of Research Instruments

Instrument reliability refers to the consistency and repeatability of results. In this study, a validated survey questionnaire was used as the instrument, and it underwent a pilot test and a trial run to ensure clarity and reliability of responses. Experts in tourism reviewed the questionnaire to ensure its suitability for the study.

N. Data Gathering Procedure

In the research conducted, the selection of research sites was carried out meticulously. Relevant tourist destinations in Northern Luzon and Central Luzon were chosen based on their direct relevance to the research topic. The selections were made after considering the availability of data and resources in these areas, ensuring that the chosen sites were not only suitable for the study's objectives but also feasible for data collection.

Subsequently, the research team prepared research instruments in the form of questionnaires. These questionnaires were carefully designed to collect pertinent data on various aspects, such as socio-demographic factors, experiences with tourist fraud, impulsiveness, trust tendency, social support, self-control, and other variables relevant to the study. The researchers took great care to ensure that the questionnaires were clear, concise, and devoid of any potential biases. To validate their effectiveness, the questionnaires underwent a pretesting phase, where a small group of individuals evaluated them for any issues that required correction.

The collection of data was the next critical step in the research process. The target participants included tourists visiting the



selected sites and tourism-related personnel, including tour guides, hotel staff, and local officials. Well-defined inclusion criteria were established to ensure that the data collected were from relevant sources. The research team took the responsibility of training a group of data collectors who administered the questionnaires. These data collectors were equipped with a comprehensive understanding of the research objectives and the ethical considerations surrounding data collection. To gather data from tourists, visits to the chosen tourist destinations were organized during appropriate seasons or periods.

The analysis of the collected data began after the data collection phase. The researchers employed a range of statistical methods, as indicated in the provided information. These methods encompassed descriptive statistics, correlation analysis, regression analysis, and chi-square tests. The collected data underwent careful organization and cleaning to maintain accuracy. The results of these analyses were then interpreted, enabling the researchers to draw meaningful conclusions in alignment with the research objectives.

Throughout this process, the research team ensured that ethical standards were strictly adhered to in both data collection and analysis. Furthermore, comprehensive documentation of each step was maintained to uphold transparency and facilitate the potential for replicating the research.

O. Statistical Analyses

Statistical analyses, including Pearson's correlation coefficient, regression analysis, and t-tests, are conducted on the collected data. These analyses serve to assess the strength of the correlations between influencing factors and the likelihood of domestic tourists becoming fraud targets. They provide quantitative evidence and insights that support the research findings [25].

Data analysis for the study "Factors Influencing Domestic Tourist Fraud in Selected Tourist Spots in Northern Luzon and Central Luzon" can be conducted using descriptive and inferential statistics. These methods help uncover patterns and relationships within the data.

The study employed various Likert scales to measure different variables. For impulsivity, a Likert scale with four levels was used, ranging from "Always" with a scale range of 4.00 to 3.00 down to "Never" with a scale range of 1.00 to 0.99. Trust tendency was assessed using a five-point Likert scale, from "Strongly Agree" with a scale range of 4.51 to 5.00 to "Strongly Disagree" with a scale range of 1.00 to 1.50. Social support, encompassing family, friends, spouse, and others, was measured on a six-point Likert scale, with "Very Satisfied" ranging from 5.50 to 6.00 and "Very Dissatisfied" ranging from 1.00 to 1.49.

Fraud victim behavior was evaluated using a four-level Likert scale, with "Strongly Agree" ranging from 4.00 to 3.00 and "Strongly Disagree" ranging from 1.00 to 0.99. Self-control was

also measured on a five-point Likert scale, with "Strongly Agree" in the range of 4.51 to 5.00 and "Strongly Disagree" in the range of 1.00 to 1.50. Finally, the level of fraudulent activities was assessed on a five-point Likert scale, from "Strongly Agree" with a scale range of 4.51 to 5.00 to "Strongly Disagree" with a scale range of 1.00 to 1.50. These Likert scales allowed for a structured assessment of the various factors and variables involved in the study.

Pearson's correlation coefficient, often referred to as Pearson's r , was a valuable statistical tool for examining the linear relationship between two continuous variables. It quantified the strength and direction of association between these variables, helping researchers understand if they were positively correlated (increased together), negatively correlated (one decreased as the other increased), or not correlated at all. This method was particularly useful for investigating several hypotheses related to tourist fraud victimization:

1. Pearson's correlation assessed if socio-demographic factors such as age, income, or education were linearly associated with the likelihood of tourist fraud victimization, providing insights into the direction and strength of these relationships.
2. The level of impulsiveness and its impact on the likelihood of tourist fraud victimization could be explored using Pearson's correlation. Researchers could determine if there was a positive correlation, indicating that higher impulsiveness was linked to a greater likelihood of victimization.
3. Trust tendency and its role in influencing tourist fraud victimization was assessed through Pearson's correlation. A positive correlation might have suggested that higher trust tendency was associated with a greater likelihood of victimization.
4. Social support's effect on susceptibility to tourist fraud victimization was examined using Pearson's correlation, potentially revealing a negative correlation that implied higher social support was connected to lower susceptibility.
5. Pearson's correlation was employed to explore the relationship between the degree of self-control and the likelihood of tourist fraud victimization. A negative correlation could have indicated that higher self-control was related to a lower likelihood of victimization.

P. Ethical Considerations

Respecting participants is a cornerstone of ethical research. Researchers must treat participants with dignity, recognizing and respecting their cultural norms and practices [26]. This involves acknowledging the diversity and unique perspectives of participants, ensuring their voices are heard, and conducting research that does not infringe upon their cultural sensitivities [19]. Moreover, all information collected must be treated with the utmost confidentiality and used solely for the study's intended purposes [21].

Ensuring the safety and well-being of participants is a non-negotiable ethical consideration [27]. Participants should not be exposed to any potential risks or harm because of their involvement in the study. Researchers must be vigilant about



identifying and mitigating any potential risks associated with the research, implementing safeguards, and providing immediate assistance if needed [20]. This ethical principle emphasizes the primacy of safeguarding the individuals who contribute to the study.

Transparency is central to ethical research conduct. Researchers must provide participants with clear and comprehensive information about the study, their rights, and their responsibilities [28] This includes a detailed description of the research methods employed, the purpose of the study, the data collection process, and the potential uses of the data. Informed consent, where participants willingly and knowingly agree to participate, is essential, ensuring that individuals are not coerced or deceived into involvement [19].

The ethical responsibility extends to the dissemination and utilization of the study's findings. Researchers should ensure that the results are shared widely, responsibly, and transparently [29]. The findings should be used in a manner that takes into account potential implications, both positive and negative. This ethical consideration highlights the importance of research that contributes to informed policy decisions, promotes positive societal changes, and respects the rights and welfare of participants [19].

Q. Inclusion and Exclusion Criteria

Inclusion Criteria

1. Domestic Tourists: The study comprised individuals classified as domestic tourists, signifying that they had undertaken travels exclusively within the Philippines and were not international visitors.
2. Age Requirement: To ensure the ability to provide informed consent and contribute an adult perspective on travel experiences and fraud-related factors, participants needed to be 18 years of age or older.
3. Tourist Spot Visitors: Inclusion necessitated that participant had visited one or more specific tourist destinations located in Central and Northern Luzon. This criterion was essential to maintain the alignment of the study with its predefined objectives.

Exclusion Criteria

1. International Tourists: Those whose primary residence was located outside the Philippines were not considered for the study. The research was specifically centered on the experiences of domestic tourists.
2. Age Restriction: Individuals under the age of 18 were ineligible for participation in the study due to potential ethical and consent-related considerations.
3. Non-Tourists: Prospective participants who had not ventured to any tourist spots within Central and Northern Luzon were excluded, as their experiences did not correspond with the study's scope.
4. Incomplete Responses: Participants who provided responses to survey questions that were either incomplete

or inconsistent were subject to potential exclusion from the analysis. This measure was adopted to preserve data quality and reliability, ensuring that the study's findings remained robust and meaningful.

III.RESULTS

A. Socio-Demographic Profile of Domestic Tourists

Table 1. Gender of the Respondents

Gender of the Respondents	Frequency	Percent
Female	38	40.4
Male	56	59.6
Total	94	100.0

Table 1 shows a slight gender imbalance in 94 respondents, with 56 (59.6%) male and 40.4% female, indicating a sample size of 94, but this may not necessarily reflect the population.

Table 2. Age of the Respondents

Age of the Respondents	Frequency	Percent
18 - 22 years old	77	81.9
23 - 28 years old	4	4.3
29 - 35 years old	5	5.4
36 - 43 years old	4	4.3
44 - 50 years old	3	3.2
Total	94	100.0

Table 2 shows the survey's age distribution shows that the 18-22 age group had the highest participation, followed by those aged 22-28 (6.4%) and those aged 45-50 (3.2%), indicating a younger demographic.

Table 3. Educational Attainment of the Respondents

Educational Attainment	Frequency	Percent
Elementary	1	1.1
High School	16	17.0
College	77	81.9
Total	94	100.0

Table 3 shows that 81.9% of 94 respondents have a college degree, followed by 17% with a high school diploma, and 1.1% with an elementary degree, suggesting a predominantly higher education population.

Table 4. Income of the Respondents

Income	Frequency	Percent
5,000 – 15,000 Php	66	70.2
15,000 – 30,000 Php	17	18.1
30,000 – 80,000 Php	9	9.6
80,000– 120,000 Php	1	1.1
120,000–200,000 Php	1	1.1
Total	94	100.0

Table 4 shows 94 survey respondents' income, with 70.2% falling within the 5,000-15,000 range, 18.1% between 15,000 and 30,000, 9.6% between 30,000 and 80,000, 1.1% between 80,000 and 120,000, and 1.1% between 120,000 and 200,000 Php.



Table 5. Level of Awareness on Fraud Affecting Domestic Tourists

Indicators of Level of Awareness on Fraud Affecting Domestic Tourists	Mean	Verbal Interpretation	Std. Dev.	Variance
I am aware of the various forms of fraud where tourists may be victimized.	4.18	Agree	0.72	0.52
I know how to identify and protect myself from fraud.	4.18	Agree	0.71	0.51
I understand the risks associated with being a tourist in unfamiliar locations.	2.99	Neutral	1.28	1.67
I have experienced fraud as a tourist.	2.99	Agree	0.85	0.72
I am aware of the common scams and frauds used to target tourists.	3.68	Agree	1.03	1.06
I know the legal steps to take if I am a victim of fraud.	3.85	Agree	0.96	0.92
I am familiar with the various forms of tourist fraud.	4.10	Agree	0.73	0.54
I am aware of the consequences of being a victim of fraud.	3.90	Agree	0.83	0.69
I know what steps to protect myself from becoming a victim of tourist fraud.	4.24	Neutral	1.12	1.24
I am confident that I can protect myself from fraud.	3.23	Neutral	1.33	1.76
Average	3.73	Agree	0.98	0.92

Table 5 revealed that respondents were generally aware of fraud affecting domestic tourists, but not confident in the risks of being tourists in unfamiliar locations, with a mean score of 2.99. The research indicates that respondents are aware of common scams and frauds targeting tourists, and likely have some understanding of the risks and consequences associated with such activities [30].

These scams are typically perpetrated by criminals and can be difficult to detect and prevent. Many tourist destinations now prioritize informing and educating visitors about the potential risks of fraud and scams, raising awareness, and educating people on how to protect themselves from becoming victims.

Table 6. Impulsiveness of Domestic Tourists

Indicators of level of impulsivity	Mean	Verbal Interpretation	Std. Deviation	Variance
1. I plan things carefully.	3.37	Always	795	694
2. I do things without thinking.	1.95	Rarely	834	696
3. I make up my mind quickly.	2.48	Almost Always	839	704
4. I am happy-go-lucky.	2.57	Almost Always	848	706
5. I don't pay attention.	1.88	Rarely	751	573
6. I have racing thoughts.	2.89	Almost Always	810	657
7. I plan things well ahead of time.	3.99	Always	812	659
8. I am self-controlled.	2.95	Almost Always	724	524
9. I concentrate easily.	2.70	Almost Always	751	564
10. I ease regularly.	2.54	Almost Always	876	767
11. I listen at lectures or lectures.	2.25	Almost Always	812	660
12. I am a careful thinker.	3.09	Always	695	487
13. I plan for job security.	3.11	Always	848	718
14. I say things without thinking.	2.30	Almost Always	748	554
15. I like to think about complex problems.	2.85	Almost Always	1,343	1,087
16. I change jobs.	1.99	Rarely	710	503
17. I act on impulse.	2.22	Almost Always	792	627
18. I get easily bored when solving thought problems.	2.13	Almost Always	785	616
19. I act on the spur of the moment.	2.34	Almost Always	837	706
20. I am a shrewd thinker.	2.91	Almost Always	771	595
21. I change where I live (I change residences).	2.55	Rarely	741	553
22. I have things on impulse.	2.30	Almost Always	861	748
23. I can only think about one problem at a time.	2.27	Almost Always	792	627
24. I change hobbies.	2.45	Almost Always	886	782
25. I spend more than I earn (I spend or always more than I earn).	2.40	Almost Always	948	918
26. I have outside thoughts when thinking (I often have extraneous thoughts when thinking).	2.85	Almost Always	851	723
27. I am more interested in the present than the future.	2.87	Almost Always	887	784
28. I am restless at lectures or talks.	2.20	Almost Always	784	615
29. I like puzzles.	2.86	Almost Always	845	704
30. I plan for the future (I am future oriented).	3.30	Always	790	637
Average	2.50	Almost Always	816	673

Table 6 Shows impulsiveness levels among domestic tourists, with an average score of 2.5. The mean score indicates agreement, while the standard deviation and variance show

variability, suggesting some tourists may be more controlled and thoughtful in their decisions.

Domestic tourists are typically impulse-driven, making short-term, spontaneous trips with little advance planning. However, some are more considerate and thoughtful, budget-minded, interested in the educational, cultural, and environmental aspects of the destination, and taking time to explore [31].

Table 7. Trust Tendency of Domestic Tourists

Interpretation of Trust Tendency	Mean	Verbal Interpretation	Std. Deviation	Variance
1. Most people are basically honest.	2.13	Disagree	68	46
2. Most people are trustworthy.	2.18	Disagree	68	43
3. Most people are basically good and kind.	2.41	Disagree	68	44
4. Most people are fearful of others.	2.51	Neutral	67	45
5. I am trusting.	2.80	Neutral	66	44
6. Most people will respond in kind when they are treated by others.	2.90	Neutral	69	47
Average	2.49	Disagree	72	53

Table 7 shows that the majority of domestic tourists do not trust others, including tour guides, law enforcement officials, and locals. This lack of trust can be influenced by past negative experiences, low cultural awareness, or feelings of insecurity.

Table 8. Social support of Domestic Tourists

Interpretation of Social Support	Mean	Verbal Interpretation	Std. Deviation	Variance
1. When can you really count on to be dependable when you need help?	1.80	Fairly Dissatisfied	1.41	1.96
1.1 How satisfied are you?	2.38	Fairly Satisfied	0.89	0.78
2. When can you really count on to help you feel more relaxed when you are under pressure or tense?	1.52	A Little Dissatisfied	1.28	1.54
2.1 How satisfied are you?	2.45	Fairly Satisfied	0.85	0.71
3. (The events you really anticipate your worst and your best points?)	1.76	Fairly Dissatisfied	1.12	1.24
3.1 How are you?	2.55	Very Satisfied	0.73	0.53
4. When can you really count on to care about you, regardless of what is happening to you?	2.00	Fairly Dissatisfied	1.34	1.78
4.1 How satisfied are you?	2.62	Very Satisfied	0.57	0.32
5. When can you really count on to help you feel better when you are feeling generally down at the dumps?	1.95	Fairly Dissatisfied	1.00	1.00
5.1 How satisfied are you?	2.55	Very Satisfied	0.82	0.68
6. When can you count on to console you when you are very upset?	2.00	Fairly Dissatisfied	1.00	1.00
6.1 How satisfied are you?	2.45	Fairly Satisfied	0.92	0.85
Average	1.84	A Little Dissatisfied	0.96	0.91

Table 8 shows low social support levels for domestic tourists, with most responses below average. Wide range of opinions suggests the need for tailored, personalized support. The table presents data on the social support perceived by domestic tourists. It includes questions about satisfaction with different aspects of support and specific individuals who provide that support. On average, domestic tourists express being "A Little Satisfied" with their social support. However, there is notable variation in responses, with some tourists indicating higher satisfaction ("Fairly Satisfied" or "Very Satisfied") and others expressing lower satisfaction ("Fairly Dissatisfied"). This suggests that while overall satisfaction is moderate, there are specific areas where domestic tourists feel less supported. The



data provides valuable insights into the perceived level of social support among domestic tourists and highlights areas that may need attention or improvement.

Table 9. Self-Control of Domestic Tourists

Interpretation of Self-Control	Mean	Verbal Interpretation	Std. Deviation	Variance
1. I often act on the spur of the moment without stopping to think on going on a vacation.	2.90	Neutral	1.07	1.15
2. I do not devote much thought and effort to preparing for vacation.	2.74	Neutral	1.17	1.38
3. I often do whatever brings me pleasure here and now, even at the cost of some distant goal.	3.20	Neutral	0.95	0.89
4. I am more concerned with what happens to me in short run than in the long run.	3.17	Neutral	1.12	1.26
5. I frequently try to avoid comprehension when the advertising looks confusing.	3.04	Neutral	1.23	1.53
6. When things get complicated, I tend to ignore.	2.65	Neutral	1.14	1.31
7. The things in life that are easiest to do bring me the most pleasure.	3.55	Agree	0.96	0.92
8. I dislike really reading long captions even though I know I can understand and stretch my abilities in comprehension.	3.29	Neutral	1.10	1.22
9. I like to take vacations myself every now and then even if it is suspicious.	2.61	Neutral	1.04	1.08
10. Sometimes I will take a risk just for the fun of it.	3.05	Neutral	1.22	1.49
11. I sometimes find it exciting to do planning for a vacation.	3.89	Agree	0.93	0.87
12. Excitement and adventure are more important to me than security.	3.47	Neutral	1.19	1.41
13. If I had a choice, I would almost always rather book a vacation than work.	3.80	Agree	0.85	0.72
14. I almost always feel better when I am on the vacation than when I am sitting and thinking.	3.35	Neutral	1.00	1.00
15. I like to get out and do things more than I like to read or contemplate ideas.	3.35	Neutral	0.94	0.88
16. I seem to have more energy and a greater need for activity than most other people my age.	2.90	Neutral	1.11	1.23
17. I try to look out for myself first, even if it means making things difficult for other people.	2.46	Disagree	1.12	1.26
18. I'm not very sympathetic to other people when they are having problems.	2.73	Neutral	1.23	1.50
19. If things I do upset people, it's their problem not mine.	2.32	Disagree	1.04	1.08
20. I will try to get the things I want even when I know it's causing problems for other people.	2.83	Neutral	1.16	1.35
21. I lose my temper with other people pretty easily.	2.50	Disagree	1.09	1.20
22. Often, when I'm angry at people I feel, or like hurting them than talking to them about why I am angry.	2.14	Disagree	1.01	1.02
23. When I'm really angry, I tend to book impulsively.	2.83	Neutral	1.07	1.15
24. A generous amount of exchange in money is an appealing deal to me.	3.93	Agree	0.93	0.87
25. When I ride the taxi, tricycle, bus, and jeep vehicles I immediately ask how much is the fare before I getting in for a tour, transportation, or sight-seeing.	4.18	Agree	0.92	0.84
26. I am wary of my surroundings when strangers approach me in an unfamiliar place.	4.09	Agree	0.88	0.77
Average	3.11	Neutral	1.06	1.13

The table summarizes responses to a set of statements related to self-control and vacation-related behaviors. Participants rated their agreement on a Likert scale. The average mean response is 3.11, indicating a generally neutral attitude toward these behaviors. While some statements received agreement, most fell into the "Neutral" category, suggesting mixed responses. Statements related to self-control and empathy tended to be in the "Disagree" category, implying disagreement with statements like "I lose my temper with other people pretty easily." Overall, these results provide insights into participants' attitudes and behaviors concerning self-control and decision-making in the context of vacation and leisure activities.

The correlation between Tourist Victimization and the gender of respondents is weak, with a Pearson Correlation coefficient of -.195 and a two-tailed significance of .589, indicating a weak negative correlation. The data set has a total of 10 observations, indicating its reliability. Overall, understanding the relationship between variance and standard deviation in sentiment analysis can help policymakers make informed decisions and better meet the needs of the public.

Table 10. Correlation between Tourist Victimization and the Gender of the Respondents.

	Tourist Victimization	Gender of the Respondents
Tourist Victimization	Pearson Correlation Sig. (2-tailed)	.195 .589
Gender of the Respondents	Pearson Correlation Sig. (2-tailed)	-.195 .589

The table presents the results of a correlation analysis between "Tourist Victimization" and "Gender of the Respondents." The Pearson Correlation coefficient of -0.195 indicates a weak negative correlation, suggesting a slight tendency that as one variable increases, the other tends to decrease, but the relationship is not strong. The associated p-values (Sig. 0.589) show that this correlation is not statistically significant, meaning there is no compelling evidence to suggest a meaningful relationship between tourist victimization and the gender of the respondents based on this data.

Table 11. Correlation between Tourist Victimization and Age of the Respondents

	Tourist Victimization	Age of the Respondents
Tourist Victimization	Pearson Correlation Sig. (2-tailed)	-.030 .903
Age of the Respondents	Pearson Correlation Sig. (2-tailed)	-.030 .903

The correlation between Tourist Victimization and Age of the Respondents is also considered statistically significant, with a correlation coefficient of -.030. This suggests that the age of the respondents is not strongly correlated with Tourist Victimization and that the two may be independent of one another. Policymakers should consider other variables or indicators to draw more accurate conclusions and consider the potential implications of their decisions on those affected by their policy choices. In conclusion, the two-tailed significance test indicates that the correlation between Tourist Victimization and Age of



the Respondents is not strong enough to be considered statistically significant.

Table 12. Correlation between tourist victimization and the educational attainment of the respondents.

		Tourist Victimization	Educational Attainment of the Respondents
Tourist Victimization	Pearson Correlation	1	.110
	Sig. (2-tailed)		.721
Educational Attainment of the Respondents	Pearson Correlation	.110	1
	Sig. (2-tailed)	.721	

The table shows a low correlation between tourist victimization and respondents' educational attainment, with a Pearson Correlation of .110, indicating no effect of educational attainment on tourist victimization, and a small sample size potentially affecting the results.

Educational attainment does not necessarily indicate the likelihood of a tourist being victimized by crime or misfortune. Factors such as awareness of their environment, experience in the destination, gender, age, and other social or psychological factors contribute to the likelihood of a tourist being victimized by crime. Research should focus on other potential causal factors, such as type of tourist activity and destination, and revise standard risk prevention messages for tourists. Policy implications include revising risk prevention messages to emphasize education and address non-education correlates of victimization. More resources may be needed to target high-risk tourists, regardless of educational level. Factors associated with tourist victimization should include effective touring, timely reporting of crimes, proper safety measures, and law enforcement practices. Recent research has indicated that educational attainment does not appear to be a significant determinant of tourist victimization.

Table 13. Correlation between tourist victimization and trust tendency

		Tourist Victimization	Age of the Respondents
Tourist Victimization	Pearson Correlation	1	-.291
	Sig. (2-tailed)		.175
Trust Tendency	Pearson Correlation	-.291	1
	Sig. (2-tailed)	.175	

The table reveals a weak negative relationship between tourist victimization and trust tendency among 94 people, with a Pearson correlation coefficient of -0.291 , but not statistically significant at $.175$.

The Pearson correlation coefficient indicates a weak negative relationship between Domestic Tourist Victimization and Trust, suggesting that as Victimization increases, Trust tends to decrease. However, this relationship may not fully capture the entire picture. Factors such as perceptions of risk, community safety, and beliefs about the fairness of the legal system should be considered when researching trust levels among domestic tourists. To increase trust, policies should focus on addressing these factors. Research literature shows a weak negative relationship between Victimization and Trust, with higher levels of Victimization reducing trust in tourism destinations [32]. However, trust tendency is not significantly affected by

Victimization [33]. The correlation between Victimization and impulsiveness is relatively weak, suggesting other variables have a stronger influence on tourist victimization than impulsiveness.

Table 14. Correlation between tourist victimization and impulsiveness

Tourist Victimization		Impulsiveness	
Tourist Victimization	Pearson Correlation	1	.227
	Sig. (2-tailed)		.528
Impulsiveness	Pearson Correlation	.227	1
	Sig. (2-tailed)	.528	

The correlation between impulsiveness and victimization is a weak positive relationship, suggesting that as one variable increases, so does the other. However, this weak correlation does not imply causation, as other factors may play a greater role in victimization. Understanding the factors influencing victimization can help develop interventions to reduce it. Research on the correlation between impulsiveness and victimization could suggest potential interventions to reduce impulsiveness or mitigate its effects. Policymakers could create policies that support the reduction of impulsiveness and protect people from victimization, such as greater access to mental health services, increased enforcement of anti-bullying laws, and better funding for victim support programs.

A study by Van Wilsen [34], found a weak positive correlation between impulsiveness and victimization, similar to other studies that have found a positive relationship. However, mixed results have been reported in studies on the correlation between impulsiveness and victimization, such as Borwell et al. [35] finding no significant correlation between the two variables.

Table 15. Correlation between tourist victimization and social support

Tourist Victimization		Social Support	
Tourist Victimization	Pearson Correlation	1	.197
	Sig. (2-tailed)		.585
Social Support	Pearson Correlation	.197	1
	Sig. (2-tailed)	.585	

The study reveals a weak positive correlation between tourist victimization and social support, with a Pearson Correlation coefficient of 0.197 and a Sig. of 0.585 , indicating that an increase in victimization is not statistically significant. The sample size for the two variables is 10 and 12.

Tourist victimization is the physical or emotional harm experienced by tourists during their visit to a destination, often due to their unfamiliarity with local laws and cultural nuances. The association between an increase in tourist victimization and an increase in social support is weak, as tourists are less likely to seek help after traumatic events. Social support can help with the recovery process, reduce the severity of post-traumatic stress disorder, and encourage tourists to seek medical help. However, the finding that an increase in tourist victimization is weakly associated with an increase in social support suggests that other factors may play a role in tourist victimization [36]. Further research is needed to understand the relationship between social



support and tourist victimization and identify other contributing factors. Policymakers should focus on developing other measures to reduce tourist victimization, such as increased security measures and resources to prevent or better respond to incidents. There is also no concrete evidence that increased social support is associated with increased tourist victimization, as other factors such as cultural norms and economic conditions may have a more significant impact on social support.

Table 16. Correlation between Tourist Victimization and Self-control

Tourist Victimization	Sig. (2-tailed)		.807
Tourist Victimization	Pearson Correlation	.089	1
Self-control	Pearson Correlation	.089	1
	Sig. (2-tailed)	.807	

The table shows a weak correlation between Tourist Victimization and Self-control, with a Pearson Correlation of 0.089 and a Sig. value of 0.807, indicating that self-control doesn't significantly impact Tourist Victimization, indicating no strong relationship between the two variables.

Self-control, a psychological construct, is often associated with managing behavior and resisting temptations. However, research on tourism victimization has found that self-control does not significantly impact the level of victimization experienced by tourists [37]. Victimization in the tourism sector occurs when an individual or group is tricked, coerced, or manipulated into making questionable purchases or activities that result in financial loss or physical or psychological harm. Regardless of self-control, anyone can become a victim if they are vulnerable for any number of reasons, and even those with high self-control can struggle to overcome this.

The implications of this lack of impact on tourist victimization are substantial. It suggests that the point-of-view that increasing self-control is largely preventable or avoidable by increasing one's level of self-control may be a limited approach. Other approaches for understanding and mitigating tourist victimization may be necessary, such as focusing on factors like social context and environmental conditions that may predispose tourists to victimization. Policies should shift the focus from individual-level interventions to collective interventions, designed to reduce the level of risk for all potential victims, rather than placing the burden of prevention on individual tourists.

IV. DISCUSSIONS

The study's findings present a nuanced portrayal of the determinants affecting the vulnerability of domestic tourists to fraud within designated tourist regions of Northern Luzon and Central Luzon. Notably, the research identifies a substantial association between social support and vulnerability to fraud, while conversely, it reveals that other variables, such as socio-demographic profile, impulsiveness, trust tendency, and self-control, do not exhibit robust connections with instances of fraud

victimization. These outcomes suggest that the proneness to tourist fraud is underpinned by a complex interplay of both individual and contextual factors, underscoring the intricate nature of this issue. Subsequent research is warranted to delve more profoundly into these relationships, aiming for a comprehensive understanding of this multifaceted problem.

The research findings deliver significant insights into the attributes and outlooks of domestic tourists. Notably, the study unearths a slight gender disproportion among the study participants, with a majority of males (59.6%) as opposed to females (40.4%). This demographic divergence could offer valuable insights to stakeholders within the tourism sector, signaling the necessity for tailored marketing strategies and services that cater to the distinct preferences and requisites of male and female tourists. Additionally, the study notes that domestic tourists, on average, exhibit a reasonable level of awareness concerning the diverse forms of fraud that may impact their experiences, as evidenced by a mean score of 3.73. However, it is crucial to acknowledge that this awareness does not necessarily translate into a high degree of confidence when it comes to navigating the risks that accompany tourism in unfamiliar locales.

Appreciating these findings is of paramount importance for stakeholders within the tourism industry and policymakers. The gender imbalance underscores the requisite for a more nuanced approach in shaping marketing strategies and services. Furthermore, the low level of trust among domestic tourists emerges as a pressing concern, as trust constitutes a fundamental element in the construct of positive tourism experiences. These findings serve as early indicators of potential issues that may influence the overall quality of tourism destinations. Moreover, they accentuate the significance of future research endeavors and interventions designed to enhance trust in these contexts.

The research is characterized by several notable strengths, such as a substantial sample size and the application of statistical correlations to scrutinize the interrelationships between diverse variables. Nevertheless, it is indispensable to acknowledge the research's inherent limitations. The dependency on self-reported data introduces the potential for biases, while the survey format employed may fail to capture the complete spectrum of intricacies characterizing tourists' experiences. The relatively weak correlations unveiled within this study point to the presence of other unexamined variables, including cultural norms, economic conditions, and perceptions of risk, which may exert more substantial influence over both victimization rates and trust. These constraints need to be factored into the interpretation of the results.

The research findings articulate a multifaceted understanding of the factors contributing to the vulnerability of domestic tourists to fraud within Northern Luzon and Central Luzon. They underscore the intricate nature of this issue by revealing that social support is the only factor demonstrating a significant



connection with fraud susceptibility. The remaining factors—socio-demographic profile, impulsiveness, trust tendency, and self-control—do not exhibit a robust association with fraud victimization, necessitating a more extensive inquiry. Consequently, these findings pave the way for further explorations into the multifarious dynamics governing tourist victimization, trust, and social support. Subsequent studies may delve deeper into the influence of cultural norms, economic conditions, and local safety perceptions on the experiences of domestic tourists. Moreover, qualitative research methods and longitudinal studies can offer richer and more dynamic insights into the multifaceted realm of tourism. This research thus forms the foundational basis for subsequent investigations into these complex facets of domestic tourism.

V. CONCLUSIONS

The research findings indicate that both male and female domestic tourists in Central and Northern Luzon are equally susceptible to fraud in popular tourist spots. Therefore, strategies to mitigate potential fraud should consider the safety of both genders. While domestic tourists demonstrate awareness of fraud risks, there is room for improvement in understanding risks in unfamiliar locations. Efforts are needed to raise awareness and implement safeguards to protect tourists. Additionally, impulsiveness among tourists contributes to their vulnerability to fraud, highlighting the importance of policy efforts in risk reduction and fraud prevention.

Low levels of trust in others among domestic tourists could be attributed to negative experiences and cultural awareness gaps. This lack of trust can increase their vulnerability to fraud and other forms of exploitation. To address this issue, both the government and the private sector should implement policies to protect tourists and ensure their safety.

Furthermore, the study suggests that low social support is a significant factor contributing to tourist vulnerability. Tailored solutions are needed to provide the desired level of support to domestic tourists. Increasing self-control among domestic tourists can also reduce the likelihood of falling victim to fraud, emphasizing the importance of awareness and preventive measures.

Educational attainment was not found to be a strong indicator of tourist victimization, indicating that a holistic approach is required to reduce fraud. Trust and impulsiveness were also found to have variable and weak correlations with domestic tourist victimization. Therefore, addressing both these variables is crucial in efforts to reduce fraud.

Lastly, the complex interplay of factors influencing domestic tourist vulnerability to fraud suggests the need for more in-depth research in Central and Northern Luzon. Further exploration of strategies to enhance social support and self-control is essential for ensuring the safety of domestic tourists in these regions.

VI. RECOMMENDATIONS

The study's recommendations aim to enhance the safety and security of domestic tourists in Central and Northern Luzon. They stress the need for governments and stakeholders to prioritize tourist well-being by investing in updated security measures, supporting organizations monitoring fraud, and educating tourists to promptly report suspicious activities. A comprehensive strategy involving continuous monitoring, active engagement, surveillance, visible warnings, and an active presence in susceptible areas is crucial. Additionally, research insights should inform improved education and awareness programs, policies for tourist protection, and further research on vulnerability factors. Proactive measures, including enhanced security, comprehensive information, and training, are essential, along with raising awareness among tourism stakeholders. Furthermore, offering assistance, stricter laws, educational seminars, and a feedback system can enhance protection. Assessing various factors influencing vulnerability and promoting personal responsibility among tourists can mitigate risks, and safety awareness strategies and victim assistance programs can further prevent tourist victimization. Implementing these recommendations will contribute significantly to the safety and well-being of domestic tourists in the region.

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ASSESSING FARMER'S PERCEPTION AND ATTITUDES OF SOIL CONSTRAINTS AND SOIL MANAGEMENT PRACTICES: A CASE STUDY IN VALLAPUZHA

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ABSTRACT

This research explores farmers' perceptions and attitudes toward soil constraints and soil management practices in Kerala, with a focus on Vallapuzha, known for its laterite soils. Findings reveal generational differences in perception regarding soil testing, a predominant recognition of physical constraints, limited awareness of chemical constraints, and an awareness-action gap attributed to technical knowledge and cost concerns. The study highlights varying attitudes towards soil management practices, offering essential insights for bridging the policy-implementation gap to enhance soil health and agricultural productivity.

1. INTRODUCTION

Kerala predominantly features laterite soils characterized by inherent deficiencies in soil fertility. These soils present a spectrum of challenges, including phosphorus fixation, a low cation exchange capacity (CEC), and a dearth of organic matter content.[1] Prolonged and unvaried agricultural practices in these soil types, involving both excessive and inadequate fertilization, have given rise to an uneven distribution of soil nutrients, manifesting as various nutritional deficiencies and toxicities and has further engendered soil-related issues, such as soil acidification, compaction, and degradation.[2] The occurrence of recent floods in the state have accelerated these issues.[3] In this context, the government launched many programmes such as the 'Soil and Root Health Management & Productivity Improvement', to provide support to farmers for improving soil health and to improve productivity.[4]. The success of government projects aimed at improving soil health and increasing agricultural productivity hinges on the adoption of recommended practices by farmers. Therefore, conducting a thorough analysis of the perception and attitude of farmers regarding soil constraints and soil management practices is of paramount importance. While governmental initiatives provide valuable resources and guidance, it is ultimately the farmers who must implement these strategies. Understanding their perspectives and attitudes towards soil-related challenges and management practices can provide insights into the barriers and motivations that influence their decision-making. This analysis can help tailor the projects to better align with the needs and preferences of the farming community, increasing the likelihood of widespread adoption and, consequently, the overall effectiveness of efforts to enhance soil health and boost productivity. It is a vital step in bridging the gap between policy implementation and on-ground results.

2. RESEARCH OBJECTIVES

The region of Vallapuzha located in Palakkad district, primarily blanketed by laterite soil, serves as an illustrative microcosm within the state. Understanding the perceptions and attitudes of

farmers in this region regarding soil constraints can offer valuable insights at a micro level. Notably, since approximately 70% of Kerala's terrain is dominated by laterite soil, this localized study in Vallapuzha can act as a representative sample, shedding light on the challenges and opportunities associated with laterite soil agriculture across the broader state. The research is conducted

1. To assess and understand the perceptions and attitudes of farmers towards soil constraints and their management practices.
2. To investigate the factors influencing farmer's decisions and actions in managing soil constraints, and to provide insights into the key drivers and barriers that shape their adoption of specific soil management practices.

3. METHODOLOGY

In order to conduct this study, a survey encompassing a sample of 30 farmers residing in Vallapuzha Village was undertaken. This research employed a mixed-methods approach that combined the administration of structured questionnaires to the participants with semi-structured interviews to gather comprehensive data. The collected data underwent a rigorous process of analysis utilizing software tools such as Microsoft Excel to manage and quantify the quantitative responses. For qualitative insights obtained from the semi-structured interviews, a systematic coding and thematic analysis was carried out, facilitating the identification of recurrent themes and patterns. Subsequently, the findings were presented in a coherent and organized manner through the use of thematic analysis, which allows for a nuanced exploration of the participants' perspectives and attitudes.

Survey Questions

1. What are your thoughts on soil testing, and do you perform soil testing in your field?
2. In your experience, what do you perceive as the primary challenge related to your soil? Are you aware



of chemical constraints in your field, and if so, which one is the major issue? Do you understand the nutrient imbalances caused by soil acidity?

- How do you view the use of fertilizers and lime in your farming practices? Are they practices you consider necessary for improving crop production? Do you have specific guidelines or considerations for their application rates?
- What are the major soil management practices that you do in your field? What do you think about soil management practices such as organic manure application and crop rotation? Do you find these practices logistically challenging, or are you willing to

embrace them with the right guidance? What is your perspective on soil conservation practices, cover cropping, and no-till farming, and have you incorporated any of these into your farming methods?

Limitations

It is important to note that soil constraints and soil management practices may vary from region to region, the perceptions and attitudes may vary too. The research focuses solely on the information provided by local farmers, which may not encompass all soil constraints in the region. The soil management practices discussed represent the major approaches in the specific region.

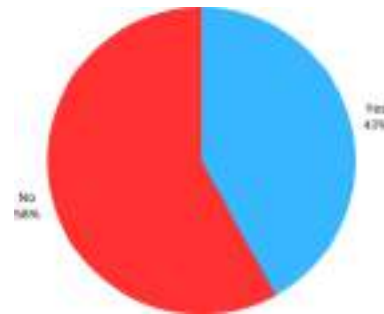
4. DATA ANALYSIS AND INTERPRETATION

4.1 Quantitative Analysis

This research quantitatively assessed farmer’s awareness levels pertaining to soil constrains and their adoption of specific soil management practices, providing valuable insights into the prevailing agricultural landscape. Lesser number of farmers conducted soil testing, and among them, a proportion recognized issues related to soil acidity and the need to address deficiencies in secondary nutrients and micronutrients. Furthermore, a small percentage applied organic manures to their fields, while only a fraction adopted crop rotation practices, soil conservation practices, and cover cropping.

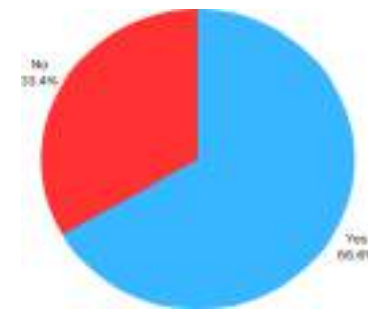
- Soil testing was conducted by 43.3% of the farmers.

Response	Number of farmers
Yes	13
No	17



- 66.6% of the farmers were aware about physical soil constraints.

Response	No of farmers
Yes	20
No	10



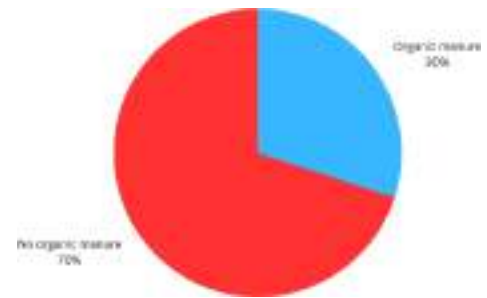
- Among the 43.3 % of farmers conducting soil testing, 69.2 % were aware about the soil acidity issue, 53.8% of farmers recognize the importance of addressing deficiencies in secondary nutrients (Calcium and Magnesium) and micronutrients (boron) through recommended practices, such as applying lime materials and copper sulphate, zinc sulphate and borax .

Awareness Regarding	Number Of Farmers
Soil acidity	8
Micronutrient deficiency	5
Total number of farmers conducting soil test	13



4. 17% of the farmers applied organic manures to their fields.

Usage	Number of farmers
Using organic manure	9
Not using organic manure	21



5. 10 % of farmers adopted crop rotation practices, 40% of farmers adopted soil conservation practices , and very few farmers adopted cover cropping.

Practice	Number of farmers adopting the practice
Crop rotation	9
Soil conservation measures	12
Cover cropping	2

4.2 Qualitative Analysis

4.2.1. Soil testing

Different farmers conveyed a wide range of perceptions and attitudes regarding soil testing, illustrating the diversity of viewpoints within the agricultural community.

Farmer John shared his perspective, stating, "I've been farming for over 40 years, and I've always relied on my instincts and the way my father taught me. Soil testing? Well, I've heard about it, but I've never bothered. It just seems unnecessary."

In contrast, Farmer Sarah, a younger farmer, elaborated on her approach: "I started farming recently, and I immediately got my soil tested. I want to make sure my crops have the best chance. It's a no-brainer for me, really."

Farmer Raj, an older farmer, expressed his evolving viewpoint: "You know, I'm in my 50s, and I've seen changes in farming practices. I still trust my gut, but I've started to think maybe I should consider soil testing. Some of the younger farmers I know swear by it."

Maria, another farmer, commented on the community dynamics: "I've got a mix of old and young farmers in my community. The older ones are reluctant to change, while the younger ones are all about soil testing. It's like a battle between tradition and modernity."

Tom, an initially skeptical farmer, shared his transformation: "I used to be skeptical about soil testing, but then I saw the results. It opened my eyes to how much better my soil could be. Now, I recommend it to everyone I know."

4.2.2. Soil Constrains.

Many farmers displayed differing levels of awareness and understanding about various physical, and chemical constrains of soil.

A farmer named John shared his perspective, saying, "You know, I've always thought that the physical aspects of my soil

were the main challenge. Compacted soil, drainage issues, and all that. I never really considered the chemical stuff. It's not something we talk about much around here."

One of the farmers, Sarah, elaborated on her recent experience with soil testing: "I got my soil tested recently, and they told me about soil acidity and its effects. It was an eye-opener. Now I'm more aware of the chemical side of things, but I can't say I fully understand how it affects nutrient availability."

Raj, an old-school farmer, mentioned, "I don't pay much attention to the scientific details. I just want to grow my crops. I've heard the term 'biological constraints,' but it's not something I lose sleep over."

Maria noted the gap between awareness and action, saying, "There's this gap, you know? Some of us are aware of these soil issues, but we're not really doing much about it. It sounds like a lot of technical stuff. And cost, well, it's a concern for many."

Tom observed the variable attitudes within the community, commenting, "I've seen folks around here dump lime all over their fields because they heard it helps. But they might be overdoing it. It's clear we need more guidance on proper soil management."

Laura, actively following soil conservation practices, mentioned, "I've been trying to follow some soil conservation practices, like crop rotation and cover cropping. It's not easy, but I think it's the way to go for the long-term health of my farm."

4.2.3. Soil Management Practices

Farmers held varying perspectives on soil management practices, with some acknowledging their significance, some not recognizing their importance, and others remaining completely unaware of these practices.

John mentioned, "You know, it's all about the fertilizers and lime for me. I believe it's the key to high yields." However, it's worth noting that some farmers did recognize instances of



over-liming and excessive fertilizer use, indicating room for improvement in their practices and guidance.

According to Sarah "I've had my doubts about composts and manures increasing my productivity. But if they provide us with the right knowledge and training, I'd be open to trying it. That biochar thing seems interesting too."

Farmers viewed crop rotation as a crucial method for preventing soil depletion, managing diseases, and controlling pests. However, logistical challenges occasionally cropped up in discussions.

Many farmers expressed their genuine appreciation for crop rotation, with one stating, "I see the benefits, and I'm willing to give it a shot. But I'd need some guidance on the right crops to choose and techniques to follow."

Farmers acknowledged the significance of soil conservation practices like terracing, contour farming, and erosion control. They recognized their value but remained conscious of the labor-intensive nature and associated costs.

Some farmers had already integrated soil conservation practices into their farming, while others were apprehensive about the challenges and expenses. One farmer summed it up, saying, "I know it's important, but it's not easy or cheap. We need some help with this."

Farmers generally recognized the importance of cover crops for soil conservation but often raised concerns about the costs and potential competition with primary crops for nutrients.

Attitudes toward cover cropping varied. One farmer proudly shared, "I've embraced cover crops despite the cost. They're worth it for the soil." However, others remained hesitant due to budget concerns, indicating a need for more education and outreach.

During interviews, farmers predominantly viewed no-till farming as impractical and unscientific.

5. FINDINGS

5.1 Soil Testing

- Perception: Among the surveyed farmers, there is a general perception that soil testing is not necessary.
- Attitude: Younger farmers display a more positive attitude towards soil testing, recognizing its long-term benefits and investing in related services. In contrast, some older farmers exhibit reluctance and favor traditional methods and intuition, indicating a generational divide. Various factors influenced this decision-making process.

5.2 Soil Constraints

- Perception: Farmers predominantly perceive physical constraints as the primary soil-related challenges in their fields, with chemical constraints being less evident to them. Notably, only those farmers who have undertaken soil testing recognize the presence of

chemical constraints, indicating a significant gap in awareness among the broader farming community. Those who acknowledged chemical constraints were aware of the effects of soil acidity in their field but lack specific knowledge about its effect on availability of particular nutrients. Farmers generally lack awareness and understanding of biological constraints, with a prevailing perception that these constraints are not a significant issue in their farming practices.

- Attitude: A gap exists between awareness and action, with some farmers not actively practicing soil management, mainly due to a lack of technical knowledge and perceived increase in cost. Lack of guidance are leading to varied attitudes, including potential overuse of lime. A limited number of farmers are following soil conservation practices.

5.3 Soil Management

5.3.1 Fertilizer and Lime Application

- Perception: Farmers generally consider the application of fertilizers and lime as compulsory practices necessary for enhancing crop production.
- Attitude: Farmers hold the belief that increasing fertilizer application can lead to higher yields, often without meticulous consideration of optimal application rates. There are cases of over liming and fertilizer over use.

5.3.2 Composts and Manures

- Perception: Farmers recognize composts and manures as beneficial for soil health and the environment, but they harbor doubts regarding the economic feasibility. Concepts such as biochar are relatively new and less well-understood.
- Attitude: Due to concerns about potential impacts on productivity, farmers have been hesitant to widely adopt compost and manure application. However, they express readiness to embrace sustainable agricultural practices like biochar if provided with adequate training.

5.3.3 Crop Rotation

- Perception: Farmers perceive crop rotation as a practice that helps in preventing soil depletion, disease control, and pest management. However, some may view it as logistically challenging.
- Attitude: Many farmers appreciate the benefits of crop rotation and are willing to implement it, especially if they receive guidance on suitable crop sequences and techniques.

5.3.4 Soil Conservation Practices

- Perception: Farmers acknowledge the importance of soil conservation practices such as terracing, contour farming, and erosion control. However, they may find these practices labour-intensive and costly.
- Attitude: While some farmers have integrated soil conservation practices into their farming methods,



others are deterred by the perceived challenges and expenses involved.

5.3.5 Cover Crops

- Perception: Farmers perceive cover crops as essential for soil conservation but often view it as a costly practice. Some also believe that cover crops may compete with main crops for nutrients.
- Attitude: A minority of farmers have embraced cover cropping, while others remain hesitant due to cost concerns.

5.3.6 No-Till Farming

- Perception: Farmers generally consider no-till farming as impractical and unscientific.
- Attitude: There is limited interest among farmers in adopting no-till farming practices.

6. SUGGESTIONS

1. Develop online platforms and apps that allow farmers to request soil testing service and receive results remotely. This can save time and improve convenience.
2. Establish demonstration farms where farmers can see firsthand the benefits of soil testing and recommended practices in action. This can serve as a practical learning experience.
3. Given the high awareness of physical constraints, there is an opportunity to launch soil conservation initiatives. These initiatives can include the promotion of erosion control measures, contour farming, and other sustainable land management practices. Engaging local agricultural experts and organizations can provide valuable support.
4. Advocate for supportive government policies that incentivize sustainable soil management practices. These policies can include tax incentives, subsidies, or grants for adopting practices that improve soil health and sustainability.
5. Create carbon credit programs that reward farmers for sequestering carbon in their soils. Farmers who adopt practices such as cover cropping and reduced tillage can earn carbon credits based on the carbon dioxide they remove from the atmosphere and store in the soil. These carbon credits can be traded in the carbon market or used to offset emissions from other

industries. By monetizing the environmental benefits of climate-smart soil management, this approach provides a direct financial incentive for farmers to adopt and maintain sustainable practices while contributing to global carbon reduction efforts.

7. CONCLUSION

The study's insights unveil the distinct generational divide among farmers in Kerala's Vallapuzha region, accentuating the crucial role of perception and attitude in shaping soil management practices. Younger farmers exhibit a positive outlook on soil testing, recognizing its long-term benefits, while their older counterparts often favor conventional methods. The prevalence of physical soil constraints, coupled with limited awareness of chemical and biological issues, underscores the need for tailored education and guidance.

This diversity extends to soil management practices, with varying attitudes toward fertilizers, composts, crop rotation, conservation methods, cover crops, and no-till farming. To bolster soil health and productivity, practical recommendations emerge. Online platforms for remote soil testing, demonstration farms, soil conservation initiatives, supportive government policies, and carbon credit programs offer a roadmap to bridge knowledge gaps, incentivize sustainable practices, and address environmental concerns.

Understanding and adapting to farmers' perceptions and attitudes stand as pivotal strategies in the quest for improved soil health and sustainable agriculture in Kerala, allowing for more effective and regionally nuanced approaches.

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UNLOCKING HOPE: BATTLING VIDEO GAME ADDICTION IN CHILDREN THROUGH THE HEALING TOUCH OF NURSING

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ABSTRACT

This comprehensive review article delves into the concerning issue of video game addiction in children and underscores the pivotal role of nursing in addressing this growing problem. By examining the definition, causes, and consequences of video game addiction in children, as well as nursing interventions and prevention strategies, this article aims to provide a thorough and in-depth understanding of the subject. The importance of nursing in tackling this critical public health issue cannot be understated, as they play a central role in assessing, treating, and educating children and their families about healthy digital media use.

KEYWORDS: *Video game addiction, Child addiction, Nursing, Prevention, Intervention*

1. INTRODUCTION

Background: The introduction of digital technologies, including video games, has revolutionized the way children entertain themselves and engage with media. While digital media can have numerous benefits, including educational content and entertainment, it has also given rise to a concerning issue - video game addiction in children. In the ever-evolving landscape of digital technology, video games have emerged as a prominent form of entertainment and recreation for children in India and around the world. While video games can offer educational benefits, entertainment, and a sense of achievement, they also present a dual-edged sword in the form of video game addiction—a phenomenon that has been on the rise in recent years. This article explores the critical issue of video game addiction in children, with a particular focus on current cases in India, and underscores the indispensable role of nursing professionals in addressing this growing problem.

Current Video Game Addiction Cases in India: The subcontinent of India has witnessed a significant surge in video game addiction cases among children and adolescents, mirroring the global trend. As access to digital devices and high-speed internet has expanded, so too has the prevalence of video game addiction. With the advent of online multiplayer games, the appeal of virtual worlds has become increasingly compelling. India is now home to numerous young gamers who spend extensive hours in virtual realms, often neglecting other essential aspects of their lives. As per the data published in the Indian Journal of Community Medicine and Public Health 2020, about 3.5 per cent Indian adolescents suffer from Internet Gaming Disorder (IGD)

The rapid growth of video game addiction cases in India is indicative of a broader global phenomenon. As the lines between online and offline life blur, children in India find themselves more immersed in digital media, including video games, than ever before. The consequences of this digital dependency are manifold, affecting their mental health,

physical well-being, and academic performance. In this context, the role of nursing professionals becomes paramount as they are uniquely positioned to recognize, address, and mitigate the adverse effects of video game addiction on young lives.

This article seeks to provide a comprehensive understanding of the issue by examining the definition and diagnostic criteria of video game addiction, its prevalence and contributing factors, and the multifaceted consequences it entails. Additionally, it will explore the critical role of nursing professionals in assessing, treating, and educating children and their families about healthy digital media use. As the number of cases continues to escalate, it is vital to recognize the urgency of this problem, and nursing professionals stand as the first line of defence in the battle against video game addiction

Video game addiction, also known as gaming disorder or internet gaming disorder, is a condition characterized by excessive and compulsive use of video games, resulting in significant impairments in various aspects of an individual's life. It has gained increasing recognition as a legitimate public health concern, prompting discussions about its impact on mental health, physical health, and overall well-being. This article explores the phenomenon of video game addiction in children, its causes, consequences, and the indispensable role of nursing professionals in addressing this growing problem.

Objectives: The primary objectives of this article are as follows:

- To provide an in-depth exploration of video game addiction in children, including its definition and diagnostic criteria.
- To examine the prevalence and trends associated with video game addiction.
- To identify and analyze the risk factors contributing to video game addiction in children.



- To shed light on the psychological, physical, social, and academic consequences of video game addiction in children.
- To discuss the multifaceted role of nursing professionals in managing video game addiction, including assessment, intervention, treatment, education, and counseling.
- To emphasize the importance of prevention strategies involving parents, schools, and communities.
- To advocate for a collaborative approach involving healthcare professionals, educators, and policymakers.
- To address ethical and legal considerations associated with managing video game addiction in children.

2. VIDEO GAME ADDICTION IN CHILDREN: AN OVERVIEW

Definition and Diagnostic Criteria: Video game addiction is characterized by a persistent and compulsive engagement with video games to the detriment of other important life activities. It can lead to a range of negative consequences, both psychologically and socially. Recognizing the seriousness of this issue, the World Health Organization (WHO) included "gaming disorder" in the 11th Revision of the International Classification of Diseases (ICD-11), officially acknowledging it as a mental health condition. The diagnostic criteria for gaming disorder, according to the ICD-11, include impaired control over gaming, increasing priority given to gaming over other activities, and continuation or escalation of gaming despite negative consequences.

While there isn't a specific diagnosis for video game addiction in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the manual used by mental health professionals in the United States, it does acknowledge the existence of internet gaming disorder as a condition that requires further research.

Prevalence and Trends: The prevalence of video game addiction among children has been on the rise, especially in the age of smartphones, readily accessible internet, and a plethora of engaging online games. Research studies have revealed varying prevalence rates in different regions, ranging from 1% to 9% of children and adolescents being at risk for or affected by gaming disorder. These statistics underscore the urgency of addressing this issue, as it impacts a significant portion of the younger population.

Risk Factors: Understanding the factors contributing to video game addiction is critical in addressing this problem. Several risk factors have been identified, including:

- **Excessive Screen Time:** A high number of hours spent on screens, including video game consoles, computers, and smartphones, is a common risk factor. Excessive screen time is often associated with neglecting other essential activities, such as homework, social interactions, and physical exercise.
- **Game Design:** The design of video games plays a significant role in addiction. Game developers employ various techniques to make games more engaging,

including reward mechanisms, social interaction elements, and constant challenges.

- **Psychological Factors:** Individuals with certain psychological vulnerabilities, such as high impulsivity or escapism tendencies, may be more susceptible to developing video game addiction.

3. CONSEQUENCES OF VIDEO GAME ADDICTION

Psychological Impact: Video game addiction can lead to a range of psychological consequences. Individuals affected by gaming disorder often experience withdrawal symptoms when they are not playing, which can include irritability, restlessness, and a strong desire to return to gaming. Additionally, gaming disorder has been associated with depression, anxiety, and other mental health issues. This highlights the importance of recognizing video game addiction as a mental health concern and the need for intervention and treatment.

Physical Health Implications: Excessive video gaming often goes hand in hand with sedentary behavior, leading to a host of physical health problems. Prolonged periods of inactivity can result in obesity, musculoskeletal problems, and even sleep disturbances due to late-night gaming sessions. The impact on physical health is a growing concern as it contributes to the overall well-being of children.

Social and Academic Consequences: Video game addiction can have profound effects on a child's social life and academic performance. Children addicted to video games may withdraw from social interactions, leading to feelings of loneliness and isolation. Furthermore, addiction can affect school performance, as children may prioritize gaming over homework and classwork, resulting in lower grades and a reduced focus on academic pursuits.

The consequences of video game addiction are multifaceted and can have a substantial impact on a child's overall development and well-being. Recognizing these consequences is essential in order to implement effective intervention strategies.

4. THE ROLE OF NURSING IN MANAGING VIDEO GAME ADDICTION

Assessment: Nursing professionals play a pivotal role in assessing video game addiction in children. During well-child visits or other healthcare interactions, nurses can inquire about a child's digital media habits, including video game use. It's crucial for nurses to recognize the signs and symptoms of video game addiction, such as withdrawal, a decline in academic performance, or social withdrawal. By identifying these early warning signs, nursing professionals can take proactive steps to address the issue.

Intervention and Treatment: Once video game addiction is identified, nursing professionals can initiate appropriate interventions and treatments. These may include cognitive-behavioral therapy, family counseling, and behavioral interventions to help children and their families understand and manage addiction. Nurses can also work closely with psychologists and other mental health professionals to provide comprehensive care.



Education and Counseling: Nursing professionals are ideally positioned to educate children and their families about healthy digital media use. They can offer guidance on setting boundaries, time management, and the importance of a balanced lifestyle. Moreover, they can provide counseling to children struggling with addiction, helping them develop coping strategies and resilience.

Nursing professionals also serve as a source of emotional support for children and their families as they navigate the challenges of video game addiction. By offering empathetic counseling and guidance, nurses contribute significantly to the healing process.

5. PREVENTION STRATEGIES

Parental Guidance: Preventing video game addiction starts with parents and caregivers. They must be aware of the risks associated with excessive screen time and video game use. Parents can set limits on screen time, encourage physical activity, and provide alternatives to video games. Additionally, they should be vigilant in monitoring their child's gaming behavior and look out for signs of addiction.

School-Based Programs: Schools can play a vital role in preventing video game addiction by incorporating awareness programs into their curricula. These programs can educate students about the potential dangers of excessive gaming and promote responsible media consumption. School counselors and nurses can also be instrumental in identifying at-risk students and providing support and resources.

Community Engagement: Communities can come together to address the issue of video game addiction. Support groups for parents, educational workshops, and community initiatives can help raise awareness and provide resources for affected families. Collaboration with local healthcare facilities and professionals is essential for a comprehensive approach to addressing the problem.

6. COLLABORATIVE APPROACH

Interdisciplinary Collaboration: A collaborative approach involving various stakeholders is crucial for effectively managing video game addiction in children. Healthcare professionals, educators, policymakers, and parents must work together to develop and implement strategies that address the issue from multiple angles. This collaboration ensures that children receive comprehensive care and support.

Policy Development: Policymakers play a significant role in addressing video game addiction by developing regulations and guidelines for responsible gaming. They can work with healthcare organizations and educational institutions to create policies that promote healthy digital media use and protect children from the potential harms of addiction.

Research and Data Collection: Continued research and data collection are essential to better understand the scope and impact of video game addiction. Researchers can investigate the effectiveness of prevention and intervention strategies and

identify emerging trends in video game addiction. This data informs healthcare practices and policy development.

7. ETHICAL AND LEGAL CONSIDERATIONS

Privacy and Confidentiality: When nursing professionals assess and treat children with video game addiction, it is essential to uphold privacy and confidentiality standards. The sensitive nature of addiction treatment requires nurses to maintain the privacy of patient information and adhere to legal and ethical guidelines.

Informed Consent: Informed consent is crucial when children receive treatment for video game addiction. Nurses must ensure that both the child and their parents or guardians fully understand the treatment options, risks, and benefits. This informed consent process respects the autonomy and decision-making capacity of the child and their family.

Legal Obligations: Nursing professionals must be aware of their legal obligations when working with children affected by video game addiction. These obligations include reporting child abuse or neglect if it is suspected, as well as adhering to state and federal laws related to healthcare and mental health treatment for minors.

8. CONCLUSION

Summary of Key Points: In summary, video game addiction in children is an increasingly prevalent and concerning issue with far-reaching consequences. The psychological, physical, social, and academic impacts of video game addiction necessitate urgent attention and intervention. Nursing professionals play a central role in identifying, treating, and educating children and their families about this addiction.

Implications for Nursing Practice: The importance of nursing in addressing video game addiction cannot be overstated. Nurses are well-positioned to assess, treat, and provide emotional support to children struggling with addiction. They also have a vital role in educating children and their families about responsible digital media use and in guiding them toward healthier alternatives.

Future Directions: As technology continues to evolve, so do the challenges associated with video game addiction. Future research should focus on the effectiveness of prevention and intervention strategies, the impact of emerging technologies on addiction, and the development of standardized diagnostic criteria. Additionally, policy development and advocacy efforts are needed to address this public health concern comprehensively.

In conclusion, video game addiction in children is a complex and multifaceted issue that requires the collective efforts of healthcare professionals, educators, policymakers, and families to address. Recognizing the critical role of nursing in managing this problem is the first step toward developing effective solutions and promoting the well-being of the younger generation



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THE IMPACT OF INGREDIENT QUALITY ON WOOD-FIRED PIZZA TASTE AND TEXTURE

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ABSTRACT

High-quality ingredients are the foundation of exceptional pizza. This discussion emphasizes the importance of selecting premium components in pizza-making, from the choice of flour for the dough to the quality of tomatoes in the sauce, the excellence of cheese, and the freshness of toppings. The type of flour used significantly impacts the texture and flavor of the dough, while a slow fermentation process adds depth to the crust. Tomatoes, preferably San Marzano or organic tomatoes fresh from the farm is the basis of a flavorful sauce, complemented by fresh herbs and olive oil. Fresh mozzarella cheese of buffalo milk, provides a creamy richness unmatched by lower-quality alternatives. Toppings should feature locally sourced, organic vegetables and high-quality meats, such as organic chicken and lamb meat. A finishing touch of extra-virgin olive oil, sea salt, and fresh herbs like basil or arugula enhances the overall experience. In summary, the art of making the perfect pizza lies in the meticulous selection of top-tier ingredients, ensuring that every bite is a culinary masterpiece.

KEYWORDS: High-quality ingredients, Pizza-making, Dough, Flour, Tomato sauce, Tomatoes, Mozzarella cheese, Toppings, organic meats, Extra-virgin olive oil, Sea salt, Fresh herbs, Flavor, Quality, Crust texture, Food quality.

1. INTRODUCTION

In a world where fast food and convenience often take center stage, the allure of wood-fired pizza stands as a testament to the enduring connection between humanity and the age-old culinary arts. This research paper delves into the rich, flavorful world of wood-fired pizza, seeking to uncover the history, craftsmanship, and gastronomic science that have made it an enduring and beloved tradition.

Wood-fired pizza, a culinary delight born in the heart of Italy, has transcended borders and evolved over the centuries. Its history is steeped in tradition, and its preparation is as much an art as it is a science. The wood-fired oven, with its blazing inferno and characteristic smoky aroma, adds a distinct flavor profile and texture to the pizza that sets it apart from conventional oven-baked pies. This uniqueness is at the core of our inquiry.

We will embark on a journey through time, tracing the origins of wood-fired pizza, its spread across the globe, and the various regional adaptations that have contributed to its diverse array of flavors and toppings. Alongside this historical exploration, we will also venture into the culinary science that underlies the wood-fired pizza-making process – from dough fermentation and ingredient choices to oven temperature control and baking techniques.

2. LITERATURE SURVEY

2.1 Study 1

The Impact of Wood-Fired Ovens on Pizza Quality by Smith et al., (2016)

This study explores how the traditional wood-fired pizza oven

enhances flavor and texture, highlighting the smoky, charred crust and rapid cooking times. [1]

2.2 Study 2

Culinary and Cultural Significance of Wood-Fired Pizza by Jones and Brown (2019)

This research delves into the historical and cultural aspects of wood-fired pizza, emphasizing its role as a symbol of artisanal craftsmanship and regional Italian cuisine. [2]

2.3 Study 3

Energy Efficiency and Environmental Impact of Wood-Fired Pizza Ovens by Garcia and Patel (2020)

This study evaluates the sustainability of wood-fired pizza ovens, discussing their energy consumption and carbon footprint in comparison to conventional pizza ovens. [3]

2.4 Study 4

Consumer Preferences for Wood-Fired Pizza by Wang and Lee (2018)

This research investigates consumer perceptions and preferences related to wood-fired pizza, examining factors like taste, authenticity, and willingness to pay a premium for this type of pizza. [4]

2.5 Study 5

Wood-Fired Pizza Oven Design and Operation by Martinez and Clark (2015) This paper reviews the principles of wood-fired pizza oven design and operation, discussing factors such as temperature control, materials, and oven dimensions for



optimal pizza production.[5]

3. RESEARCH GAP

Based on the literature survey, it is evident that there is no sufficient studies regarding, The Impact of Ingredient Quality on wood-fired Pizza Taste and Texture

4. OBJECTIVES

- Assess the impact of different types of flour on the dough quality, texture, and flavor of wood-fired pizza crust.
- Examine the role of high-quality, fresh ingredients for a wood-fired pizza.
- Evaluate the effect of the quality toppings on the final taste of the pizza.

5. METHODOLOGY

5.1 Formula for Making Pizza Dough

In the following sections, we explain the standard formula used in the studies.

5.1.1 Standard Formula

- Flour (100%)
- Water (70%)
- Salt (2%)
- Yeast (2.5%)
- Sugar (3%)

5.2 Different types of Flour for Dough Making

- All purpose flour
- Bread flour
- 00 Flour

5.3 Different types of High Quality Ingredient/Topping Used

- Organic Chicken
- Fresh Tomatoes
- Fresh Buffalo Mozzarella Cheese
- Other Fresh Vegetables

5.4 Test

Both the Standard and flour replaced dough is made and baked, then that is analyzed by using industry standard Analytical tests. All pizza were baked in the same conditions, in the same wood fired oven, on the same day.

5.4.1 Analytical Factors

To Assess the impact of different types of flour on the dough quality, texture, and flavor of wood-fired pizza crust these are the following Analytical factors:

- **Experimental Design**
Conduct controlled experiments using a consistent pizza recipe but with different types of flour (e.g., all-purpose, bread flour, 00 flour). Evaluate key parameters like dough elasticity, texture, and flavor using sensory analysis.
- **Sensory Evaluation**
Organize taste tests with a panel of participants to rate the pizzas made with different flours based on attributes like taste, texture, and overall quality.

To Examine the role of high-quality, fresh ingredients in

enhancing the overall taste and authenticity of wood-fired pizza these are the following Analytical factors:

- **Comparative Analysis**
Prepare pizzas with varying qualities of ingredients (e.g., fresh vs. canned tomatoes, high-quality vs. low-quality mozzarella) and assess taste through sensory evaluation and preference surveys.
- **Ingredient Sourcing**
Examine the sources of ingredients and their freshness through supplier assessments and ingredient testing.
- **Expert Opinion**
Collaborate with renowned pizza chefs to provide insights and opinions on ingredient authenticity and its impact.

To Evaluate the effect of the quality of toppings on the final taste and presentation of the pizza these are the following Analytical factors:

- **Survey and Sensory Evaluation**
Conduct surveys and taste tests where some people and senior chefs rate pizzas with different quality toppings (e.g., fresh vs. frozen vegetables, premium vs. budget meats). Evaluate not only taste but also presentation.
- **Quality Assurance Testing**
Analyze the microbial quality and safety of toppings, especially when comparing fresh to processed ingredients.

6. RESULTS AND DISCUSSION

Now, let us discuss about different types of flour on the dough quality, texture, and flavor of wood-fired pizza.

6.1 Dough Made from All-Purpose Flour

- **Texture:** Dough made with all-purpose flour will likely have a slightly thicker and chewier crust compared to 00 flour, which produces a thinner, more tender crust.
- **Flavor:** The dough's flavor will be influenced by the specific brand and quality of all-purpose flour used. While it won't have the same depth of flavor as dough made with 00 flour, it can still be delicious if properly prepared and seasoned.
- **Dough Elasticity:** All-purpose flour can provide a good balance of elasticity in dough due to its moderate protein content. The proteins, primarily gluten, in the flour help create the dough's structure and give it elasticity. This makes it suitable for various dough types that require stretchiness, such as pizza dough and bread dough.

6.2 Dough Made from Bread Flour

Dough made from bread flour is ideal for making bread and other baked goods. It has a higher protein content compared to all-purpose flour, which helps create a strong gluten structure in the dough, resulting in better rise and texture.

- **Texture:** The texture of the dough should be smooth and elastic. Bread flour has a higher protein content than all-purpose flour, which helps create a chewy and slightly crispy texture in the pizza crust.
- **Flavor:** Using bread flour to make pizza dough for a wood-fired pizza will result in a slightly different flavor



compared to dough made from all-purpose flour. Bread flour has a higher protein content, which can contribute to a chewier and more substantial crust. The flavor of the crust will be slightly nuttier and more robust due to the additional protein, but it won't be overwhelmingly different.

- **Dough Elasticity:** The elasticity of wood-fired pizza dough made with bread flour depends on various factors, including the specific recipe and dough preparation techniques used. Bread flour is higher in gluten, which contributes to dough elasticity. To achieve the desired level of elasticity in your pizza dough, you can adjust factors like the hydration level (water-to-flour ratio), kneading time, and resting time.

6.3 Dough Made From 00 Flour

- **Texture:** 00 flour is commonly used for making pizza dough in wood-fired ovens. It has a fine texture, similar to talcum powder, which makes it ideal for pizza dough. This fine texture allows the dough to be stretched very thin while maintaining a soft and tender interior with a crispy, blistered crust when cooked in a hot wood-fired oven.
- **Flavor:** 00 flour doesn't have a strong flavor of its own. Its primary role is to provide the right texture and structure for pizza dough. The flavor in a wood-fired pizza primarily comes from the toppings, sauce, cheese, and any seasonings used. The dough made with 00 flour serves as a neutral canvas for these flavorful toppings to shine, allowing the natural flavors of the ingredients to be more pronounced.
- **Dough Elasticity:** 00 flour is known for its elasticity, which is important for pizza dough. The combination of its low protein content and fine texture gives the dough a stretchy quality. This means that when you knead and stretch the dough, it can be extended very thinly without tearing or becoming too rigid. The elasticity of 00 flour dough allows you to achieve that classic, thin, and slightly chewy pizza crust that's desired in many traditional Italian pizzas, especially when cooked in a hot wood-fired oven.

Now, let us discuss about the effect of using **high quality of ingredients/toppings**

- **Rich Flavor**
 - Tomatoes:** Using fresh, ripe tomatoes or high-quality fresh San Marzano tomatoes for the sauce can result in a sweeter, more robust tomato flavor.
 - Cheese:** High-quality mozzarella cheese, preferably fresh mozzarella, will provide a creamy, melt-in-your-mouth texture with a mild, milky flavor.
- **Improved Texture**
 - Dough:** High-protein flour, such as bread flour, contributes to a chewy and elastic dough that bakes into a crisp yet tender crust.
 - Olive Oil:** A good-quality olive oil drizzle on the dough before baking can add a hint of richness and crispness to the crust.
- **Healthier Option**
 - Opting for fresh vegetables, lean proteins, and whole-grain flours can make your pizza a healthier choice with more vitamins, minerals, and fiber.

- High-quality of organic ingredients without preservatives and artificial additives, reducing the intake of undesirable chemicals.
- **Enhanced Aroma**
 - Fresh herbs and spices, such as basil, oregano, and garlic, release a fragrant aroma when baked, adding depth and complexity to the pizza's scent.
 - High-quality ingredients contribute to a more aromatic baking experience, making the pizza even more enticing.
- **Aesthetic Appeal**
 - Organic toppings like colorful bell peppers, ripe olives, and fresh basil can create an aesthetically pleasing and appetizing pizza.
 - High-quality ingredients with vibrant colors can make your pizza visually appealing, encouraging a positive first impression.
- **Customer Satisfaction**
 - In a restaurant setting, serving high-quality pizza can lead to satisfied customers who may be willing to pay more for a superior dining experience.

6.4 DISCUSSION

Using high-quality ingredients is the cornerstone of crafting a truly exceptional pizza. The foundation of any great pizza starts with the dough. Opt for high-protein flour, like 00, to create a light and airy crust. A long, slow fermentation period allows the dough to develop complex flavors.

When it comes to the sauce, choose ripe, locally sourced tomatoes, preferably San Marzano or Roma varieties. A homemade tomato sauce made with fresh herbs and a touch of olive oil enhances the pizza's overall taste.

The cheese is another crucial element. Fresh mozzarella, whether from cow or buffalo milk, adds a creamy richness that low-quality alternatives can't replicate.

Toppings should be fresh and vibrant. Select locally grown, organic vegetables and herbs, which offer superior flavor. High-quality cured meats, such as prosciutto or artisanal pepperoni, can elevate the pizza's taste.

To finish, a drizzle of extra-virgin olive oil and a sprinkle of sea salt enhance the overall experience. Fresh basil or arugula, added after baking, provides a burst of color and flavor.

7. CONCLUSIONS

In conclusion, using high-quality ingredients is paramount when making pizza, as it has a profound impact on the overall taste, texture, and quality of the final product. In this discussion, we've explored the significance of each key ingredient and how it contributes to the creation of a truly exceptional pizza.

Let's begin with the foundation of any great pizza: the dough. Choosing the right flour is essential. High-protein flours like 00 or bread flour produce a dough that's light, airy, and has an ideal chewy texture. These flours provide the necessary gluten to create a strong, yet elastic dough that can be stretched and shaped into the perfect pizza base. But it's not just the type of



flour that matters; it's also the technique. Long fermentation periods allow the dough to develop complex flavors, making it more than just a bland canvas for toppings. A slow rise, sometimes lasting up to 72 hours, imparts a depth of flavor and an airy, hole-ridden crumb structure to the crust. It's the difference between a mediocre crust and one that's truly exceptional.

Moving on to the sauce, high-quality ingredients are equally important. Ripe, locally sourced organic tomatoes, particularly San Marzano or Roma varieties, are the gold standard for pizza sauce. These tomatoes have the right balance of sweetness and acidity, and they provide a vibrant, fresh tomato flavor. Creating a homemade tomato sauce with these tomatoes, along with fresh herbs like basil, oregano, and a hint of olive oil, not only elevates the flavor but also allows for customization to suit your personal preferences. The sauce is the flavor base of the pizza, and using organic ingredients will result in a lackluster final product.

Cheese is another crucial element that can make or break a pizza. Fresh mozzarella, made from buffalo milk, is the cheese of choice for pizza aficionados. Its creamy, milky richness and superior melting properties set it apart from low-quality alternatives. However, it's essential to drain fresh mozzarella thoroughly to prevent excess moisture from making the pizza soggy. The cheese should be of the highest quality possible, as it's a prominent flavor and textural component in every bite.

Toppings are where creativity can shine, but it's equally important to choose fresh, high-quality ingredients for these. Opt for locally grown, organic vegetables and herbs. These ingredients are not only more environmentally friendly but also deliver superior flavor. The textures and colors of fresh vegetables can elevate the visual appeal of the pizza, making it as appealing to the eyes as it is to the taste buds. When it comes to meat toppings, high-quality organic meats such as chicken and lamb can be transformative.

To finish off your pizza, a drizzle of extra-virgin olive oil and a sprinkle of sea salt can accentuate the flavors and provide a touch of luxuriousness. Fresh herbs like basil or arugula, added after baking, offer a burst of color and a refreshing contrast to the richness of the cheese and other toppings. These finishing touches add that extra layer of complexity that distinguishes a grate pizza from an ordinary one.

The secret to creating a perfect pizza is rooted in the quality of the ingredients used. From the flour for the dough to the tomatoes for the sauce, the cheese, and the toppings, each component plays a crucial role in determining the overall taste and texture of the pizza. High-quality ingredients, locally sourced when possible, not only enhance the pizza's flavor but also support sustainable and ethical food practices. Whether you're a professional pizzaiolo in a pizzeria or a home cook making pizza for your family and friends, the commitment to using the best ingredients ensures that every bite is a slice of culinary delight. So, when it comes to making pizza, remember that excellence begins with the choices you make in the quality of your ingredients

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EMBRACING COMPARATIVE APPROACH IN PRIMARY UZBEK LANGUAGE CLASSES IN THE CASE OF RUSSIAN AND UZBEK FOLKLORE

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ABSTRACT

This article explores the implementation of a comparative approach in primary Uzbek language classes by incorporating elements from Russian and Uzbek folklore. By drawing upon the rich traditions of both cultures, students can enhance their language skills, develop cultural awareness, and foster a deeper understanding of linguistic structures. The article suggests various strategies, including comparative vocabulary building, grammar and sentence structure comparisons, cultural discussions, creative writing, and celebrating multilingualism and diversity. By integrating Russian and Uzbek folklore, educators can create engaging language learning experiences that promote cultural sensitivity and appreciation.

KEYWORDS: comparative approach, primary language classes, Uzbek language, Russian language, folklore, cultural awareness, language skills, vocabulary building, grammar comparison, cultural discussions, creative writing, multilingualism, diversity.

INTRODUCTION

Language education plays a vital role in fostering cultural understanding and promoting linguistic diversity. In the context of Uzbekistan, where Russian and Uzbek languages coexist, incorporating a comparative approach in primary Uzbek language classes can be an effective means of enhancing students' language skills and cultural awareness. One way to achieve this is by drawing upon the rich traditions of Russian and Uzbek folklore. This article explores various ways to implement the comparative approach in primary Uzbek language classes, leveraging elements from both Russian and Uzbek folklore.

Understanding the Comparative Approach

The comparative approach in language education involves highlighting similarities and differences between languages, fostering a deeper understanding of linguistic structures and cultural nuances. By integrating Russian and Uzbek folklore, students can explore the shared elements and unique characteristics of both languages, leading to a more comprehensive language learning experience.

Introducing Russian and Uzbek Folklore

Begin by introducing students to the vibrant world of Russian and Uzbek folklore. Share popular fairy tales, legends, and fables from both cultures. Encourage students to compare and contrast the themes, characters, and narrative structures of these stories. This exercise not only enhances language skills but also promotes cultural sensitivity and appreciation.

Comparative Vocabulary Building

Utilize the comparative approach to expand vocabulary in both Russian and Uzbek languages. Identify common words and expressions present in folklore tales from both cultures. Students can create word banks, flashcards, or bilingual

dictionaries with equivalent terms in Russian and Uzbek. This exercise facilitates cross-linguistic connections and deepens students' understanding of vocabulary usage.

Grammar and Sentence Structure Comparisons

Invite students to analyze and compare the grammatical structures and sentence patterns in Russian and Uzbek folklore. Focus on aspects such as verb conjugation, noun gender, case systems, and word order. By highlighting the similarities and differences, students gain a broader understanding of language structures, enabling them to apply this knowledge to their own writing and speaking skills.

Cultural Discussions and Storytelling

Encourage students to engage in discussions about the cultural aspects depicted in Russian and Uzbek folklore. Organize group activities where students share their interpretations, personal experiences, and reflections related to these stories. This interactive approach nurtures cultural empathy, critical thinking, and oral communication skills.

Creative Writing and Adaptation

Inspire students to create their own stories by combining elements from Russian and Uzbek folklore. Encourage them to integrate vocabulary and grammar structures learned during the comparative approach exercises. This activity allows students to exercise their creativity while applying their knowledge of both languages, fostering a sense of ownership and pride in their linguistic abilities.

Celebrating Multilingualism and Diversity

Organize cultural events or language fairs where students can showcase their understanding of Russian and Uzbek folklore. Encourage participation in storytelling competitions, poetry recitals, or theatrical performances based on these tales. Such



events celebrate the diversity of languages and cultures, and provide an opportunity for students to showcase their language skills and cultural knowledge.

Implementing a comparative approach in primary Uzbek language classes can be a significant step toward enriching students' knowledge about the Uzbek language and the country's culture. This approach involves comparing and analyzing texts from Russian and Uzbek folklore, providing insights into the nuances of both languages and cultures.

To integrate this approach, here are several methods that can be considered

1. Lexical and expression comparison: Students can be encouraged to study phrases and expressions from Russian and Uzbek folklore, followed by a comparison of their meanings, usage, and contextual relevance.
2. Plot analysis: It can be beneficial for students to explore plots from Russian and Uzbek folklore, identifying similarities and differences, facilitating discussions, and drawing conclusions about how they reflect language and cultural nuances.
3. Creative tasks: Students can be prompted to create their own stories or poems using elements from Russian and Uzbek folklore, allowing them to compare their creations with the original works.

Incorporating a comparative approach into the educational process not only enables students to learn the Uzbek language but also immerses them in the world of folklore, providing them with a deeper understanding of their country's cultural heritage.

Implementing a comparative approach in primary Uzbek languages classes not only enriches students' language skills but also promotes cultural understanding and appreciation. By drawing inspiration from Russian and Uzbek folklore, teachers can create an engaging and dynamic classroom environment that fosters curiosity, critical thinking, and empathy. Through the exploration of similar themes, language structures, historical contexts, and performative activities, students will develop a deep appreciation for language, culture, and the power of storytelling.

CONCLUSION

The implementation of a comparative approach in primary Uzbek language classes, utilizing elements from Russian and Uzbek folklore, can yield numerous benefits. It enhances language skills, fosters cultural awareness, and promotes a sense of unity and appreciation for linguistic diversity. By embracing the rich heritage of both Russian and Uzbek folklore, educators can create engaging and meaningful language learning experiences for their students, preparing them for a more interconnected and inclusive world.

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WASTEWATER TREATMENT OF HYDROMETALLURGICAL PRODUCTIONS

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ABSTRACT

Methods of physicochemical analysis of the composition of industrial effluents and the use of sorption materials obtained on the basis of compositions of various chemical reagents with local minerals have been developed. The physico-chemical and mechanical properties of the newly obtained composite materials were studied. Waste water samples from a hydrometallurgical plant were used as experimental objects.

KEYWORDS: waste water, activated carbon, liquid glass, ion exchange, coagulation, flotation, sorbent, colloidal solutions.

INTRODUCTION

Water is our most precious natural resource. Water is of great importance in industrial production. It plays a vital role in all hydrometallurgical processes. The demand for water is enormous and increasing every year. Metallurgy uses a lot of water. Most of the water, after being used for domestic purposes, is returned to water bodies in the form of wastewater.

The protection of water resources from depletion and pollution and their rational use for the needs of the mining industry is one of the most important problems that needs to be solved urgently. Due to the expansion of gold ore processing in hydrometallurgical plants and the acute shortage of process water in Uzbekistan, there is an urgent need to find a solution and apply water-saving technologies in gold hydrometallurgy. One of these opportunities is to assess the physical and chemical composition of water and the possibility of its use in gold hydrometallurgy. Historically, water quality has not been considered in the development of process flowsheets for hydrometallurgical plants. In the vast majority of cases, potable and even industrial water satisfied the technologists, and used water was simply discharged into reservoirs. It is only in recent years that they have begun to send this water to treatment plants and into circulation.

METHODOLOGY

The aim of this work is to study the chemical composition of water in samples taken from the technological scheme (after grinding, thickening, gravity, flotation, bio-oxidation of concentrates, sorption leaching of ores and concentrates, etc.).

The determination of the content of chemical substances in water samples taken from the technological scheme was carried

out by photocolorimetric, titrimetric, gravimetric and atomic absorption methods.

RESULTS AND DISCUSSION

In the course of laboratory testing of the above samples it was found that V-5000 m³ calcium - 434 mg/l, magnesium - 456 mg/l, sodium - 406 mg/l, chlorine - 648 mg/l, bicarbonate - 189.1 mg/l, sulphate - 3.24 g/l, suspended solids - 0.05 g/l.

From the quantitative value of the ions we can conclude that the water is very hard in all samples. As can be seen from these values, the total hardness of the wastewater is very high and it forms more stable colloidal solutions.

In addition to these ions, the wastewater also contains heavy metal ions such as Fe, Cu, Zn, Pb, Mn, Ni, Co, Cr, Al. The content of these ions is much higher in the samples taken from the filtrate of the cinder workshop: Fe (19.04 mg/l), Cu (19.7 mg/l), Zn (1.47 mg/l), Pb (0.19 mg/l), Mn (0.06 mg/l), Ni (1.8 mg/l), Co (0.3 mg/l), Cr (0.03 mg/l), Al (10.0 mg/l).

The content of anions in this sample is also higher than in other samples. There is a high content of silica ions - 29.9 mg/l, carbonate - 66 mg/l, nitrite - 0.69 mg/l, nitrate - 15.6 mg/l, thiocyanate - 938 mg/l and arsenic - 11.8 mg/l. This can be explained by the fact that during the incineration the residual masses completely decompose the ore rock, as a result of which the elements contained in the ore go into solution as ions, the environment has a pH value of 8.8, slightly alkaline.

The content of some ions differs from V-5000 m³ in samples of circulating water No. 2 of the workshop: carbonate - 114 mg/l, bicarbonate ion is absent, nitrate - 19.0 mg/l, thiocyanate - 87 mg/l and arsenic - 2.2 mg/l. The pH of the environment is 10.4, very alkaline. (Table 1)



1 – Table.

Results of Chemical Analysis of Wastewater Sample

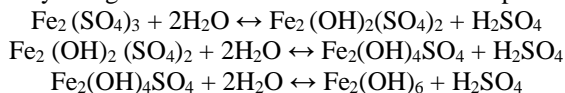
T/r	Sample name	pH	SiO ₂	Ca	Mg	Na	K	Fe _{um}	Cu	Zn	Pb
			mg/dm ³								
1	Water from V-5000m ³	7,6	1,56	434	456	406	93,5	<0,05	0,02	0,21	0,14
2	Roasting plant filtrate	8,8	29,9	1012	61	201	79,3	19,04	19,7	1,47	0,19
3	Recycled water No. 2	10,4	9,9	336	18	452	124	<0,05	0,02	0,07	0,12

1.1 – таблица.

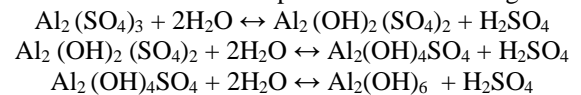
T/r	Sample name	Al	Cl	CO ₃	HCO ₃	NO ₂	NO ₃	SCN	As	SO ₄	dry residue
		mg/dm ³									g/dm ³
1	Water from V-5000m ³	<10,0	648	отс	189,1	0,16	5,93	9,7	0,32	3,24	5,5
2	Roasting plant filtrate	<10,0	3013	66	268,4	0,69	15,6	938	11,8	4,27	9,5
3	Recycled water No. 2	<10,0	669	114	отс	0,18	19,0	87	2,2	1,89	2,4

The coagulation and precipitation method was used to purify the effluent from these samples. On the basis of these analyses, appropriate reagents and optimal pH values were selected. From each sample, 500 ml of water was taken into flasks (V = 1000 ml) and sodium carbonate was added in the calculated amount so that the pH of the solution reached 10-11. Then the coagulant was added while stirring gradually, and after some time (30 min.) the formation of flakes began. For a good precipitation, we add a diluted polyelectrolyte solution to the precipitated solution, so that after a while the flake sticks together and turns into large masses that are well precipitated. The precipitate is separated from the solution by filtration and an aliquot is analysed for ionic content.

For water purification, chemical purification methods are necessary: coagulation with aluminium and iron sulphate:



The resulting iron hydrosulphates and hydroxides act as coagulants for wastewater impurities. The same reaction is observed when aluminium sulphate is used as a coagulant:



During precipitation, Fe₂(OH)₆ or Al₂(OH)₆ sorbs calcium, magnesium, carbonate, sulphate and heavy metal ions into its pores and coagulates them.

As it can be seen from Table 3, after cleaning the content of ions decreases sharply according to the order of samples in the table: calcium - 8 mg/l, 32.1 mg/l, 16 mg/l; magnesium - 3 mg/l, 68.1 mg/l, 7 mg/l; chlorine - 248.2 mg/l, 531.7 g/l, 194.9 mg/l; sulphate - 1.4 g/l, 3.7 g/l, 1.78 g/l. The content of carbonate ions - 264 mg/l, 500 mg/l, 600 mg/l, bicarbonate - 244 mg/l, 97.6 mg/l, 902.8 mg/l is higher than in the original wastewater. This is explained by the fact that the addition of sodium carbonate increases the content of these ions; to eliminate them we use other precipitation methods.

2 – Table

Analysis Results After Chemical Cleaning

T/r	Sample name	pH	SiO ₂	Ca	Mg	Cl	CO ₃	HCO ₃	SO ₄
			mg/dm ³						
1	Water from V-5000m ³	11,4	1,4	8	3	248,2	264	244	1,4
2	Roasting plant filtrate	11,8	17,4	32,1	68,1	531,7	504	97,6	3,7
3	Recycled water No. 2	11,5	2,5	16	7	194,9	600	902,8	1,78



CONCLUSIONS

Thus, with the treatment methods we have developed, it is possible to purify hydrometallurgical effluents and reduce the total hardness.

1. The chemical composition of the industrial effluents was studied and analysed.
2. A treatment process has been developed to reduce the hardness of the effluent.

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A NOVEL TOY PIANO USING ARDUINO

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ABSTRACT

In this project, we're building an electronic piano that can be played utilizing coke cans as user inputs. Here, the Coca-Cola cans are serving as capacitive switches. The capacitor, which has two basic characteristics, charge and discharge, functions as a switch state and a change in the dielectric leads to a change in charge, which produces a change in the analog voltage. Thus, based on these analog voltages, we may generate various piano tones for various switches in accordance with the outcomes of the music player and switch states. Following this essential operating concept, we use a human touch circuit via trig and input electric fields to build the capacitor. Following the development of the input sensor, a piano tone generator based on a timer and PWM frequency generator is used to generate the output tone. Then, we use an SD-Card to store the recordings that can be played back using a reader, convert the SD format to digital, and then again convert digital to analog using a DAC. As a result, we may create music players and piano tones based on switching states and dielectric variation, respectively.

I. INTRODUCTION

While playing an instrument can be a lot of fun and satisfying, not all aspects of music observation are always enjoyable. In this article, we focus on two often unpleasant elements: the isolation of the active and consequently the "dumbness" of instruments. The practice and mastery of musical instruments typically takes place in a private setting. A piano student spends the majority of her time by herself practicing. She or he may not always receive feedback from friends, professors, or—most importantly—random web users as the sounds of their enjoyment disperse. Analyzing her active sessions is also difficult. Although there is a technological danger involved in recording oneself and posting the recordings online, doing so requires a significant amount of work, hence it is rarely, if ever, done. Typically, instruments don't show any intelligence of their own. They are rather mechanical, even when operating digitally. Typically, they only respond to the player's direct actions, so the player alone is responsible for the instrument's quality and the music it initiates. There is no middle ground between actively making music for someone who is by themselves with an instrument and actively listening to music recordings.

A timer and PWM frequency generation is used to create output tones using a piano tone generator. Then, we use an SD-Card to store the tracks that can be played back using a reader, convert the tracks from SD format to digital, and then again from digital to analog using a DAC.

II. DESCRIPTION OF THE SYSTEM

This block diagram aids in comprehending how the system operates. There are two phases, as this application explains:

1. A piano for music,
2. A system for music players

- 1) *Music piano system:* Using the coke cans as piano switches, this system generates various sounds depending on which cane is touched.
- 2) *Music player system:* This mode can be accessed by giving the system the command "d," which we created in the application. Upon changing the liquid level of the coke tin, rather than the dielectric, the system will play a different song.

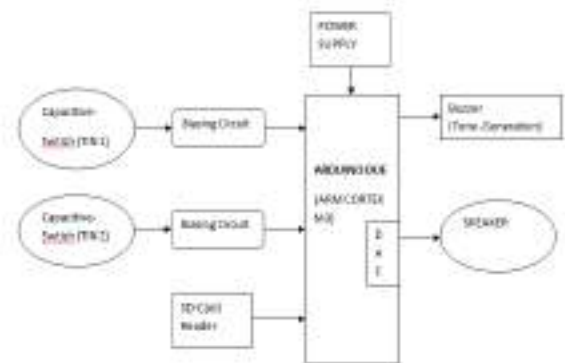


Fig.1. Block diagram

Here, the system is comprised of an Arduino that continuously measures the capacitance values of Coke cans and executes user commands.

III. SYSTEM DEVELOPMENT

The fundamental idea underlying our bit sensing approach is that each "key" on a piano is actually a device that has the potential to store an individual's electrical capacitance. The measurement may change as the user approaches the device and may experience a sharp spike in response to contact. In order to



detect when the user has touched the key, the Arduino will be hankering after these spikes. One pin on the Arduino should be used as the "input pin" for each key, and one pin overall should be used as the "common send" pin. In addition, we will need one pin for the buzzer that will be used to produce a tone. This suggests that we could have up to eighteen keys on our keyboard because the Arduino One has twenty input pins—14 digital and two analog! That range will be much greater if you have an associate degree Arduino Mega or another board with lots of pins!

A. Capacitive Sensors: Motion, chemical composition, electric field, and many other variables that can be translated into motion or dielectric constant—like pressure, acceleration, fluid level, and composition—can all be directly sensed by capacitive sensors. Their construction involves the use of conductive sensing electrodes within a dielectric, excitation voltages approximately five volts, and detection circuits that convert variations in capacitance into variations in voltage, frequency, or pulse width.

The applications for capacitive sensors are numerous. A few are

- Flow: A variety of flow meters use an orifice for volume flow or a Coriolis effect force for mass flow to convert flow into pressure or displacement. The displacement can then be measured by capacitive sensors.
- Pressure: Using a spacing-sensitive detector, a diaphragm with stable deflection characteristics can measure pressure.
- Liquid level: By measuring variations in capacitance between conducting plates dipped in a liquid or applied to the exterior of a non-conducting tank, capacitive liquid level detectors determine the liquid level in a reservoir.
- Spacing: The mutual capacitance is a highly sensitive indicator of spacing when a metal object is in close proximity to a capacitor electrode.
- Scanned multi-plate sensor: By employing numerous plates, each addressed independently, the single-plate spacing measurement can be expanded to contour measurement. It is possible to measure both conductive and dielectric surfaces.
- Thickness measurement: If the thickness of an insulator is known, two plates in contact with it will measure the thickness; otherwise, they will measure the dielectric constant.
- Ice detector: Insulated metal strips in the leading edges of the wings can be used to detect icing on an airplane's wings.
- Shaft angle or linear position: Capacitive sensors can measure angle or position using an analog output that has a simpler circuitry and a faster response time, or a digital output with a multiplate scheme that provides high accuracy.
- Lamp dimmer switch: The standard metal-plate soft-touch lamp dimmer detects a person's body capacitance using 60Hz excitation.

- Key switch: Capacitive key switches break the coupling between two small plates by using the shielding effect of a fingertip in close proximity or a moving conductive plunger.
- Limit switch: When a plastic component or a metal machine component is nearby, limit switches can sense the difference in capacitance.
- Shaft angle or linear position: Capacitive sensors can measure angle or position using an analog output that has a simpler circuitry and a faster response time, or a digital output with a multiplate scheme that provides high accuracy.

B. Arduino: Arduino Due is the ARM cortex M3 design based controller comprises of internal, 16 PWM's, 2 UART, 2 I2C, 2 DAC, 16 ADC, 13 GPIO's and is a 32-digit engineering, having 70Mhz clock. Utilizing SPI inner we are perusing the wav record put away in SD-miniature card and play the music. Furthermore, utilizing PWM we are creating tones for individual piano tones.

C. SD Card Reader

Here we are utilizing SD-card peruser which is connected through SPI correspondence to peruse the .wav record from the SD-card and play it individually from the 5W speaker joined to the DAC of the Arduino.

D. Arduino Tool: ARDUINO is the open-source Arduino climate permits client to compose code and transfer it to the I/O board. The climate is written in Java. The Arduino improvement climate contains a content tool for composing code, message region, message console, and toolbar with buttons for normal capabilities, and a progression of menus. It interfaces with the Arduino equipment to transfer programs and speak with them. Arduino programs are composed in C or C++. Arduino highlights, equipped for gathering and transferring projects to the Board with a solitary snap. Programming composed utilizing Arduino is called outlines. These portrayals are written in the content manager. Draws are saved with the record augmentation „.ino.“ It has highlights for cutting/gluing and for looking/supplanting text. The message region gives input while saving and sending out and furthermore shows blunders. The control center presentations message yield by the Arduino climate including total blunder messages and other data. The base right-hand corner of the window shows the ongoing board and sequential port. The toolbar buttons permit you to check and transfer programs, make, open, and save portrays, and open the chronic screen. As the Arduino stage utilizes Atmel microcontrollers, Atmel's advancement climate, AVR Studio or the more up to date Atmel Studio, may likewise be utilized to foster programming for the Arduino.

IV.DEVELOPMENTAL AND EXECUTION STEPS

A. DEVELOPMENTAL STEPS

Step1: Nonstop read the capacitance values from the tins utilizing ADC and Clock mode.

Step2: Comprising two modes utilizing status variable to ascertain Di-electric, if „d“ instructed from the client or fill in for what it's worth of piano-tone age mode in default.

Step3: Presently giving as far as possible to each case adjust unit test and start to finish tests essentially set the values.

Step4: After this we can see that contacting to bottle which goes about as a switch will give the tone and tasting the fluid from the tin which shifts the dielectric makes .wav document playing from the sd-card put away

B. EXECUTION STEPS

Step1: Associate the USB link to PC comprises of terminal for activity.

Step2: Open the terminal utilizing arduino IDE and work the framework by giving orders as „d“ to di-electric mode and „u“ for ordinary mode.

Step3: In ordinary mode contact any tin which gives a tone.

Step4: Presently working the framework in dielectric mode taste a portion of the fluid which shifts the dielectric and plays music by means of the speaker appended to the DAC through 555 time based intensifier.

Fig.2 shows flowchart of the system.



Fig.2.Flowchart of Process

Fig.3 shows the prototype of the system.

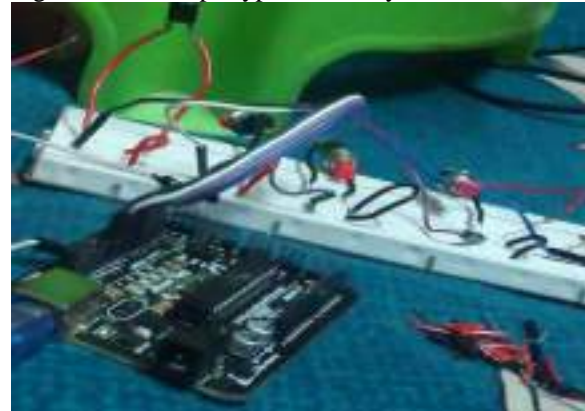


Fig.3. Prototype of the system

V.CONCLUSION

In this paper we hence examined to work with capacitance which goes about as a switch comprising bottle as a plate and human finger as a releasing plate, when contact brings about delivering tone utilizing 555 clock based speaker and we can make applications utilizing dielectric change, which can be made while tasting fluid in tin, what's more, brings about playing a music from the put away media, for example, SD-card

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LIVED EXPERIENCES OF GRADE 2 TEACHERS IN UTILIZING SCHOOLYARD PEDAGOGY TO ENHANCE READING SKILLS DURING THE IN-PERSON CLASSES: AN INQUIRY

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ABSTRACT

The purpose of this qualitative-phenomenological study was to divulge the experiences, coping mechanisms, and insights of Grade 2 teachers in the implementation of Schoolyard Pedagogy during in-person classes. It comprised of fourteen (14) participants selected using a purposive sample technique, with seven (7) parents in a virtual in-depth interview and seven (7) public elementary teachers in a focus group discussion. The data analysis employed was thematic analysis. For the Grade 2 teachers, there were issues emerged from the problem namely: increase of student engagement in reading; improvement of students' reading skills; emphasis on socialization and collaboration increase of reading retention; emphasis on multisensory; awareness and appreciation for the environment; erratic weather conditions; limited reading resources and concerns on student safety. To address the issues, teachers mentioned ways: alternative solutions to barriers; guidance and assistance from colleagues; feedback and responses from students and parents; time management and flexible scheduling; emphasis on self-learning, emphasis on self-motivation; emphasis on self-care; utilization of differentiated activities; and utilization of additional resources. They also cited insights they could share to others, namely: provide reading resources and materials; conduct training; evaluate and improve one's self; integrate optimism, incorporate passion; and encourage the use of schoolyard pedagogy. The results are deemed significant to Grade 2 teachers, parents, learners, DepEd officials, administrators, and future researchers to give awareness and to develop best practices in utilizing schoolyard pedagogy to enhance reading skills during in-person classes to attain high quality education.

KEYWORDS: education, in-person classes, schoolyard pedagogy, qualitative-phenomenological approach

INTRODUCTION

After a protracted period of learning at home during school closures, learners returned to the physical classroom and adjust to the new routine. The prolonged school closures have caused unprecedented difficulties, notably in terms of their reading skills. Furthermore, reading is a skill that most people in the modern world take for granted, yet it is one of the most crucial areas that learners master in school since it forms the basis for all subsequent learning. In addition, reading is a must for all of our everyday responsibilities, thus being able to read fluently can help individuals perform their tasks more efficiently. However, many of life's seemingly ordinary and everyday tasks, which many literate people take for granted, can be felt like insurmountable difficulties to someone who is illiterate. Teachers should therefore take the necessary action to aid in the improvement of learners' reading skills.

In India, a study conducted among learners in Maharashtra revealed that 12,300 or 37% of learners from 32,888 who participated in the survey had failed to attain the minimum skills in reading (Gaikwad, 2022). Consequently, Gaikwad (2022) stated that this was the highest percentage of learners failing to attain the minimum skills in the state of Maharashtra. In Thailand, a study by World Bank (2020) revealed that nearly 40% of Thai learners were functionally illiterate. Further, teachers have observed that learners were not interested in reading and are very unmotivated which makes it difficult for

them to understand the lessons. Additionally, it was shown that Malaysian students have the same learning impairments because their performance, particularly in reading, has drastically declined (Selan, 2021).

In the Philippines, according to a United Nations Children's Fund research from 2022, the Philippines has a literacy rate of fewer than 15% or around three out of every twenty learners can read simple texts in large as a result of more than 70 weeks of school closure since the middle of February owing to the COVID-19 pandemic. Furthermore, Mendoza (2021) highlighted that the Department of Education admitted that the nation had been experiencing learning poverty after a World Bank report revealed that 90% of learners under the age of 10 were illiterate. It argued that learners should be able to read at this age since reading is a doorway for learning other areas such as math, science, and the humanities as they advance through school and conversely, an inability to read closes that door.

In a school in Tagum City Division, particularly in the school I am assigned, many teachers shared their views and concerns regarding the deteriorating reading skills among learners. Teachers have discovered that more than half of the population struggles with reading and comprehension since the beginning of the school year. Specifically, in a classroom of 50 pupils, the majority of the pupils lack phonemic awareness and cannot read. Further, after the pandemic, the I have observed that



learners who have disengaged from school altogether had regressed and appeared to have lost the knowledge or skills they once had. The majority merely learned less than they would have in a usual year, but this is nonetheless significant. In general, learners advance to the next grade level unprepared, lacking the fundamental building blocks of knowledge needed to succeed.

After reading numerous kinds of literature and studies, the gist reveals that similar research was undertaken about the implementation of schoolyard pedagogy. Anent to this, Sahrakhiz et al., (2018) conducted a study in Germany that demonstrated that schoolyards promote meaningful context for early education by providing children with multiple possibilities for both formal and informal learning experiences. Consequently, Largo-Wight et al. (2018), stressed that learning outside stimulates interest, vitality, and motivation to learn. It can help learners improve their behavioral and concentration issues, especially those learners who are hard to deal with and lacks motivation in a traditional classroom. However, the researcher has not encountered any qualitative studies that discuss the implementation of schoolyard pedagogy to enhance reading skills during in-person classes, especially in national and local settings. The entire extent of learning loss during the pandemic will not be known for months and even years. If the learners are unable to regain their footing, they may experience delays in the acquisition of other reading-related skills, making it harder to master future academic content. For these reasons, the researcher was urged to do such a study.

This study is beneficial in assessing the lived experiences of Grade 2 teachers in the implementation of schoolyard pedagogy during in-person classes. Through the results and findings of the study, programs and interventions could be created to respond to different and specific needs in particular in terms of their reading skills through the implementation of schoolyard pedagogy. Furthermore, the results of this study would be endorsed to the research committee in the division and disseminated through school-based activities such as Learning Action Cells to uncover trends and to address the future recommendations of this research endeavor relative to alleviating the learners' reading skills.

PURPOSE OF THE STUDY

This phenomenological study aimed to discover and understand the lived experiences of Grade 2 teachers in the implementation of schoolyard pedagogy during in-person classes in the South District of Tagum City Division.

At this stage in research, the lived experiences of elementary teachers in the implementation of schoolyard pedagogy during the in-person classes have been generally defined as teachers' challenges, coping mechanisms, and insights in the implementation of schoolyard pedagogy during the in-person classes which aimed to alleviate the learners' reading skills caused by the COVID-19 pandemic.

RESEARCH QUESTION

The study aims to answer the following research questions:

1. What are the experiences of Grade 2 teachers in utilizing Schoolyard Pedagogy to enhance reading skills during in-person classes?
2. How did Grade 2 teachers cope with the challenges encountered in utilizing Schoolyard Pedagogy to enhance reading skills during in-person classes?
3. What are the insights drawn from the experiences of Grade 2 teachers in utilizing Schoolyard Pedagogy to enhance reading skills during in-person classes that can be shared to others?

METHODS

This research study utilized qualitative research design following a phenomenological approach. According to Creswell (2013) qualitative research is an inquiry which focuses on the similarities among the lived experiences which participants in a particular group share. Phenomenological study was used to investigate the lived experiences of the Grade 2 teachers in the implementation of Schoolyard Pedagogy to enhance reading skills during in-person classes. This type of research design enabled participants to communicate their thoughts, past experiences, coping techniques, and insights regarding the phenomena. Furthermore, phenomenological study is a flexible research approach which permitted interviewees to share experiences during interviews. Hence, a phenomenological research design was employed to obtain data and address the study's research questions.

This phenomenological inquiry involved 14 Grade 2 teachers, seven (7) for in-depth interviews (IDI) and seven (7) for focused group discussion (FGD) from the South District of Tagum City Division. To conform with the number of participants, this study abided by Creswell's (2013) principle which states that phenomenological research requires three to fifteen participants who have all encountered similar occurrences in order for phenomenology to have uniformity in the life experiences of research participants of a particular phenomenon. The interview was done virtually through an online platform such as Google Meet or Zoom. The participants of this study was chosen through a purposive sampling technique. The following criteria was used in selecting the participants: (a) must be a public elementary teacher from the South District of Tagum City Division; (b) must be a Grade 2 adviser with at least 5 years of teaching experience; and (c) must be using schoolyard pedagogy for at least five years. Moreover, the teachers may either be male or female, and may also come from small, medium, large, or mega-category schools.

Furthermore, thematic analysis is a flexible technique for discovering themes that are crucial in addressing the research problem (Braun & Clarke, 2006). Moreover, it strives to completely comprehend and analyze the data. Furthermore, the six-phase approach was outlined by Braun and Clarke (2014) as follows: familiarizing with the data, generating initial codes, looking for themes, analyzing potential themes, defining and labeling themes, and producing the report.



REVIEW OF RELATED LITERATURE

Schoolyard Pedagogy

Schoolyard pedagogy exemplifies teaching theories, approaches, and techniques that go beyond the confines of the traditional classroom and make use of the resources offered by the nearby schoolyard. Learning settings ranged across outdoor adventure education, school gardens, field trips, and traditional school subjects taught in natural environments (Mann et al., 2022). In a study conducted by Frielle (2021), the finding revealed that outdoor learning provides learners with enriching experiences outside of the classroom, which has the potential to improve educational practices in primary schools both directly and indirectly. As a matter of fact, core academic material is taught outside the classroom in schoolyard education. It actively involves students in engaging learning activities by utilizing the surrounding natural environment. By bringing core curricula outside, teachers can dramatically improve their learners' knowledge of both process skills and subject-specific concepts (Van Dijk-Wesselius et al., 2018).

Even though these extracurricular outdoor learning activities have a lot of promise, teachers frequently feel limited in their abilities in facilitating and improving learners' exposure to these kinds of outdoor activities because of issues with transportation, instructional demands, and a lack of time and scarcity of resources (Edward Jones et al., 2018).

Trends in Reading

Phonics system and the whole language method are the two main approaches that educators have traditionally used to teach reading (Reyhner, 2020). Reyhner (2020) highlighted that the phonic method encourages beginner readers to mix the "sound spelling patterns" and sound out new words. The entire language approach is intended to assist children in learning words and their context-based meanings. Practically speaking, both approaches are frequently utilized to instruct beginner readers.

One important aspect of the research is figuring out how each person learns. Reading literacy instruction should take a very dynamic approach and be tailored to the needs of each type of learner because different methods are effective for various students. It is believed that approaches that dramatically alter what teachers and learners do every day in order to prioritize the teaching of reading from kindergarten through Grade 12 are thought to be connected with learners' achievement (The University of Kansas, 2019).

As a matter of fact, teachers at all levels are starting to see that the old strategy of making children sit quietly while they learned is no longer successful. No longer are students who learn via movement classified as having behavioral issues. They are now seen as students who learn in unique ways. To ensure that all kids learn effectively, teachers are now including movement in the lessons. Given that integrating physical exercises and literacy lessons enhances memory and helps kids retain new information, this is highly useful. New methods are increasingly being used, such as encouraging pupils to imitate spelling words in clay, drawing letters in dirt or sand, reading

with flashcards, and re-enacting a story that involves repeating words (Barry University, 2020).

Roles of Teacher in Schoolyard Pedagogy

In adopting or implementing outdoor learning opportunities, teachers are expected to have extensive pedagogical content knowledge, which may be defined as the integration of pedagogical and subject matter knowledge (Dyment et al., 2018). On the other hand, teachers' comprehensive understanding of the surrounding environment exemplifies the overlay of the teacher and the environment. Therefore, teachers should exhibit an awareness of the concept of "place" and place-based pedagogy and realize the importance of environment/place as both a co-educator and a curricular source is essential for optimizing learning. It is apparent that teachers who are familiar with the environment and context of outdoor learning are in a better position to identify and capitalize on educational opportunities when they arise (Blenkinsop et al., 2016).

In addition, preparing for teaching in an outdoor setting differs significantly in a more conventional setting. A crucial skill for maximizing learning is the ability to pursue and embrace learning opportunities that present themselves in unpredictable but fertile outside environments (Blenkinsop et al., 2016). To maximize spontaneous learning opportunities, outdoor teachers should make the most of the affordances of the location they are teaching in by being emergent, spontaneous, progressive, and attentive to both their learners and the environment (Blenkinsop et al., 2016).

However, teachers are faced with uncertainties in the implementation of schoolyard pedagogy. Much of this tension stems from the conflicting goals of outdoor experiences: the release of excess energy and the development of gross motor skills, or emphasis on mental and emotional growth, including the instillation of environmental values.

Experiences of Teachers in Utilizing Schoolyard Pedagogy

Teachers who have implemented schoolyard pedagogy to enhance reading skills during in-person classes have reported positive experiences and observed significant benefits for their learners. In fact, researchers from a study conducted by Kuo et al., (2017) found that "the number of redirects after a lesson in nature was roughly half (54%) that of redirects after a classroom lesson."

Moreover, the literature supports the notion that outdoor activities can have a positive impact on language skills and literacy development, as emphasized by the Nature Explore Program (2022). Likewise, incorporating outdoor activities in teaching reading makes the learning process more interesting and fun, enhancing students' interest in learning. The National Association for the Education of Young Children (2020) highlights that when learners are exposed to a wider range of materials and activities, they gain flexibility and often express heightened engagement, enjoyment, and motivation in their learning.



Similarly, in a study conducted by Yildirim and Akamca (2017), teachers have noticed a significant improvement in reading retention when implementing schoolyard pedagogy. Such meaningful experiences are more likely to be stored in their long-term memory, contributing to their social and emotional development in the long run.

Furthermore, the incorporation of schoolyard pedagogy in in-person classes not only yields positive effects on students' reading skills but also proves beneficial in nurturing their socialization and collaboration abilities. When students collaborate in reading, they not only acquire knowledge from each other but also become aware of their peers' attitudes towards reading, which can either bolster or hinder their reading motivation (Barber & Klaudia, 2020).

Strategies of Teachers in Utilizing Schoolyard Pedagogy

The implementation of schoolyard pedagogy to enhance reading skills during in-person classes has been proven beneficial for teachers. However, teachers have faced significant challenges in this process, which must be addressed for successful outdoor learning experiences.

Adverse weather, like extreme temperatures and rain, can disrupt or limit outdoor activities, which can have a negative impact on student engagement and the overall effectiveness of this approach. Therefore, it's crucial to be prepared for extreme weather emergencies. While outdoor learning can happen in most weather conditions, it shouldn't be pursued at the expense of the children's comfort or safety. To address this, a weather response plan must be in place for extreme cold, rain, or heat (Gwen, 2022).

Also, it is important to consider concerns related to limited resources. Since teacher buy-in is crucial for the effective use of these learning environments, it's essential to gain a better understanding of the factors that influence teachers' adoption and continued use of this approach (Dring et al., 2020).

Insights of Teachers in Utilizing Schoolyard Pedagogy

Teachers have shared valuable insights on how to enhance reading skills through the implementation of schoolyard pedagogy during in-person classes. One of the key points highlighted by teachers is the importance of differentiated instruction. According to Tomlinson and Moon (2013), differentiated instruction involves adapting the content, process, and products of learning to cater to individual students' readiness, interests, and learning profiles.

Another aspect that teachers underscore in schoolyard pedagogy is the importance of having well-structured lesson plans. An effective lesson plan exhibits characteristics such as attractiveness, dynamism, satisfaction, increased engagement, and students' interaction and participation in the classroom (Iqbal et al., 2021). With a well-prepared lesson plan, a teacher can utilize time, resources, materials, and techniques efficiently, thereby enhancing the overall learning experience.

Moreover, when choosing activities, it is essential for teachers to consider students' reading levels and individual characteristics. This practice is in line with formative assessment principles, where ongoing assessments help teachers understand students' strengths and weaknesses, enabling them to tailor instruction accordingly (Black & Wiliam, 2018). When empowered to make decisions about topics, communication forms, and materials, students take on greater ownership and responsibility for their learning engagement (Adlit, 2018).

Furthermore, collaboration and partnership with stakeholders also play a significant role in providing additional resources. Distributed leadership, which entails shared leadership or management, emphasizes collective and extended leadership rather than specific roles and responsibilities (Academy, 2022). Through such collaborative efforts, teachers gain access to a broader range of resources, further enhancing the effectiveness of schoolyard pedagogy.

RESULTS AND DISCUSSIONS

Table 1

Major Themes and Core Ideas on the Experiences of Grade 2 Teachers in the Implementation of Schoolyard Pedagogy to Enhance Reading Skills during In-Person Classes

Major Themes	Core Ideas
Increase of Student Engagement in Reading	<ul style="list-style-type: none"> ● observed an increase of students' reading interest and enthusiasm through outdoor reading activities ● noticed the increase in students' engagement in the reading activities ● sparked students' curiosity and enthusiasm through outdoor reading activities ● noticed the increase in students' attentiveness in class ● perceived an increase in students' learning autonomy in reading ● noticed an increase in student motivation in reading



Improvement of Students' Reading Skills	<ul style="list-style-type: none"> observed that the students improve their reading ability by using words with pictures observed a positive impact on student reading experience enhanced the students' reading comprehension encountered the students' improved skills in vocabulary and reading comprehension encountered a rapid development of the student's reading skills noticed the students' retention in remembering the phonetic sounds of the word perceived a higher level of reading retention due to personalized learning experiences observed the students' capability to easily retrieve information from memory due to the authentic activities experienced
Enhancement of Learning through Collaboration	<ul style="list-style-type: none"> enabled the students to experience collaborative learning through peer correction. noticed the improvement of the non-reader's skills through peer teaching noticed the improvement of the student's social skills through schoolyard pedagogy
Emphasis on Multisensory Learning Experience	<ul style="list-style-type: none"> let the students encounter learning through experiences that appeal to their tactile, kinesthetic, and auditory senses enhanced the reading instruction by providing the students with a rich sensory experience perceived schoolyard pedagogy as an effective approach to reading that utilizes the students' multiple senses let the students become more aware of their surroundings through a multisensory learning experience developed the students' sense of greater appreciation for the environment let the students be more connected to the real world through their reading environment
Lack of Reading Resources and Bad Weather Conditions as Barriers to Schoolyard Pedagogy	<ul style="list-style-type: none"> experienced erratic weather conditions encountered rain as a barrier to conducting outdoor activities experienced scarcity of reading materials in school due to financial constraints encountered limited access to resources and materials that spark readers' interest experienced limited availability of resources when conducting outdoor reading activities
Concerns on Student Safety	<ul style="list-style-type: none"> experienced classroom disruptions due to the congested space perceived class size as factor to consider in terms of the security and safety of learners understood that student safety is a primary concern for the teachers

Increase of Student Engagement in Reading

My students are excited because they have a chance to go out in our classroom at the same time they learn while they are enjoying. IDI-02

I noticed that the children were more engaged in their learning how to read – thus, having their reading skills significantly improved. IDI-04

Taking reading activities outdoor can spark student curiosity and enthusiasm for learning. When students are actively engaged in their reading experiences, they are more likely to develop a love for reading and improve their skills. IDI-05

The participants emphasized that learners became more engaged and interested in reading when exposed to outdoor reading activities through schoolyard pedagogy. This aligns with the contemporary research on experiential learning, which suggests that students are more likely to be engaged in their learning when they can connect it to real-world experiences

(Kuo et al., 2017). Schoolyard pedagogy provides a unique environment that captivates students' curiosity by linking the learning process to the outdoors, making reading a more enjoyable and meaningful experience.

Highlighted as well are the improvement in students' reading skills as a direct result of implementing schoolyard pedagogy. Such outcomes can be attributed to the enriched learning opportunities provided by the schoolyard environment, which fosters active participation and hands-on experiences. This was supported by the idea of Nature Explore Program (2022) that outdoor activities can contribute to improved language skills and literacy development.

Improvement of Students' Reading Skills

If they see the picture, they can read, so their reading ability will really improve. IDI-01

Then, I can see is that there is indeed a positive impact on the child's reading journey. IDI-03



Using schoolyard pedagogy is very helpful for children because it enhances their reading comprehension even more. IDI-05

The accounts of teachers highlight the significant improvement in students' reading skills due to the implementation of schoolyard pedagogy. Visual aids, such as pictures and real-life objects in the outdoor setting, offer contextual cues that facilitate reading comprehension. This aligns with research on the effectiveness of multisensory learning, showing that incorporating visual elements in reading instruction enhances students' decoding and word recognition skills (Agtarap, 2021). Schoolyard pedagogy taps into students' natural inclination towards visual learning, leading to a more effective and rapid development of reading skills.

The experiences shared by participants underscore the positive influence of schoolyard pedagogy on students' vocabulary and reading comprehension. The outdoor environment provides diverse and authentic learning opportunities that expose students to new words and contexts, enriching their vocabulary (Usman, 2019). Additionally, engaging in reading activities outdoors sparks students' curiosity and fosters deeper comprehension through real-world connections (Bradberry and De Maio, 2019). By linking reading to the environment and experiences around them, students are better able to grasp and retain information, leading to improved reading comprehension.

Enhancement of Learning through Collaboration

When a child makes a mistake in reading, their classmates can also correct them, as they learn from one another. IDI-06

My learner's reading skills is letting the kids learn together through peer teaching where the readers taught the non-readers, and pair and share where they share their learnings with each other or vice versa. IDI-07

Their ability to socialize with other learners has also improved. FGD-05

The participants highlighted the value of peer teaching and collaborative learning in schoolyard pedagogy. Allowing students to work together and help each other, regardless of their reading abilities, creates a sense of community and mutual support in the classroom. Research on cooperative learning supports these findings, showing that collaborative activities enhance students' social skills, communication, and empathy towards their peers (Kuo et al., 2019). Through this approach, students become active participants in their own learning process, fostering a positive and inclusive classroom culture.

Moreover, the observations made by the participants underscore the positive impact of schoolyard pedagogy on students' socialization skills. The outdoor setting and group activities create an environment conducive to communication and interaction. As students engage in discussions, provide feedback, and learn from their classmates, they develop stronger socialization skills, including active listening and effective communication (Howard as cited by Columbia University, 2021). Moreover, the freedom and encouragement to express themselves in the schoolyard contribute to increased

confidence and sociability among learners, fostering a more inclusive and supportive learning community.

Emphasis on Multisensory Learning Experience

The learning experiences provide them with opportunities to engage in physical movement, active listening, and tactile exploration of the materials we use. IDI-04

The outdoor environment provides a rich sensory experience that can enhance reading instruction. IDI-05

It is a very effective approach and rewarding as well because we allow them to use their senses for their learning experience. IDI-07

The experiences shared emphasized the importance of engaging students' senses during the learning process. Schoolyard pedagogy allows students to physically interact with the environment, actively listen to sounds, and tactilely explore materials related to their reading. Research on multisensory learning supports these findings, suggesting that incorporating multiple senses during instruction facilitates deeper understanding and memory retention (Morin, 2022). By immersing students in rich sensory experiences, schoolyard pedagogy provides a more holistic and meaningful learning experience that complements reading instruction.

Lack of Reading Resources and Bad Weather Conditions as Barriers to Schoolyard Pedagogy

Sometimes it's nice in the morning, the weather is very pleasant. But by midday, it suddenly rains or in the morning, it's a bit chilly, but by noon, it becomes very hot. IDI-01

Then limited resources and materials, since you are outside, it's important that the materials you acquire are ready to use and can engage the children in utilizing them, especially reading materials. IDI-04

In schoolyard activities, your preparations become more extensive. FGD-01

Without adequate reading materials, teachers may find it challenging to engage students effectively in reading activities, limiting the breadth of the educational experience. Research on outdoor education emphasizes the importance of having relevant and engaging materials to facilitate meaningful learning in nature (MacDonald & Breunig, 2018). Insufficient resources may hinder the full potential of schoolyard pedagogy in fostering students' reading skills and overall learning outcomes.

Concerns on Student Safety

Sometimes a child would cry because they got hurt, or there are instances when we are in the gym and other grade levels are using their play areas, so they complain to us. IDI-01

One of my concerns is the safety of the learners, specially if you have many learners you have to be extra careful. FGD-02

We should also prioritize the safety of the learners because it is indeed our responsibility as teachers. FGD-03

The participants' responses highlight that student safety should be a primary concern for teachers during the implementation of



schoolyard pedagogy. As teachers strive to provide engaging and enriching outdoor experiences, they must remain vigilant about potential safety risks and take proactive measures to

protect students from harm (Yussif, 2023). A safe and conducive environment enables students to fully engage in their experiences, promoting positive learning outcomes

Table 2

Major Themes and Core Ideas on the Coping Mechanism of Grade 2 Teachers in the Implementation of Schoolyard Pedagogy to Enhance Reading Skills during In-Person Classes

Major Themes	Core Ideas
Providing Alternative Solutions to Barriers to Implementing Schoolyard Pedagogy	<ul style="list-style-type: none"> • innovating learning materials as an alternative solution to limited reading resources • having backup plans as an alternative to erratic weather conditions • looking for solutions when encountering difficulties in implementing schoolyard pedagogy • looking for substitute activities via the internet as an alternative solution to limited resources • being resourceful and flexible when problems in implementation arise
Seeking Guidance and Assistance	<ul style="list-style-type: none"> • seeking help from colleagues and administrators in the implementation of schoolyard pedagogy • asking support from colleagues and professional communities in implementing schoolyard pedagogy • asking reading strategies from seasoned colleagues regarding strategies in implementing schoolyard pedagogy • engaging collaboration with colleagues in preparation for schoolyard activities • having weekly feedbacking sessions with colleagues to help mitigate implementation issues
Receiving Constructive Feedback and Responses from Students and Parents	<ul style="list-style-type: none"> • receiving positive feedback from parents • listening to students' feedback for better implementation • seeking the feedback of the students to improve the implementation of schoolyard activities • feeling inspired by the positive responses of the students, parents, and colleagues • receiving heart-warming messages from the parents
Managing Time Wisely	<ul style="list-style-type: none"> • accommodating outdoor reading activities through flexible scheduling • managing the timeframe of the tasks in other subjects to allow more time for outdoor reading activities • being conscious of the time when implementing outdoor reading activities
Emphasizing on Self-Motivation as a Coping Mechanism	<ul style="list-style-type: none"> • reminding oneself of schoolyard pedagogy advantages as a form of self-motivation • banking on the students' heightened interest in reading as a form of self-motivation • having the higher purpose of teaching the students to read as a form of self-motivation • engaging in positive self-talk as a form of motivation
Emphasizing on Self-Care as a Coping Mechanism	<ul style="list-style-type: none"> • engaging in self-care activities for one's wellness and health • celebrating one's achievements as a form of self-care • allocating time to recuperate as a form of self-care • enjoying the teaching process and going with the flow as means for self-care
Utilizing Differentiated Activities in the Implementation of Schoolyard Pedagogy	<ul style="list-style-type: none"> • accommodating the diverse learning styles of the students in implementing schoolyard activities • providing differentiated activities to address the individual needs of the students • accounting for the students' level of reading skills in choosing schoolyard activities • understanding that the schoolyard activities should be suited according to the student's strengths, weaknesses, and level of skill



Providing Alternative Solutions to Barriers to Implementing Schoolyard Pedagogy

We will just innovate in our own way to find ways for children to learn how to read. We will create our own reading materials. IDI-01

I have a desired activity but the materials are not available, so I would look for alternatives on the internet. FGD-02

So, look for alternatives, be resourceful, that's probably it. Being flexible. FGD-04

According to Schleicher (2018), resilience in education involves problem-solving, creativity, and adaptability in response to challenges. The Grade 2 teachers' approach of innovating and creating their own reading materials demonstrates their resourcefulness and adaptability. By finding alternative ways for learners to learn how to read, they show a commitment to the students' education despite limited resources.

Additionally, the importance of being flexible and adaptive, as stressed by the participants resonates with the notion of teacher resilience discussed by Blenkinsop et al., (2016). Resilient teachers possess a positive attitude and are open to change, enabling them to navigate challenges and find solutions effectively.

Seeking Guidance and Assistance

Seeking help from my colleagues, my master teachers and school principal in preparation and implementation of the schoolyard pedagogy. IDI-03

Connecting with other teachers who have implemented this schoolyard pedagogy or joined professional communities where I can share challenges and success stories. IDI-05

I seek the guidance of More Knowledgeable Others who can influence me, teach me strategies, and give me advice on enhancing the learners' reading skills. IDI-07

The act of connecting with other teachers who have already implemented Schoolyard Pedagogy or joining professional communities, as mentioned by the participants fosters a sense of support and camaraderie. Such interactions provide opportunities for feedback and support, enabling teachers to learn from one another's experiences and overcome implementation issues effectively (Frielle, 2021).

Furthermore, it also highlighted the importance of seeking guidance from More Knowledgeable Others (MKOs) and underscores the importance of learning from experienced colleagues. As per Vygotsky's sociocultural theory, interactions with MKOs facilitate cognitive development and the acquisition of new knowledge and skills (Abatahi, 2017). By seeking advice and strategies from seasoned teachers, teachers enhance their instructional approaches and contribute to the improvement of students' reading skills.

Feedback and Responses from Students and Parents

I also seek feedback to my students regarding their experiences to gain a deeper understanding on how to the

challenges that may be faced and adapt the approach accordingly. IDI-03

Receiving a positive impact from students, parents and colleagues reinforce the impact of this schoolyard pedagogy. IDI-04

Listen to your students because they are the ones who know if they enjoyed the activities or encountered any difficulties. FGD-06

The acknowledgment of receiving positive feedback and impact from students and parents serves as a motivating factor for teachers to continue using Schoolyard Pedagogy. Positive reinforcement from stakeholders reinforces the significance and relevance of the chosen approach, providing a sense of validation and encouragement for teachers (Deci & Ryan as cited by Pelletier et al., 2016). This aligns with the concept of self-determination theory, where the fulfillment of psychological needs, such as competence and relatedness, drives intrinsic motivation and commitment (Cherry, 2022).

Furthermore, listening to students and encouraging them to share their ideas and preferences, promotes a sense of agency and ownership over their learning experiences. This participatory approach aligns with the principles of student voice and agency, where learners are actively involved in shaping their educational journey (Katopodis, 2020).

Managing Time Wisely

Flexible scheduling to accommodate outdoor learning component, schedule have been adjust to allow dedicated time of the schoolyard. IDI-01

I try to simplify the activities for other subjects to allow more time for our outdoor activities on that day. FGD-02

We need to be conscious of time to ensure that it doesn't interfere with other subjects. FGD-05

As highlighted by the participants responses, teachers recognize the need for effective time management to strike a balance between outdoor and experiential learning activities and core academic subjects. This aligns with research on the importance of time allocation and organization in maximizing learning opportunities (Meador, 2019).

Moreover, the emphasis on simplifying activities for other subjects during expanded face-to-face classes allows more time for outdoor activities, showcasing the adaptability and resourcefulness of teachers in ensuring sufficient opportunities for outdoor learning. Such flexible scheduling enables teachers to capitalize on the benefits of Schoolyard Pedagogy while maintaining a well-rounded curriculum (Daniel, 2021).

Emphasizing on Self-Motivation as a Coping Mechanism

When I see them improving, actively participating, it motivates me even more to continue implementing the program because many children are learning from it. IDI-03



I motivate myself by recognizing that the children or learners should have something to learn every day they are in school. IDI-04

When my learners are happy at the same time they are learning, especially when I hear them express their eagerness to play or learn outside the classroom, it motivates me. FGD-05

Intrinsic motivation serves as a driving force that fuels teachers' commitment and dedication to making outdoor and experiential learning effective for their students (Neuhaus, 2022). The participants' reflection on the visible benefits and improvements in their learners' participation and learning progress reinforces the importance of personal conviction in sustaining the use of schoolyard pedagogy.

Similarly, focusing on the happiness and enthusiasm of their students during outdoor activities demonstrates the emotional connection teachers have with their students' engagement and joy in learning. This connection, in turn, motivates them to continue utilizing schoolyard pedagogy as a means to foster a positive learning environment (Keller et al., as cited in Dewaele et al., 2021).

Emphasizing on Self-Care as a Coping Mechanism

We should also participate in activities that contribute to our physical well-being, such as exercise, zumba, engaging in our hobbies, and sports. IDI-02

I celebrate my achievements in simple ways, like eating out or getting a massage, to stay motivated for the following week. FGD-02

I also allocate time for myself. Although I work hard most of the time, there are moments when I set aside tasks to recharge and avoid burnout. FGD-04

The participants recognize the demanding nature of incorporating outdoor and experiential learning activities into their curriculum and the potential impact it can have on their physical and emotional well-being. The participants' suggestion to engage in self-care activities, such as exercise, hobbies, and outdoor adventures, aligns with research on the positive effects of physical activity and leisure on reducing stress and improving overall well-being (Parkhurst, 2021). By prioritizing self-care, teachers can recharge themselves and maintain their energy and enthusiasm in the classroom.

Utilizing Differentiated Activities in the Implementation of Schoolyard Pedagogy

I consider diverse needs and abilities of my students when selecting schoolyard activities. IDI-01

I try to provide differentiated activities to meet their individual needs. FGD-01

Before choosing activities, I assess their reading level so that I know what type of activities I need to provide. FGD-02

Research supports the effectiveness of differentiated instruction in meeting students' diverse learning needs. According to Tomlinson and Moon (2013), differentiated instruction involves modifying the content, process, and products of learning to address individual students' readiness, interests, and learning profiles. By providing differentiated activities, teachers can cater to various learning styles, learning speeds, and levels of comprehension, thus promoting active engagement and optimal learning outcomes.

The responses of the participants highlight the teachers' commitment to selecting schoolyard activities that can be differentiated. This approach aligns with the concept of Universal Design for Learning (UDL), which emphasizes providing multiple means of representation, expression, and engagement to accommodate learners' variability (Meyer et al., 2014). By implementing UDL principles in schoolyard pedagogy, teachers ensure that all students can access and participate in the learning activities effectively.

Utilizing Additional Resources

I search for additional resources that can support implementation of schoolyard pedagogy. IDI-01

I would ask for assistance from others, such as the administration, because they also understand that the school cannot shoulder everything. IDI-06

The teacher should know how to find ways to ask other teachers, seek support from parents, or look for alternative materials. FGD-02

The responses of the participants exemplify the proactive approach of Grade 2 teachers in seeking support when resources are lacking. This aligns with the concept of teacher agency, which emphasizes teachers' ability to take initiative, make decisions, and seek resources to support their instructional practices (Arnsten, 2021). By exercising agency and resourcefulness, teachers can effectively adapt to challenging situations and ensure that schoolyard pedagogy remains a viable and enriching approach for enhancing reading skills.

Furthermore, collaboration and partnership with stakeholders play a significant role in providing additional resources. Seeking assistance from fellow teachers, parents, and school administration fosters a sense of collective responsibility and support for the implementation of schoolyard pedagogy. This collaborative effort is aligned with the concept of distributed leadership, where various stakeholders contribute to decision-making and resource allocation to achieve common goals (Academy, 2022). Through such collaborative efforts, teachers can access a broader range of resources, further enhancing the effectiveness of schoolyard pedagogy.



Table 3
Major Themes and Core Ideas on the Insights of Grade 2 Teachers in the Implementation of Schoolyard Pedagogy to Enhance Reading Skills during In-Person Classes

Major Themes	Core Ideas
Provide Reading Resources and Materials	<ul style="list-style-type: none"> ● recommend the need to have ready-to-use reading materials ● utilize ready-to-use materials as a great help in the teacher’s preparation for schoolyard activities ● provide materials as a means to expedite the smooth implementation of activities ● provide lesson plans as a resource for implementation of schoolyard pedagogy ● Sustain the schoolyard pedagogy implementation ● provide additional reading materials especially for the learners under Kindergarten to Grade 3 ● integrate technology in the implementation of schoolyard activities
Conduct Training on the Implementation of Schoolyard Pedagogy	<ul style="list-style-type: none"> ● provide of workshops and seminars on schoolyard pedagogy ● conduct training on the implementation of schoolyard pedagogy for teachers who are not familiar with the approach as a means with the necessary knowledge and competencies ● suggest to DepEd the conduct specific training on various strategies in implementing schoolyard pedagogy
Evaluate and Improve One’s Teaching Prowess	<ul style="list-style-type: none"> ● take the time to evaluate oneself to improve one's prowess in teaching strategies ● be flexible to further improve schoolyard pedagogy implementation ● engage in new activities to stay relevant ● find ways to improve ones’ teaching approach ● seek new knowledge to stay relevant ● embrace the need to learn new things without fear
Integrate Optimism in Facilitating Schoolyard Pedagogy	<ul style="list-style-type: none"> ● approach teaching challenges with a growth mindset ● consider difficulties as an avenue to improve one’s teaching ● strive to remain optimistic despite having problems ● be optimistic and realistic in managing one’s expectations ● keep on utilizing schoolyard pedagogy until one can get it right ● identify solutions to problems
Incorporate Passion in Facilitating Schoolyard Pedagogy	<ul style="list-style-type: none"> ● maintain passion and dedication in one's teaching profession ● harness the power of schoolyard pedagogy through maintaining one's passion for teaching ● be passionate in all aspects of teaching ● keep the passion alive despite burnouts and exhaustion
Encourage the Use of Schoolyard Pedagogy	<ul style="list-style-type: none"> ● share the positive effect of schoolyard pedagogy with the students. ● testify the effectiveness of schoolyard pedagogy as an approach to teaching reading ● promote the benefits of schoolyard pedagogy as an approach to teaching reading

Provide Reading Resources and Materials

It would be great if they could support teachers by providing ready-to-use materials that can be easily utilized. IDI-04
DepEd should consider the long term and sustainability and maintenance of the outdoor learning class. IDI-03
DepEd should provide additional ready-to-use materials so that teachers can just use them without having to prepare. IDI-06

Supporting the call for essential resources, the participants emphasize the importance of providing reading materials to teachers, especially for reading-based activities, to facilitate the smooth implementation of schoolyard pedagogy. Adlit (2018) underline the value of providing diverse and engaging reading materials to enhance students' motivation and comprehension skills. By ensuring teachers have access to a range of appropriate reading resources, the potential for creating dynamic and enriching reading experiences during schoolyard pedagogy sessions can be maximized.



Conduct Training on the Implementation of Schoolyard Pedagogy

Workshops, seminars, and ongoing support should be provided to ensure that teachers feel confident and competent in implementing Schoolyard Pedagogy. IDI-01

Training should be conducted for teachers because not all teachers are knowledgeable or aware of the significance or importance of schoolyard pedagogy. IDI-02

DepEd should provide trainings and workshops and seminars to ensure that teachers are equipped with knowledge and competent in implementing the schoolyard pedagogy. IDI-03

Research conducted by Hattie, Fisher, and Frey (2017) highlights the influence of effective professional development on teacher confidence and competence. Teachers who receive specialized training and support are more likely to implement innovative instructional methods, such as schoolyard pedagogy, with greater effectiveness. In the context of reading instruction, studies by Deci and Ryan (2017) have demonstrated that experiential learning in outdoor settings can significantly enhance students' vocabulary acquisition and comprehension skills.

Furthermore, the importance of providing ongoing support and upskilling opportunities for teachers is reinforced by the work of Waheed (2022). In her research, she emphasizes that one-off workshops may not lead to sustained changes in teaching practices, but rather continuous professional development is essential to ensure lasting impact. By offering seminars and workshops focused on the implementation of schoolyard pedagogy, teachers can continually refine their skills and adapt instructional approaches to meet the evolving needs of their students.

Evaluate and Improve One's Self

Then take time to evaluate what worked well and what's need and use this to improve your teaching strategies. IDI-03

For me, my advice is that as teachers, we should always find ways to better our teaching. FGD-03

Do not be afraid to learn new things especially if it greatly affects the learners just like the implementation of schoolyard pedagogy. FGD-05

The suggestion to regularly evaluate the effectiveness of pedagogical approaches aligns with research by Coghlan & Brannick, as cited by Farell (2022) on the significance of teacher self-assessment in professional growth. By critically examining their teaching strategies, teachers can identify areas for improvement and make necessary adjustments to optimize student learning outcomes in the context of schoolyard pedagogy.

The need for flexibility in schoolyard pedagogy implementation is supported by the work of Moore (2022). She outlined the adaptable teaching approaches which are essential to meet the diverse needs and challenges of students effectively. Embracing flexibility allows teachers to respond to unexpected

situations and optimize learning opportunities in outdoor settings.

Integrate Optimism in Facilitating Schoolyard Pedagogy

Approach the challenges with a growth mindset, recognizing that obstacles and setbacks are opportunities for learning and improve and improvement. IDI-01

Let's not think that it's difficult, we can do it as long as we want to and we can be even better at it. IDI-02

Then be positive, always strive to be optimistic in every situation because, like I said, problems will always be problems unless you take action. FGD-06

Research by Lu (2021) supports the role of optimism in promoting teacher resilience. A growth-oriented mindset encourages teachers to view setbacks as opportunities for learning and improvement. This optimistic approach enables teachers to persist in the face of challenges and continuously strive to enhance their instructional practices in schoolyard pedagogy.

Moreover, the positive attitude advocated by the participants fosters an optimistic classroom environment that can have a significant impact on students' motivation and engagement. Studies revealed that teachers' optimism and positive reinforcement influence students' attitudes toward learning and academic self-efficacy (Lu, 2021). By modeling optimism and embracing challenges with a positive attitude, teachers can inspire students to approach reading activities with enthusiasm and confidence.

Incorporate Passion in Facilitating Schoolyard Pedagogy

Maintain your passion for teaching because your dedication and effort are making a difference in the lives of your students. IDI-03

Maintain your passion for teaching and the believe in the power of your schoolyard pedagogy to enhance the reading skills and then stay resilient in the face of challenges. IDI-05

Always remember to be passionate and keep in mind the reason why you became a teacher. FGD-05

Research by Osika et al., (2022) supports the impact of positive emotions, such as passion, on learning and motivation. When teachers approach schoolyard pedagogy with enthusiasm and love for the subject, they foster a positive learning environment where learners feel encouraged and supported to explore reading activities with eagerness.

Moreover, the suggestions emphasizing the role of teachers' beliefs and attitudes in influencing learners' learning outcomes align with the research of OECD (2019). When teachers maintain a passion for teaching and believe in the power of schoolyard pedagogy, they instill confidence in their students, leading to increased engagement and improved reading skills.

Encourage the Use of Schoolyard Pedagogy

I want to share what schoolyard pedagogy is, how it works, what activities can be done, and what positive effects it can have on our learners. IDI-01



I will encourage other teachers to use schoolyard pedagogy in their schools. IDI-03

Teachers should promote the benefits and make sure that the necessary resources are available to further encourage teachers. FGD-06

Research by Arkansas State University (2017) emphasizes the importance of teacher collaboration in creating positive and transformative learning experiences. When teachers share best practices, strategies, and successful experiences with one another, they create a culture of continuous improvement and innovation within the school community. This collaboration enhances teachers' professional development and effectiveness in implementing innovative pedagogical approaches like schoolyard pedagogy.

Furthermore, the recommendations align with the research of Bouchrika (2022) on promoting the benefits of educational practices. By actively promoting the positive outcomes of schoolyard pedagogy, teachers not only encourage their colleagues to adopt the approach but also foster a culture of support and openness to innovative teaching methods within the educational institution.

IMPLICATION FOR TEACHING PRACTICE

The utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes has both benefits and drawbacks for Grade 2 teachers. This study effectively uncovered the diverse perspectives Grade 2 teachers concerning the issues of utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes and the effects on learners' educational processes. Their overall perspectives were summarized by the continuum, which displayed the broad themes established from the diverse responses of the teachers. Furthermore, this research study provided an opportunity for all the parents, teachers, students, and education personnel to understand the different standpoints of Grade 2 teachers regarding the utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes.

In the light of conclusions of the study, teacher may provide alternative activities that can improve students' reading skills despite the limitations and challenges in its implementation. Moreover, they may seek professional relationship towards their peers, master teachers, and school principal to learn and share teaching materials, strategies, and best practices, enhancing the quality of reading activities in the schoolyard. Likewise, it is imperative for the teachers to seek feedback from students and parents into the effectiveness of the teaching strategies employed to tailor their approach to meet the unique needs and preferences of their learners. Most importantly, teachers should maintain genuine enthusiasm and dedication for outdoor and experiential learning to inspire students to actively engage in the learning process and develop a genuine interest in reading.

CONCLUSION

After a protracted period of learning at home during school closures learners are returning to the physical classroom and

adjusting to the new routine. Result from the prolonged school closures has caused unprecedented difficulties, notably in terms of their reading skills. Teachers' on the other hand went through a lot of adjustments to enhance learners' reading skills during in-person classes through the use of Schoolyard Pedagogy. The results of this study revealed the challenges and difficulties in the implementation of Schoolyard Pedagogy to enhance reading skills during in in-person classes, as well as their coping mechanisms and insights into the phenomena.

I opted to investigate thoroughly the experiences of Grade 2 teachers' utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes because this phenomenon impacts everyone in the education field specially after long school closure due to the pandemic. Personally, as a teacher who utilize Schoolyard Pedagogy, I encountered several challenges regarding its implementation. This issue left me to reflect on other teachers' perspectives and experiences of other teachers in the utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes.

Throughout the conduct of this study, I became aware of the extent of the researcher's preparation and duty in carrying out the thesis while adhering to safety standards, appropriate precautions, and ethical concerns. This encounter needed patience and sacrifice in order to collect all of the important data that would support my research. With the assistance extended by my adviser, I was able to complete this research successfully. Furthermore, this endeavor enabled me to become aware of the experiences of the Grade 2 teachers in the utilization of Schoolyard Pedagogy to enhance reading skills during in-person classes.

As a teacher, I could say that there is really a need to exert much effort and willingness to implement various strategies including schoolyard pedagogy in helping alleviating the learners' reading skills as a result of the learning gap caused by the pandemic. Furthermore, it is very important for teachers to have genuine passion and enthusiasm for outdoor and experiential learning to inspire learners to actively participate, develop a love for reading and embrace learning with enthusiasm.

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CONTRACEPTION KNOWLEDGE AMONG SECONDARY SCHOOL STUDENTS IN PORT HARCOURT METROPOLIS RIVERS STATE NIGERIA

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ABSTRACT

This study investigates the factors associated with the knowledge of contraception among secondary school students in Port Harcourt Metropolis, Nigeria. A descriptive survey research design was employed, involving 900 students from both public and private secondary schools. A validated self-structured instrument with a reliability index of 0.76 was used for data collection. The study found that 76.1% of the respondents exhibited good knowledge of contraception, with 23.9% demonstrating poor knowledge. Disastrously, 80.3% of the students opinioned that contraceptives help prevent sexually transmitted diseases, and 63.7% understood their role in preventing unwanted pregnancies. However, misconceptions persisted, with 16.7% believing that other contraceptives prevent only pregnancy and 59.3% thinking that daily oral pills must be taken daily for effectiveness. Chi-square analysis revealed significant associations between knowledge of contraception and various factors. Age was found to be significant ($\chi^2 = 13.633, p = 0.008$), with students aged 15-16 years exhibiting better knowledge. Gender was also significant ($\chi^2 = 5.705, p = 0.033$), as female students had a higher level of understanding. Religion ($\chi^2 = 23.564, p = 0.002$) and guardian ($\chi^2 = 20.432, p = 0.001$) both significantly influenced knowledge, with Christian students and those guided by parents demonstrating better knowledge. Based on the findings, it was recommended that government in collaboration with health promotion experts, health educators and school administrators should design, develop and implement a targeted educational interventions to address misconceptions and disparities in knowledge; comprehensive sexual education programs should be implemented, tailored to students' diverse backgrounds, and designed to promote gender equity.

KEYWORDS: *contraception, Knowledge, students, associated factors, secondary Schools.*

INTRODUCTION

The socioeconomic and health implications of adolescent pregnancies in the Port Harcourt Metropolis of Nigeria have raised concerns among researchers (19). Consequently, it is crucial to ensure that teens have enough access to contraception-related knowledge. The Port Harcourt Metropolis has had a notable rise in adolescent pregnancies in recent years, as evidenced by the findings of Briggs (6). This highlights the urgent necessity for more knowledge regarding contraceptive techniques among high school students. The primary objective of this study is to enhance comprehension of the intricate factors that shape the level of knowledge among secondary school students in the Port Harcourt Metropolitan Area regarding contraception. By doing so, it aims to facilitate the development of more well-informed educational programs and policies in this domain.

Contraception, also referred to as birth control, is a viable means of preventing pregnancy (6; 19). Condoms and diaphragms can be classified as barrier methods (9). On the other hand, hormonal

methods encompass birth control pills, patches, and injections(11). Intrauterine devices (IUDs) (10), fall under the category of methods that are implanted within the uterus. Emergency contraception (6), is employed to prevent pregnancy following unprotected sexual intercourse. Lastly, fertility awareness methods involve tracking one's reproductive cycle. Due to variations in efficacy, advantages, and risks among different kinds of contraception, individuals and couples have the ability to choose the method that most effectively aligns with their own needs and personal preferences.

The effective prevention of unintended pregnancies among adolescents necessitates the extensive dissemination of accurate and comprehensive contraceptive education (16), the dissemination of precise information regarding sexual and reproductive health among adolescents might serve as a preventive measure against the occurrence of unintended pregnancies and sexually transmitted infections (STIs). Enhancing the level of knowledge among secondary school



students in Port Harcourt Metropolis regarding contraception is of utmost importance in reducing the incidence of teenage pregnancies and promoting healthier sexual behaviors.

The socioeconomic status of adolescents has a substantial influence on their ability to obtain information regarding contraception. The Port Harcourt Metropolis has a notable disparity in both economic conditions and educational opportunities. Students from privileged families may have an edge due to their access to resources such as the internet, private schools, and participation in extracurricular activities. Nevertheless, individuals hailing from socioeconomically deprived households may encounter limited access to educational resources pertaining to contraception, so impeding their ability to acquire knowledge in this domain.

The acquisition of contraception information among adolescents is frequently shaped by gender dynamics. The presence of gender norms is a significant societal obstacle to open discussions about sexual and reproductive health in certain nations, such as Nigeria (12). The presence of cultural taboos and societal standards can impose further limitations on women's ability to obtain information. In order to effectively implement gender-sensitive interventions in Port Harcourt Metropolis, it is imperative to possess a comprehensive awareness of the distinct difficulties and opportunities encountered by both women and men within the urban setting.

The significance of schools in providing comprehensive sex education cannot be overstated. The extent and comprehensiveness of sex education provided in secondary schools in the Port Harcourt Metropolis may influence students' knowledge and understanding of birth control method (4). The comprehension of contraception and its effectiveness among students is significantly impacted by factors such as the curriculum, instructional methods, and interactions between teachers and students(21)

Recent studies have shown an increasing amount of evidence indicating that early engagement of students in family planning might enhance the initial adoption of contraceptives as well as the sustained usage of contraception (3,8). Despite the acknowledgement by governmental authorities of the imperative to provide cost-free access to contraceptives, the utilization rate of such methods remains disproportionately low, particularly among the younger demographic. Additionally, scholarly investigations indicate that the high occurrence of sexually transmitted infections, particularly HIV/AIDS, and adolescent pregnancy among students is a significant societal concern that has the potential to impede students' concentration on their academic pursuits (20; 14, 23).

The adverse consequences of adolescent pregnancies on the physical, mental, and social well-being of teenagers and their

communities render these statistics deeply concerning. Approximately 75 million unwanted pregnancies occur annually due to factors such as inadequate thinking, information, or practice, as well as the inefficacy of contraceptive methods (25,14). These unplanned pregnancies account for a significant portion of the estimated 210 million pregnancies experienced by women and teenagers worldwide each year. The majority of these pregnancies are terminated prior to reaching full gestation, resulting in significant health consequences (7,24). The prevalence of adolescent pregnancy is a significant global concern, with Nigeria being no exception. The phenomenon has also affected Port Harcourt Metropolis, which serves as the administrative center of Rivers State. Based on the findings of the 2018 Nigeria Demographic and Health Survey (NDHS), it was determined that the adolescent birth rate in Rivers State stood at roughly 105 births per 1,000 girls within the age range of 15 to 19 years (DHS, 2018).

AIM AND OBJECTIVES

The aim of this study is to assess associated with knowledge of contraceptive among senior secondary school students in Port Harcourt Metropolis.

The objectives of this study are to:

1. Assess the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis
2. Establish the association between the secondary students' knowledge of contraception and age, gender, religion and guardian.

RESEARCH QUESTIONS

The study sought answers to the following questions.

1. What is the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis?
2. What is the association between the secondary students' knowledge of contraception and age, gender, religion and guardian?

RESEARCH HYPOTHESIS

The following null hypotheses were formulated to guide the study
There is no significant association between the secondary students' knowledge of contraception and age, gender, religion and guardian.

METHODOLOGY

This study used a descriptive survey research method to collect and present data on high school students' understanding of and engagement with contraception in the greater Port Harcourt area. The success of similar studies in Nigeria, such the one conducted in Ekpoma by Idonije et al. (2011), provided support for this methodological choice. Given its cultural and ethnic diversity, economic significance, and growing worries about adolescent pregnancies, Port Harcourt Metropolis, a significant commercial



hub in Nigeria's Niger Delta region, was chosen as the study area. Students from both public and private secondary institutions in the Port Harcourt Metropolitan Area made up the study population of 53,000.

To determine the sample size, the Cochran formula was employed, resulting in a sample size of 900 students (see below) The sample size was calculated using the Cochran formula, (Cochran 1963)

$$n = Z^2 Pq/d^2.$$

Where Z= 1.96 set at 95% confidence interval, so that Z² = 3.8416

P= 52.0% =0.520 is the proportion of safety device utilization (Ojo *et al.*, 2021).

d = 0.05 level of significance.

$$q = 1 - 0.520 = 0.480$$

d=Error margin tolerated at 5.0% = 0.05 so that e² = 0.0025

$$n = \frac{3.8416 \times 0.520 \times 0.480}{0.0025} = 384$$

n= **900**

Two administrative regions were chosen, then five wards within those regions, and finally two schools—one public and one private—were selected from each of those wards. The data was gathered with the help of a designed questionnaire with two parts: socio-demographic information and questions on contraception. Expert assessments verified the instrument's validity, and the test-retest procedure confirmed its reliability, producing a reliability coefficient of 0.76. Descriptive statistics, including frequency percentages (%) and Chi-Square, were used for data analysis in the SPSS.

RESULTS

Table 1: Socio-Demographic Data

Variables	Frequency	Percentages
Age		
< 15 years	325	36.5
15-16 years	323	36.3
>16 years	242	27.2
Gender		
Male	362	40.7
Female	528	59.3
Religion		
Christianity	596	67.0
Islam	38	4.3
Traditional	91	10.2
Others	165	18.5
Guardian		
Parents	387	43.5
Siblings	274	30.8
Friends	17	1.9
Relatives	109	12.2
Others	103	11.6

The result showed that 325(36.5%) of the respondents were aged <15 years, 323(36.3%) were aged 15-16 years and 242(27.2%) were aged >16 years. For gender, 362(40.7%) of the respondents were males while 528(59.3%) were females. The result also showed that 596(67.0%) of the respondents were of the Christian

religion, 38(4.3%) Islam, 91(10.2%) Traditionalists and 165(18.5%) were of other religion. For guardian, 387(43.5%) had parents as guidance, 274(30.8%) had siblings, 17(1.9%) had friends, 109(12.2%) had relatives and 103(11.6%) had others as guidance.

**Table 2a: Level of knowledge of contraceptive use among senior secondary school students**

Variables	Frequency (n=890)	Percentages
Have you heard of family planning		
Yes	569	63.9
No	321	36.1
Source of information		
Television	145	16.3
Radio	29	3.3
Newspaper	1	.1
Health worker	129	14.5
Friends	469	52.7
Worship center	36	4.0
Others	81	9.1
What method of contraceptive have you heard or know of		
Condom	433	48.7
Oral pill	281	31.6
Safe period	137	15.4
Others	39	4.4

Table 2a shows the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis. The result showed that 569(63.9%) of the respondents indicated that they have heard of family planning.

About 145(16.3%) indicated that they got their information from television, 29(3.3%) indicated radio, 1(0.1%) newspaper, 129(14.5%) health workers, 469(52.7%) friends, 36(4.0%) worship centers and 81(9.1%) others.

Table 2b: Level of knowledge of contraceptive use among senior secondary school students

S/N	Variables	True Freq (%)	False Freq (%)	Decision
1	Contraceptive helps to prevent sexually transmitted diseases	715(80.3)	175(19.7)	bad
2	Contraceptive helps to prevent unwanted pregnancy	567(63.7)	323(36.3)	Good
3	Other types of contraceptive (oral pills, vagina foam, injectibles, IUCD, etc) prevents only pregnancy	741(16.7)	149(16.7)	Good
4	Condom is to be worn on the male penis just before penetration during sexual intercourse	804(90.3)	86(9.7)	Good
5	Emergency oral contraceptive is to be taken at most within 72hrs after unprotected sex	777(78.3)	113(12.7)	Good
6	Daily oral pills are taken regularly on daily basis for it to be effective	528(59.3)	362(40.7)	Good
7	Injectibles and IUCDs are use on long-term basis for it to be effective	616(69.2)	274(30.8)	Good
Total		678(76.1)	212(23.9)	Good

Decision = >50 % is good knowledge; <50% is poor knowledge



Table 2b shows the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis. The result showed that 678(76.1%) of the

respondents had good knowledge of contraceptive while 212(23.9%) had poor knowledge.

Table 3: Summary of Chi Square analysis to establish the if secondary school students' knowledge of contraception is associated with age, gender, religion and guardian

	χ^2_{cal}	Df	χ^2_{crit}	Cramer's Value	p.val	Decision
Age	13.633 ^a	2	5.991	0.224	0.008	Significant
Gender	5.705	1	3.841	0.213	0.033	Significant
Religion	23.564	3	7.815	0.333	0.002	Significant
Guardian	20.432	4	9.488	0.453	0.001	Significant

*Dependent variable: Knowledge of contraception

*Independent variables: Age, Gender, Religion and Guardian

* $P > 0.05$; $\chi^2_{crit} < \chi^2_{cal}$: H_0 Rejected

Age: The chi-square statistic (χ^2_{cal}) of 13.633 with 2 degrees of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 5.991. This result, along with a Cramer's value of 0.224 and a p-value of 0.008, demonstrates that age is significantly associated with knowledge of contraception among students.

Gender: The chi-square statistic (χ^2_{cal}) of 5.705 with 1 degree of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 3.841. This indicates a significant association between gender and knowledge of contraception, supported by a Cramer's value of 0.213 and a p-value of 0.033.

Religion: The chi-square statistic (χ^2_{cal}) of 23.564 with 3 degrees of freedom (Df) significantly exceeded the critical chi-square value (χ^2_{crit}) of 7.815. This suggests a notable association between religion and knowledge of contraception, as indicated by a Cramer's value of 0.333 and a low p-value of 0.002.

Guardian: The chi-square statistic (χ^2_{cal}) of 20.432 with 4 degrees of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 9.488. This demonstrates a substantial association between the guardian and students' knowledge of contraception, with a Cramer's value of 0.453 and a p-value of 0.001.

DISCUSSION

In order to ascertain the level of knowledge of contraceptive use among the students, the research first examined their level of awareness and found that 63.9% of them were aware of contraceptive use. The findings indicate that a significant majority of both public school student participants and private schools student participants (63%) demonstrated accurate knowledge on on contraceptive ability to prevent unplanned pregnancies. The findings of this study are supported by previous research conducted in Nigeria. For instance, it was discovered that a significant number of students had a comprehensive understanding of various contraceptive techniques (12).

Nevertheless, the study also revealed prevalent misconceptions among the students. Such as contraceptives prevent sexually transmitted diseases 80.3%, a majority of 59.3% of respondents hold the belief that the efficacy of oral contraceptive tablets is contingent upon daily usage, whilst a minority of 16.7% believe that other contraceptive techniques merely prevent conception. The existing amount of research pertaining to adolescent knowledge regarding contraception substantiates the presence of these misconceptions. Studies conducted have revealed that Nigerian young are extensively exposed to misinformation and prevalent beliefs around contraception (16,18). Misinterpretations of information can lead individuals to improperly utilize contraceptive methods, thereby diminishing their effectiveness in avoiding unwanted pregnancies and sexually transmitted infections.

Statistically significant gender disparities in contraception awareness were also observed. Female students exhibited a greater level of contraceptive awareness in comparison to their male counterparts. This finding aligns with previous research that has identified a disparity in contraceptive awareness among individuals of different genders. A study has shown that female adolescents in Nigeria had a higher level of comprehension of efficacious contraceptive techniques compared to their male counterparts (5) . This variance can be attributed to a range of factors, such as cultural norms, the availability of information, and the influence of peers.

Emphasizing the significance of addressing the gender disparity in adolescent access to comprehensive contraception information is of utmost importance. In order to address this informational disparity, it is imperative to implement comprehensive sexual education courses that actively include male pupils.

The findings of the research further emphasis the significance of students' religious affiliation and parental oversight in influencing their comprehension of contraception. According to the findings of the survey, a majority of the students, specifically 67%,



identified themselves as Christians. Notably, this group exhibited a higher level of familiarity and understanding on the topic of birth control. This finding aligns with other studies conducted under comparable circumstances. A correlation between religious affiliation and contraceptive knowledge among adolescents in Nigeria's Christian majority (1). The researchers found that religion exerted an influence on the accuracy of their understanding of contraceptives.

Additionally, the research revealed that the concept of guardianship had a substantial influence on the academic progress of students. The data revealed that individuals who resided with their parents as guardians exhibited the highest levels of knowledge. Similar to a findings that parental assistance and communication significantly contributed to adolescents' knowledge and understanding of contraception (21).

The discovery that students' comprehension of contraception seems to improve as they grow older is intriguing. There exists a strong positive correlation between knowledge and age. The cohort of students aged 15 to 16 had superior understanding of contraception compared to both their younger and older counterparts. A findings indicate that there are comparable age-related discrepancies in contraceptive knowledge among adolescents in Nigeria (5). Consequently, our research outcomes align with their study. It is possible that their exposure to sexual education programmes or discussions has increased as they have advanced in age.

CONCLUSION

Understanding the current situation of adolescent sexual and reproductive health is aided by the study's findings on contraception awareness among secondary school students in Port Harcourt Metropolis. The findings are consistent with the current literature in some respects, such as the observation of differences in education and between the sexes, but they also provide light on some novel areas, such as the impact of religion and guardianship.

Targeted educational interventions should be developed to address the observed knowledge gaps and misunderstandings. Students' age, gender, religious background, and the influence of their guardians should all be taken into account while designing these interventions. Stakeholders may help improve adolescents' sexual and reproductive health in the Port Harcourt Metropolis by providing them with more information about available methods of birth control.

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ASSESSMENT ON MULTIPLE INTELLIGENCE AND ACADEMIC PERFORMANCE OF CBMA STUDENTS: BASIS IN THE ENHANCEMENT OF SELF LEARNING MODULE AND PROGRAM CURRICULUM

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ABSTRACT

Many educational institutions believe that education should encompass a variety of methods to reflect students' different learning styles in order to equip students with the skill demand of various activities. This study determined to assess the students' multiple intelligences and academic performance as basis in the enhancement of self-learning module and program curriculum. The multiple intelligences include Intrapersonal Intelligence, Existential Intelligence, Naturalistic Intelligence, Kinesthetic Intelligence, Interpersonal Intelligence, Visual Intelligence, Musical Intelligence, Logical Intelligence, and Verbal Intelligence. The research design used was basically a descriptive method employing an adopted Multiple Intelligences Survey from Walter McKenzie, 1999 of Surfaquarium Consulting. There were 212 respondents from BS in Entrepreneurship and BS in Office Administration. Academic performance of the students in their major subjects got an average of 1.63 and were measured based on the results of the final examinations for first semester of AY 2020-2021. Results showed that the top three intelligences the respondents have based on their scores are intrapersonal intelligence, followed by existential and naturalistic intelligences; least of the intelligences are musical, logical and verbal. This implied that oral communication is part of the required testing because this skill is needed not only in the workplace, to practice face-to-face communication skills which reinforces other skills such as critical thinking and non-verbal communication skills and to develop their verbal ability. There is a need to enhance the course syllabi and integrate the learning methodologies in the self-learning module that utilizes the multiple intelligence.

KEYWORDS: *multiple intelligence, academic performance, CBMA students, course syllabi*

INTRODUCTION

Multiple intelligence (MI) theory has attracted much attention in the field of education, although Howard Gardner as the inventor of this theory, does not intend to create it to apply learning and instruction. The theory was directed at the philosophy of developmental and cognitive psychology Gardner (2011) as a discipline he was interested in since the beginning of his career. Eventually, MI theory became popular in educational practice. The multiple intelligences include Naturalistic Intelligence, Musical Intelligence, Logical Intelligence, Existential Intelligence, Interpersonal Intelligence, Kinesthetic Intelligence, Verbal Intelligence, Intrapersonal Intelligence and Visual Intelligence.

The success of an individual in a chosen profession depends on his skills and abilities. According to Ahvan (2016) multiple intelligences including visual-spatial, verbal-linguistic, interpersonal, bodily-kinesthetic, musical, natural, interpersonal have a positive correlation with academic performance achievement. MI such as visual-spatial intelligence, interpersonal and verbal-linguistic intelligence were statistically significant and could positively predict academic performance achievement, whereas the musical intelligence was a tunable negative predictor for academic achievement of students. This traditional way of defining intelligence serves as the basis on what degree programs a student will be enrolling to prepare for his chosen profession. A

student who is good in language could be journalist, lawyer, teacher and a diplomat. On the other hand, logically inclined students would probably take up engineering, accountancy, statistics, medicine and the like.

The level of intelligence has been associated with the kind of profession an individual must pursue in order to be successful. Students with above average intelligence based on the intelligence quotient (IQ) test are expected to take degrees that are more sophisticated and which requires higher level of thinking. Students should keep abreast with the level of intelligence required to perform satisfactorily in all the requirements leading to a particular degree. For example, a logical student would probably survive in taking up engineering compared to a student who is a linguistic.

Similarly, individuals have varying levels of multiple intelligences. Each of the MI types can serve as gateways to personalize important cognitive and emotional processes that underlie learning such as attention, memory, motivation, creative cognition, problem-solving, and understanding as mentioned by Armstrong (2017). The benefit of embedding MI in learning is that it can easily span diverse cultures because each school represents a cultural system of educational beliefs, social ideas, and practices according to Shearer (2018). An



individual could be linguistic and logical but possess a little of the musical and bodily intelligences.

The researcher aims to assess the multiple intelligences and the academic performance of College of Business and Management (CBMA) students as basis for the enhancement of self-learning module and program curriculum.

METHODOLOGY

This study utilized the descriptive methods of research. Two Hundred Twelve (212) third year level from BS Entrepreneurship and BS Business Administration students are the respondents of the study from the College of Business Management and Accountancy (CBMA). The researcher will employ the Multiple Intelligences Survey from Walter McKenzie, 1999 of Surfaquarium Consulting which has 80 items. On the other hand, the academic performance of the students in their major subjects were measured based on the results of the final grade for first semester of AY 2020-2021. This study used mean, standard deviation, Pearson’s *r* and linear regression analysis for the statistical treatment of the data.

RESULTS AND DISCUSSION

The mean average and the standard deviation of the students' MI scores and academic achievement are shown in Table 1 and 2, which reports the students' levels of MI. The significant differences obtained the highest rating of intrapersonal intelligence, 25.0, existential, 18.9, naturalistic, 20.0, kinesthetic, 22.7, interpersonal, 22.5, visual, 27.6, musical, 23.3, logical, 20.7 and verbal 25.1 which reflects the student’s level of multiple intelligence.

When considering the level of performance of the students in their major subjects there is a significant difference found with a standard deviation of 0.226.

1. What extent the students possess in the following multiple intelligences namely: Naturalistic Intelligence, Musical Intelligence, Logical Intelligence, Existential Intelligence, Interpersonal Intelligence, Kinesthetic Intelligence, Verbal Intelligence, Intrapersonal Intelligence and Visual Intelligence?

Table 1. Descriptive Statistics of the Independent Variables

Types of Intelligence	<i>M</i>	<i>SD</i>
Intrapersonal	77.4	25.0
Existential	76.0	18.9
Naturalistic	73.8	20.0
Kinesthetic	70.4	22.7
Interpersonal	68.5	22.5
Visual	66.9	27.6
Musical	62.5	23.3
Logical	58.1	20.7
Verbal	53.6	25.1

Note. *N*=121. Each of type of intelligence is measured on a scale of 0–100.

2. What is the level of academic performance of the students in their major subjects?

The 212 respondents of the study got an average of 1.63 in their academic performance with a standard deviation of 0.226.

3. Is there a significant relationship between the extent the student possesses the multiple intelligences and the academic performance?

In order to answer this question, Pearson’s *r* was used. Table 2 shows the correlation coefficients between each type of intelligence and the academic performance of the respondents.

Table 2. Correlation of each type of intelligence with Academic Performance

Type of Intelligence	<i>r</i>	<i>p</i>	Strength of correlation
Naturalistic	.151	.098	slight
Musical	.103	.262	slight
Logical	.327**	<.001	low
Existential	.057	.533	slight
Interpersonal	.197*	.030	slight



Kinesthetic	.083	.368	slight
Verbal	.220*	.015	low
Intrapersonal	.361**	<.001	low
Visual	.216*	.017	low

Note. N=121.
 * $p < .05$. ** $p < .01$.

The results show that logical ($r=.327, p<.001$), interpersonal ($r=.197, p=.03$), verbal ($r=.22, p=.015$), intrapersonal ($r=.361, p<.001$), and visual ($r=.216, p=.017$) types of intelligences are statistically significantly correlated with the performance of students in terms of their GWA.

Naturalistic, musical, existential, and kinesthetic intelligences do not have statistically significant correlation with academic performance.

4.Does the extent the student possess the multiple intelligences predict the academic performance?

To answer this question, a linear regression model was fit into the data. The response variable used in the model was the academic performance of the students while the predictors were the nine types of intelligence. The model fit measures are shown in Table 3 while the regression coefficients and their significance are shown in Table 4.

Table 3. Model Fit Measures

Model	R	R ²	Adjusted R ²	Overall model test			
				F	df ₁	df ₂	p
1	0.653	0.427	0.415	3.16	9	111	<.001

Table 3 shows that the regression model accounts for 42.7% of the total variance in the Performance (GWA) of the

respondents. The model is also statistically significant ($F=3.16, p<.001$). Overall, the regression model has a good fit.

Table 4. Regression Coefficients

Predictor	B	SE B	t	p
Intercept	1.9730	0.1036	15.095	<.001
Naturalistic	0.0001	0.0014	1.299	0.197
Musical	0.0000	0.0012	-0.056	0.955
Logical	0.0057	0.1327	7.286	<.001
Existential	0.0006	0.0015	-0.463	0.645
Interpersonal	0.0043	0.1120	8.451	<.001
Kinesthetic	0.0001	0.0014	0.077	0.939
Verbal	0.0024	0.0828	9.367	<.001
Intrapersonal	0.0069	0.0912	7.365	<.001
Visual	0.0071	0.1231	6.258	<.001

The significant predictors are logical ($B=0.0057, p<.001$), interpersonal ($B=0.0043, p<.001$), verbal ($B=0.0024, p<.001$), intrapersonal ($B=0.0069, p<.001$), and visual ($B=0.0071, p<.001$) types of intelligences.

thought to be one of the most efficient and vitally important problem-solving methods.

For every one unit increase in the level of logical intelligence, there is a corresponding 0.0057 units increase in the level of performance (GWA) of the respondent. CBMA students has the capacity to understand, reason, and solve problems as well as think logically. As cited by Lynch (2021) ability to solve problems through existing patterns and reasoning methods is

For every one unit increase in the level of interpersonal intelligence, there is a corresponding 0.0043 units increase in the level of performance (GWA) of the respondent. CBMA students has the ability to interact with other students, understand their situations and can build relationship and trust. According to Patrickson (2016) the deeper communication is build, the more it links to commitment. Communicate and



giving feedback regarding their performance, providing information perceive to emerge the level of commitment.

For every one unit increase in the level of verbal intelligence, there is a corresponding 0.0024 units increase in the level of performance (GWA) of the respondent. Verbal intelligence is a predictor in the level of academic performance of the CBMA students. Logsdon (2020) stated that people with strong verbal-linguistic abilities excel in school tasks like reading and writing. Communicate well and are usually good listeners, having a high memory for material read and strong recall of spoken information. Having a good verbal-linguistic intelligence can quickly and accurately respond in any spoken or written instructions.

For every one unit increase in the level of intrapersonal intelligence, there is a corresponding 0.0069 units increase in the level of performance (GWA) of the respondent. CBMA students are aware of their own emotions and sensitive to the feelings of others. They are also intuitive and usually introverted. Intrapersonal intelligence as self-knowledge and the ability to act adaptively on the basis of the knowledge. This intelligence includes having a picture of one's strengths and limitations, awareness of inner moods, intentions, motivations, temperaments, and desires, and the capacity for self-discipline, self-understanding, and self-esteem according to Armstrong (2020).

For every one unit increase in the level of visual intelligence, there is a corresponding 0.0071 units increase in the level of performance (GWA) of the respondent. Visual Intelligence is evident as predictor for the level of performance of CBMA students. Stimulated by powerful information through different aspects like captivating information to create a considerate meaningful experience and the ability to visualize one's perceptions. The ability of students to memorize and retain material from a learning process, the more likely they are to perform better in their studies.

CONCLUSIONS AND RECOMMENDATIONS

The study provided evidence that the intrapersonal and existential intelligence is the student's most frequent intelligence and the logical and verbal is the least frequent intelligence. This could be due to the opportunities and environment available for each intelligence. According to Mojares (2015) intrapersonal strength reflects self-smart the students has the ability to comprehend themselves, to be aware of one's feelings, anxieties and impulses. It was also found out that logical and intrapersonal intelligences can predict the academic performance of the CBMA students. This means that CBMA students has the ability to think logically, reason, and identify connections, recognize patterns with ease, and work well with numbers. They have a very systematic approach to learning and are keeping organized. The researcher also conclude that academic performance has a good fit with regards to multiple intelligence and statistically significant. The result implies that intrapersonal intelligence should be turned to verbal prowess as CBMA students need effective communication skills to succeed in their chosen profession. Therefore, teaching oral communication must focus on the

enhancement of verbal-linguistic intelligence and interpersonal intelligence. Thus, it would be better if another study would be undertaken focusing on the employment of MI teaching methods for both BS Entrepreneurship and BS Office Administration programs. It was also recommended to enhance the course syllabi and apply the teaching methodologies on multiple intelligences, develop instructional materials that focuses on MI and develop concepts and teaching techniques of multiple intelligence.

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THE SIGNIFICANCE OF EMPATHY IN PSYCHOLOGICAL COUNSELING (A REVIEW OF LITERATURE)

Ms. Manisha

Author Note

Ms. Manisha is a Psychologist cum Counsellor, a Master's degree holder in Clinical Psychology and Applied Counselling, Masters in Business Administration, Graduate in Education and Honours in Psychology with fifteen years of experience in the field of Educational and School Psychology. This article is based on the field study/experience and is not a part of any affiliated research programme.

ABSTRACT

Empathy is the ability to take another person's role and thus become aware of his feelings as well as his motives, his attitudes, values and beliefs. It depends on our ability to make accurate interpretations of the information other's give about their internal states. Empathy is the most important skill and is significant in psychological counseling. Counseling efficiency is closely related to the empathetic attitude of the counselor. The accurate empathetic understanding of the clients experience and feelings make the counselling process more effective and gives a positive outcome. The barriers and blocks to communicate effectively can be removed with empathetic listening and showing compassion to support the people.

KEYWORDS: *Empathy, Cognitive, vulnerability, Compassion, Perceptual Skill, Therapeutic, Misconceptions, Psychological, Inter perceptual, Interpersonal disruption, Trauma, Validated, Self motivation, Self actualization.*

INTRODUCTION

Empathy is the capacity to understand or feel what another person is experiencing from within their 'frame of reference' that means it is the capacity to place oneself in another's position. It IS the social, cognitive and emotional processes. It is the ability to take another person's role and thus become aware of his feelings as well as his motives, his attitudes, values and beliefs. It is also considered as an ability to assess accurately the other's definition of the situation. Empathy is sometimes used synonymously with the term 'sympathy'. it is different from sympathy. While empathy is on ability the requires sensitive awareness, sympathy is a behavioral tendency that not only involves awareness but also implies a willingness to take on another's mood, especially when the other individual is fearful, anxious or depressed. Empathy is more easily defined and measured as a kind of inter-perceptual skill.

Empathy depends on our ability to make accurate interpretations of the information other's give about their internal states. Certain universal ways of expression, which communicate empathy, have been identified as laughter, sadness, terrified, etc. but it is also subject to culture variations. One situation that is emotionally appropriate in one culture may not be of significant importance in another culture. According to some psychologists, by late childhood and culturally determined and learned emotions, by sheer number, outweigh the unlearned ones. Comparative studies with individuals from European American and East Asians individuals show that in western cultural context, the self is typically experienced as an independent entity, defined primarily by its internal attributes such as preferences, desires and traits, (*Kitayama Duffy & Uchida, 2007) Markus & Kitayama1991*. In contrast, in Eastern cultural contexts the self is typically experienced as an

interdependent and interpersonally connected entity (*Kitayama, et al., 2007: Markus & Kitayama,1991*) primarily defined by one's place in social relationships and others surrounding the self. This culturally varying degree of overlap between the self and others is expected to shape individuals' responsiveness to and level of accuracy in reading others' pain.

Buchheimer identifies five dimensions of Empathy. They are as follows:

- Tone – the expressive and non-verbal dimension conveying harmony and unity,
- Peace - the appropriate timing of leads
- Flexibility – the ability to adapt to situation.
- Perception of frame of reference
- Repertoire of leads – methods of approach.

Based on these:

Empathy has been identified as a core condition for providing counseling. It is the counselor's skill or capacity to gain trust and openness on the part of counselee.

“Counseling is an interactive process conjoining the counselee who needs assistance and the counselor who is trained and educated to give this assistance” (*Pere, 1965) Patterson (1959)* characterizes it as is the process involving interpersonal relationships between a therapist and one or more clients by which the former employees psychological methods based on systematic knowledge of the human personality in attempting to improve the mental health of the latter.

Rogers (1952) describes counseling as the process by which the structure of the self is relaxed in the safety of the client's relationship with the therapist, and previously denied



experiences are perceived and then integrated into an altered self.

Practically all the definitions concur with the view that counseling is a process that involves bringing about sequential changes over a period of time leading to a set goal. Counseling is the counselor – counselee relationship that is not casual, matter – of – fact and business like but it is characterized by warmth, responsiveness and understanding counseling is concerned with bringing about a voluntary change in the client. It is a means to help people realize their potential. At times counseling or rather, say psychological counseling is regarded as a helping technique. Many people opt to become a counselor without any professional training and start to counsel people with mental illness. They start giving advice and unnecessary guidance to the afflicted person without learning the exact role of counseling. There are quite a few misconceptions about counseling. It would perhaps be useful to state what counseling is not, to help clarify our conception of it.

Counseling is not

- Giving advice or solutions
- It is not being judgmental
- Not sitting in silence and thinking
- Sorting out the problems of client
- It is not cheerleading
- Looking at client's problems from your own perspectives

Counseling is *“a talking therapy that involves a trained therapist listening to you and keeping you finds ways to deal with emotional issues”* (UK NHS). It is a helping approach. The client fails to utilize his capacities fully and efficiently. The role of counselor is to help the client gain fuller self-understanding through self- exploration and to appreciate strengths and work on weaknesses. Prevention of emotional tensions, anxieties, indecisions are such problems that come under the range of counseling. It is commonly believed that counselor resolves the client's problems immediately but as already explained that counseling is bringing change in perception, understanding, goals and values by a clients own conscious efforts and the counselors help them by using self-direction, self-motivation and self-actualization techniques. It will be seen that there may be differences between the expectations of the clients and the goals of the counselors. These difference causes dissatisfaction, misunderstanding and irritation. Counseling has no magical solutions. It is concerned with individuals find realistic and workable solutions to their problems by helping them gain an insight into themselves and for this kind of professional relationship a counselors, skills play very important role. Rapport, empathy and attentiveness are the three most important skills that can either facilitate or inhabit the counseling process. Rapport means interest, responsiveness and sensitive emotional involvement. Through rapport, the counselor understands and communicates with the client from the commencement to the end of the interview. Attentiveness is the presence of mind. It is focused attention of the counselor on the client's behavior, non-verbal cues, listening skills, etc. Empathy is the most important skill and is

significant in psychological counseling. It is the ability to feel and describe the thoughts and feelings of others.

Lack of Empathy in counseling makes the counseling process ineffective thus, devaluing, the trust of client. The person who is suffering emotional conflicts or traumas need to talk with someone who understands the situational factors and his/her symptomatic problems. Counseling efficiency is closely related to the empathetic attitude of the counselor. It is a therapeutic relationship in which the counselor treats the client as a unique human being with his/her own experiences and worldviews coordinated with the counselors' experiences and worldviews. “You must experience empathy before you can express it,” writes counseling experts *Jeff and Nancy Cochran (Cochran & Cochran, 2015, p.48)*. Expressing empathy within a counseling session involves more than just words; the counselor must communicate a deep understanding and display a personal connection with the client. American Psychology Association confirmed that empathy is a *“sensitive understanding of the patient's feelings and struggles; seeing them from the patients point of view.”* (APA, 2019) Emotional intelligence is vital in psychological wellbeing and growth and helps in developing emotional skills and empathy. In the absence of empathy, nobody can counsel the other and provide a positive, remedial outcome. Empathy is expressed through body language, listening, sharing perceptions and using declarative statements. It is a sequence starting with client's expression of emotion, followed by the perception, vicarious experiences and empathic response by the counselor.

Example

Case Excerpts

Client: “I am feeling very low and irritated.”

Counselor: “Yes, and you seem to be unhappy.”

Client: A moment of silence (let the client be silent and take in his/her own thoughts.

Counselor: “I understand” (take a pause)

Client: [He understands me] “I want to share my experience...” [Pause] “Tell me if I am wrong.”

Counselor: “Definitely, please go ahead. I am here to help you.”

Most often, the client will need considerable encouragement to express his/her interpersonal disruption or trauma. It there is lack of empathy than the counter productivity of counseling will be not show positive results. However, the positive quality of empathy can also at times get in the way of healthy counseling relationship. Because of empathy some client's regard this quality of counselor as an intrusion. The client might regard this empathic understanding as a penetration into protected areas of self. The client wants to be understood by not completely known. The counselor is an important figure for the client and there is constant fear of rejection or abandonment on the part of client. He thinks that the counselor might reject him if he expresses his vulnerable side.

Case Excerpts:

(Case of an addict after many sessions)

Counselor: “I see, you are looking happy today.”



Client: “Yes, I am...” [Pause] “I am feeling better but at times I still find it difficult to cope.” [Stops suddenly]

Counselor: “You want to know why this is happening to you.”

Client: “No, No, it’s just that I am trying” but [Pause] I am not sentimental types...” “I have been thinking a lot about my life and how I used to be...” [Long pause] “It’s very hard for me to remember...”

At this point in the conversation, the client is not very interested in opening up to the counselor because he thinks that his vulnerability might ruin his image and relationship with the counselor. The counselor is empathetic but the client might regard this as breaching the trust of someone who understands him. Empathy has both negative and positive impact on the effectiveness of counseling. However, the lack of empathy is still a hindrance in the therapeutic relationship of counseling. The client’s emotional pain must be allowed and accepted, as only then the effectiveness of counseling will be validated.

CONCLUSION

In this article, I discussed why empathy is important in the counseling encounter. Empathy is seen to involve the client feeling understood and accepted. It is the process of placing oneself into another person’s shoes. In counseling empathy involves the experiencing of emotional reactions. *Roger (1957)* defined empathy as – “To sense the client’s private world as if it were your own, but without ever losing the ‘as if quality’.”

However, the question is that whether empathy is a positive trait or a negative trait in psychological counseling? In counseling, empathy is an expression of the regard and respect the counselor holds for the client. As a therapeutic tool, it connects the counselor and client. The empathetic counseling approach brings a positive impact. The lack of empathy means lack of connecting to the clients as human beings and considering them just as objects. Empathy is a significant skill used in psychological counseling. It is a social skill that helps builds a therapeutic relationship. The professional counselors must be supported through continuous educational programs to build and polish their empathetic skills as it allows them to effectively communicate with their clients.

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A STUDY ON EMOTIONAL INTELLIGENCE AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

Although a person's feelings cannot be observed directly by others but they can be inferred from overt behavior and verbal report of introspection, as no one can doubt the reality of emotions as conscious experiences. Emotions are inherently neither positive nor negative. Exhibiting the emotion is very easy but doing it at the right time, place as well as right person and to do the right degree is difficult. In fact, each feeling provides us with vital and potentially profitable information every minute a day. The management of emotions has given rise to the most talk about term "Emotional Intelligence". Emotional intelligence is developed through experiences. Competencies keep on growing through the experiences; people get better and better in handling emotions, influencing others and in social adroitness. It encompasses awareness about our one's own capabilities, strengths and weaknesses. There are many examples of how emotional intelligence can play a role in daily life, it can be powerful, but also it is temporary. The present study was conducted to know the emotional intelligence among secondary school students. Samples of 90 students were selected from different types of high school (rural and urban) from Mysuru district. After all the data analysis and interpretation it is found that 82 students are having high level of emotional intelligence, 7 students are having normal level of emotional intelligence, no students are having low level of emotional intelligence.

KEY WORDS: Emotional Intelligence, Emotions, Behavior, Social adroitness.

INTRODUCTION

In India, education is not only vital for competitiveness and growth, but also for social stability and essential for everyone. Education is something like act of spreading knowledge to others and receiving knowledge from someone else. India has been a major center for learning and also has best universities in the world. India now has one of the largest higher educations in the world in terms of numbers of institutions and it's the second largest in terms of students. For developing nations quality of education has become an important issue. Educational developments have been made at both government and non-governmental levels to match the fast changing scenarios across the globe.

Education is an indispensable tool for everyone to get something different and to succeed in their life. It is important for both women and men, as both plays an essential role in the development of a healthy and smart society. Education will help to transform an individual to be a better and responsible citizen because of education, all the power and progress can be achieved by human beings. It is a key to success in the future and to have many opportunities in our life.

Secondary school education is one of the most important phases of every student's life. It is the link between primary education and higher education. Some secondary schools provide both lower secondary education (ages 11 to 14) and upper secondary education (aged 14 to 18). It is the time when the emotional, physical and mental developments of children are at a good phase. Primary school includes the years before secondary education. The main aim and objective of secondary school education is to bring all round development among the learner, to improve intellectual, practical skills and vocational efficiency of the students and also scientific attitude and desirable change among the students. Besides these, the secondary education should be based on a national curriculum frame work (NCF) which contains a common core along with other components that are flexible.

Emotional Intelligence means, Ability to monitor one's own and other's feelings or emotions to discriminate among them. It is a set of competencies fitting with domains like: understanding, self-management, self-awareness, social awareness, learning, reasoning, creativity, planning, critical thinking, and problem solving and think abstractly.



Emotional Intelligence is also reflects abilities to join empathy, intelligence and emotions to understand thought and it affects our learning, relationships, health and communication.

Emotional Intelligence Divided Into Four Key Abilities

1. Thinking and reasoning using emotions.
2. Managing and regulating emotions
3. Perceiving and identifying emotions and
4. Understanding emotions and how they change

NEED AND IMPORTANCE OF THE STUDY

Emotional intelligence will be able to influence many parts of our life, from academic grades to job performance also interaction and adjustment in daily life. Emotional intelligence is very much important for secondary school students to quickly overcome their exam stress and get on with answering the questions and can overcome boredom and maintain concentration during dull topics.

Emotional intelligence is very much helpful for subjects like drama, history, English and creative arts where you need to understand or even inculcate the human emotions. Also it helps to build strong relationships between teachers and classmates.

Emotional intelligence can lead to better social, mental and physical health it lowers anxiety and depression among students and more likely to be socially active, good shape, feel healthy and involved. The main importance of emotional intelligence is to self – regulation among students and bringing better achievement and offers them skills for their personal and professional lives.

In the above discussion it is clearly indicates that, Emotional intelligence helps a person in many ways, to achieve in life while maintaining the personal growth, education and happiness.

REVIEW OF RELATED LITERATURE

The main aim of reviewing the related literature is to get an insight on study and to gain an understanding of the existing research also to present that knowledge in the form of a written report.

1. Le page Lees (1997): The threw light upon the role of Emotional intelligence in academics, was conducted by Ford. The participants were 104 African American male college students from urban areas. He examined the role of psychosocial variable (i.e., emotional intelligence quotient) in facilitating academic resilience. The result indicated that only emotional intelligence quotient was a significant contributor to academic resilience.

2. Bharadwaj (1998): Explored the prospects of emotional intelligence associated with students of both genders on a sample of 600 students a two-group design. The 12 independent studies brought to the fore that in comparison to girls posses greater emotional intelligence. Boys have greater expression and control emotions.

3. Koifman (1998): conducted research on relationship between emotional intelligence (Q) and cognitive intelligence and their relationship to creativity was examined. The EQ-1 was found as a measure of emotional intelligence, grade point averages, as a measure of IQ, and EQ was significantly co-related with reported life satisfaction ($r=0.55$, $P<001$) and creativity ($r=0.41$, $P<001$). Ni significant correlation was found between IQ and creativity or between IQ and EQ.

4. Kim and Kim (1999): investigated the construct validity and reliability, and analyzed the relationships of children's emotional intelligence (EI) with cognitive ability. The sample of 973 children participated in this study ranging from 3-6 years of age. Result identified six factors of children's emotional intelligence (EI).

5. Sharma (2000): discussed the concept and characteristics of emotional intelligence. Emotional intelligence is described as a type of social intelligence involving recognition and management of emotions and feelings in self and others for motivating self and dealing effectively with others".

6. Corso (2001): Examined the relationship between emotional intelligence and giftedness in adolescence. Participants (N=100) were students between 12-16 years, accepted into a verbally and mathematically gifted summer youth program held at western Kentucky university. Students completed the EQ-1; yv, and their parents related the students in five areas of emotional intelligence on a f-point likert scale the gifted adolescents scored significantly higher than their non-gifted same age person total EQ. The above mentioned researches have indicated the relevance of EI with respect to social and emotional competencies, which are considered vital for a successful performance in academics.

7. Anjum Sibia and Girishwas Misra (2004): Examined the nation of emotional intelligence (EI) in Indian socio-cultural context. An attempt has been made a discern the indigenous notion of EI based on the perspectives of people (parents, teachers and children) in the contemporary Indian society. The Results indicates after the research the Indian view of EI is context sensitive and focuses on the role of family and society in shaping one's emotions.

8. Katyal (2005): Studied the gender difference in emotional intelligence among adolescents of Chandigarh. 150 students of 8th class from different government schools from Chandigarh were selected randomly. The data were collected through standardized emotional intelligence tests. The findings revealed that girls were found to have greater emotional intelligence than that of boys.

9. Ajay Kumar Bhimrao Patil (2006): Emphasized that there is no significance difference between emotional intelligence of male and female students. It was also stated that emotional intelligence and academic achievement are significantly related.

STATEMENT OF THE STUDY

A study on Emotional Intelligence among secondary school students



OBJECTIVES OF THE STUDY

1. To assess the level of Emotional Intelligence among secondary school students.
2. To study the significant difference between boys and girls with respect to Emotional Intelligence among secondary school.
3. To study the significant difference between urban and rural of secondary school students with respect to their Emotional Intelligence.
4. There is no significant difference between Urban Boys & Girls of secondary school students with respect to their Emotional Intelligence.
5. There is no significant difference between Rural Boys & Girls of secondary school students with respect to their Emotional Intelligence.

HYPOTHESIS OF THE STUDY

1. There is no significant difference between boys and girls with respect to their Emotional Intelligence among secondary school.
2. There is no significant difference between urban and rural secondary school with respect to their Emotional Intelligence.
3. There is no significant difference between Urban Boys & Girls of secondary school students with respect to their Emotional Intelligence.
4. There is no significant difference between Rural Boys & Girls of secondary school students with respect to their Emotional Intelligence.

VARIABLE OF THE STUDY

1. Main variable – "Emotional Intelligence"
2. Background variable
 - Girl / Boy
 - Rural / Urban

OPERATIONAL DEFINITIONS

Emotional Intelligence: Intelligence refers to abilities to adjust with the situations. If a concept that refers to individual differences in the ability to acquire knowledge to think and reason effectively, and to deal adaptively with the environment. Earlier, it was thought that performance is the outcome of certain abilities, collectively known as Intelligence. However, increasingly it has been realized that in addition to intelligence, emotions are equally or even more responsible for performance. Hence, the concept of EQ has become popular particularly in management sciences. Emotions are powerful organizers of thought and action and paradoxically indispensable for reasoning and rationally. Emotional intelligence motivates employees to pursue their unique potential and purpose, and activates innermost potential values and aspirations, transforming them from things they think about, to what they do. Emotional Intelligence enables one to learn to acknowledge and understand feelings in ourselves and in others and that we appropriately respond to them, effectively applying the information and energy of emotions in our daily life and work.

METHODOLOGY OF THE STUDY

Descriptive/survey method will be used to study the "Emotional Intelligence scale among secondary school students".

SAMPLE OF THE STUDY

The students studying in different types of high school affiliated to the Karnataka state educational department become the total population of the study, among the total population sample select from Mysore district.

TOOL USED FOR THE STUDY

Researcher used the standardized tool "Emotional intelligence scale" by Ankul Hyde, Sanjyot Pethe and Upinder Dhar (English). The items of the scale were constructed on the basis of the opinion of teachers, parents and pupils obtained through unstructured interview and going through literature as well.

Variable Measure	Tool Used	Developed By	Publications
Emotional Intelligence scale	Emotional Intelligence scale For Children	Ankul Hyde(Indore) SanjyotPethe(Ahmedabad) Upinder Dhar(Indore)	National psychological corporation, AGRA

ANALYSIS AND INTERPRETATION OF DATA

Data will be analyzed by appropriate statistical techniques manually and by using SPSS software.

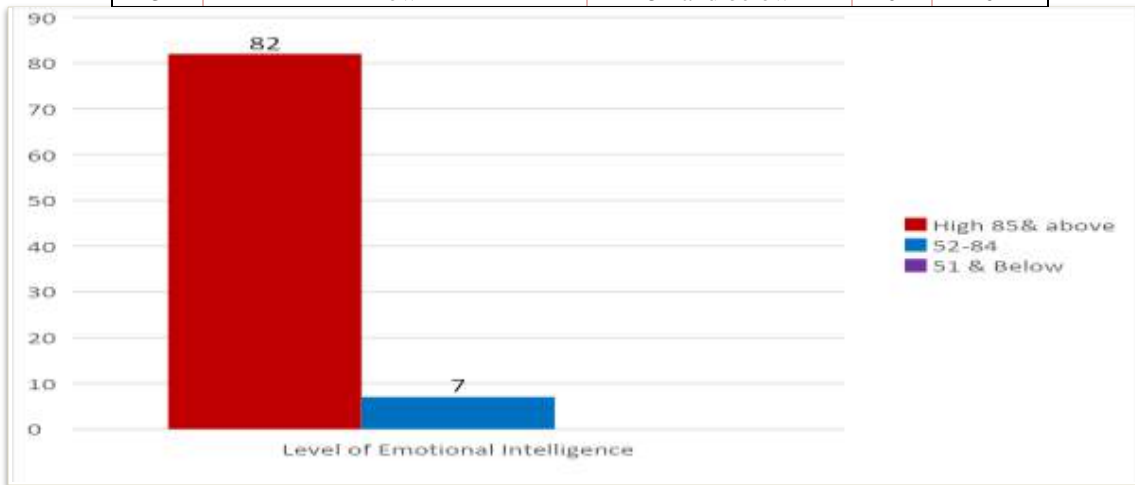
(A) **Descriptive Statistics:** Mean, standard deviation and percentile analysis.

(B) **Inferential Statistics:** "t-test".



Objectives 1: To assess the level of Emotional Intelligence among secondary school students.

SI No	Level of Emotional Intelligence	Range of Raw scores	No of Students	
			No	%
1	High	85 and above	82	92.13
2	Normal	52-84	7	7.86
3	Low	51 and below	0	0

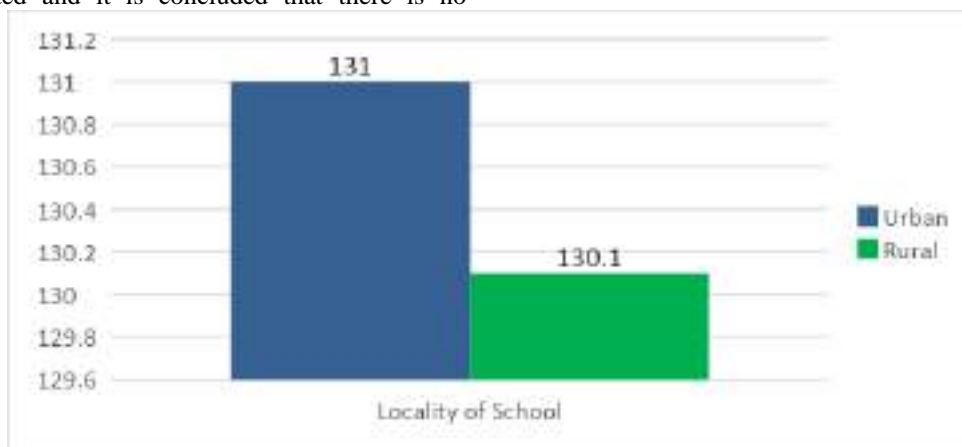


Hypothesis 1: There is no significant difference between Rural & Urban secondary school students with respect to their Emotional Intelligence.

SI No	Locality of School	N	Mean	SD	df	“t”	Remarks
1	Rural	47	130.10	17.38	87	0.2170	Accepted
2	Urban	42	131	21.69			

Above table shows that the obtained “t” value is less than “t” value of df 87 at 0.05 level of significant. That is the null hypothesis is accepted and it is concluded that there is no

significant difference between Rural & Urban secondary school students with respect to their Emotional intelligence.



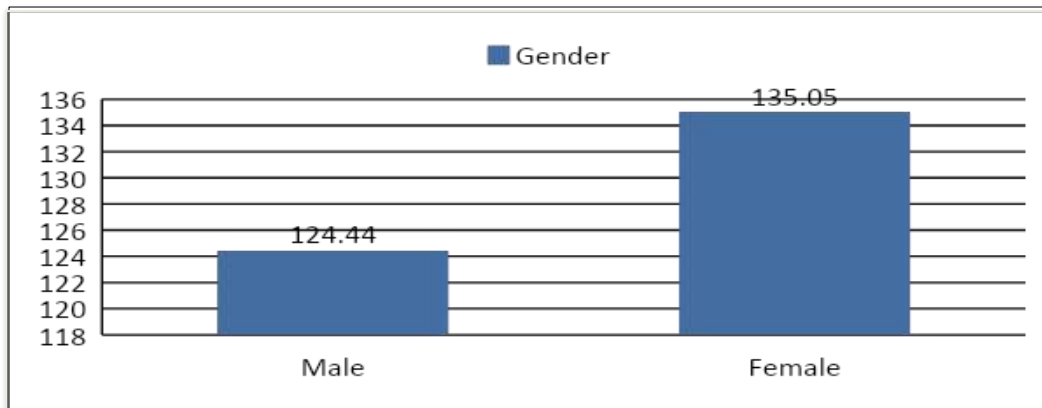


Hypothesis 2: There is no significant difference between Boys & Girls secondary school students with respect to their Emotional Intelligence.

SI No	Type of School Board	N	Mean	SD	df	“t”	Remarks
1	Boys	38	124.44	24.14	87	2.633	Rejected
2	Girls	51	135.05	13.56			

Above table shows that the obtained “t” value is more than “t” value of df 87 at 0.05 level of significant. That is the null hypothesis is rejected and it is concluded that there is a significant

difference between Boys & Girls secondary school students with respect to their Emotional intelligence.



Hypothesis 3: There is no significant difference between Urban Boys & Girls of secondary school students with respect to their Emotional Intelligence.

SI No	Urban B/G	N	Mean	SD	df	“t”	Remarks
1	Boys	17	119.35	26.76	40	3.2116	Rejected
2	Girls	25	138.92	12.20			

Above table shows that the obtained “t” value is more than “t” value of df 40 at 0.05 level of significant. That is the null hypothesis is rejected and it is concluded that there is a significant

difference between Urban Boys & Girls secondary school students with respect to their Emotional intelligence.



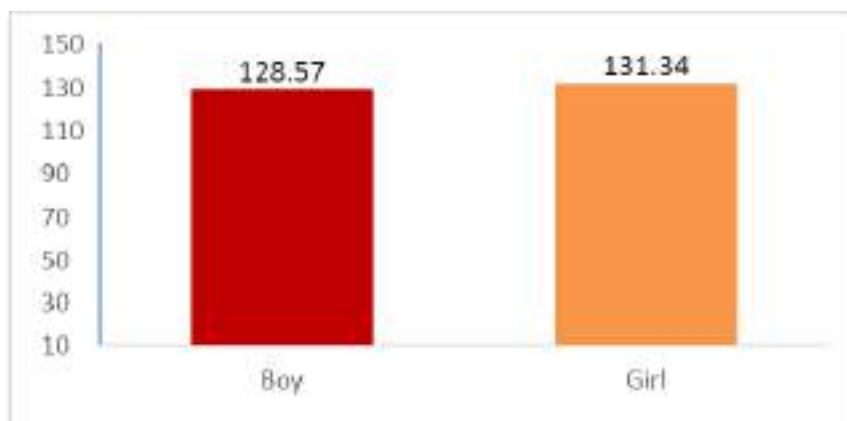


Hypothesis 4: There is no significant difference between Rural Boys & Girls of secondary school students with respect to their Emotional Intelligence.

SI No	Rural B/G	N	Mean	SD	df	“t”	Remarks
1	Boys	21	128.57	20.91	45	0.5455	Accepted
2	Girls	26	131.34	13.76			

Above table shows that the obtained “t” value is less than “t” value of df 45 at 0.05 level of significant. That is the null hypothesis is accepted and it is concluded that there is no significant difference

between Rural Boys & Girls secondary school students with respect to their Emotional intelligence.



MAJOR FINDINGS OF THE STUDY

The purpose of the study was to know the level of Emotional Intelligence among the secondary school students of rural and urban.

The study was conducted to 89 students out of which,

1. 82 students are having high level of Emotional Intelligence.
2. 7 students are having normal level of Emotional Intelligence.
3. No students are having low level of Emotional Intelligence.

There is no significant difference between Rural & urban secondary school students with respect to their Emotional Intelligence and also found that there is a significant difference between Boys & Girls secondary school students with respect to their Emotional intelligence and also with respect to their Urban Locality but there is no significant difference between Rural Boys & girls secondary school students with respect to their Emotional intelligence.

LIMITATIONS OF THE STUDY

1. The study is limited to secondary school students (8 &9).
2. This study is limited to the Mysore district.
3. This study is only conducted for rural and urban students.

EDUCATIONAL IMPLICATIONS

The analyzed data helps to know the level of Emotional Intelligence among secondary school students. Since all of the students are having extremely high emotional intelligence are able to keep a check on their emotions better and also around them by mentoring or taking counseling for better improvements. This can help students as well as teacher to develop ability to monitor one’s own and others feelings and emotions, also it increases self-awareness, self-regulation, social skill, empathy and motivation. It also achieves aims and objectives in education.

SUGGESTIONS FOR FUTURE STUDY

1. This study is can be conducted to individuals residing in any and many parts of the world.
2. This study can be conducted for students and even adults 13 and above.
3. The study can be extended to different types of school and students like CBSE, SBSE and ICSE individually and altogether.
4. The number of samples collected for the said survey can be as many as possible.

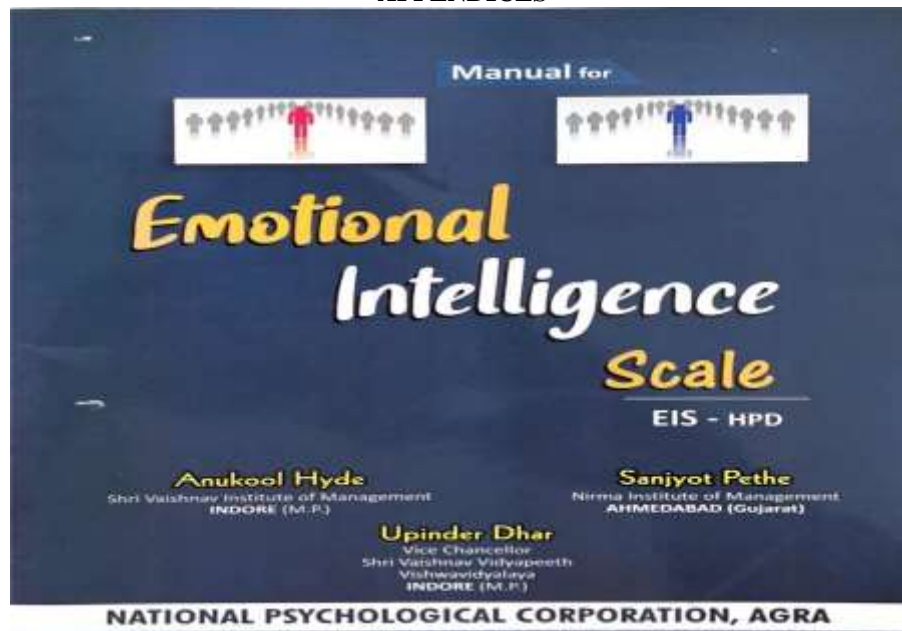
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APPENDICES





HEALING THE WOUNDS OF CARE: UNDERSTANDING, PREVENTING, AND MANAGING WORKPLACE VIOLENCE IN HEALTHCARE

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ABSTRACT

Workplace violence in healthcare is a growing concern, with severe implications for healthcare professionals, patient care, and healthcare institutions. This review article provides an in-depth examination of the various forms of workplace violence, its prevalence, contributing factors, consequences, and strategies for prevention and management. It also addresses the psychological and physical impact on healthcare professionals and offers policy recommendations to mitigate this issue.

KEYWORDS: *Workplace violence, Healthcare, Occupational safety, Occupational health, Violence prevention, Healthcare professionals*

1. INTRODUCTION

1.1 Definition of Workplace Violence in Healthcare:

Workplace violence in healthcare is a pervasive and distressing phenomenon characterized by a range of aggressive behaviors directed towards healthcare professionals within the clinical environment. These behaviors encompass physical violence, verbal abuse, sexual harassment, and various forms of intimidation or harassment, creating a hostile and unsafe atmosphere for those tasked with delivering essential medical care.

Healthcare settings, which should ideally be sanctuaries of healing and well-being, are increasingly marred by incidents of workplace violence. Healthcare professionals—nurses, physicians, paramedics, social workers, and support staff—are often on the front lines, facing not only the physical and emotional demands of patient care but also the risk of encountering violence from patients, their families, or even colleagues. Such incidents disrupt the healing process, harm patient outcomes, and leave a lasting impact on the well-being of those dedicated to caring for the sick and vulnerable.

1.2 Significance and Relevance of the Issue: The significance of workplace violence in healthcare cannot be overstated. It is not merely a nuisance or a transient issue but a grave concern with profound and far-reaching implications. It jeopardizes the safety and well-being of healthcare professionals, has a detrimental impact on the quality of patient care, and exacts a heavy toll on healthcare institutions.

The rising prevalence of workplace violence in healthcare is indicative of a deeper societal issue—an erosion of respect, empathy, and civility within healthcare settings. The deteriorating doctor-patient relationship, increased patient acuity, substance abuse, and mental health issues have exacerbated the problem. In a field where compassion and empathy should be paramount, the prevalence of violence signals a fundamental breakdown in the delivery of care.

1.3 Aim and Scope of the Review: The aim of this comprehensive review is to shed light on the multifaceted issue of workplace violence in healthcare. It delves into the various forms of violence experienced, its alarming prevalence, the complex web of contributing factors, the severe consequences for all stakeholders involved, and the strategies and policy recommendations essential for its prevention and management.

This review seeks to offer a detailed examination of the topic and to serve as a resource for healthcare professionals, policymakers, and researchers. By comprehensively addressing workplace violence in healthcare, we hope to provoke discussions, stimulate research, and drive policy changes that can lead to safer and more respectful healthcare environments. We also aim to highlight the human element behind the statistics, emphasizing the need for empathy and understanding in healthcare, not only among professionals but also among patients and their families.

In the following sections, we will explore the various forms of workplace violence, dissect the factors that contribute to its prevalence, examine its consequences, and propose strategies and policies that can help mitigate this pressing issue. Workplace violence in healthcare is a challenge that demands our collective attention and commitment to creating a safer, more compassionate healthcare landscape for all.

2. Forms and Prevalence of Workplace Violence

2.1 Physical Violence: Physical violence against healthcare professionals is a critical concern. Incidents can range from aggressive patients lashing out physically to attacks by visitors or even colleagues. These situations can lead to severe injuries, including fractures, concussions, and in extreme cases, fatalities. Research indicates that the incidence of physical violence varies across healthcare settings, with emergency departments, psychiatric units, and long-term care facilities being particularly high-risk areas. Healthcare professionals



working with patients exhibiting drug or alcohol withdrawal, dementia, or severe mental illness are more susceptible to physical violence.

2.2 Verbal Abuse: Verbal abuse is another prevalent form of workplace violence in healthcare. It includes threats, insults, yelling, and offensive language directed at healthcare professionals. While it may not result in physical harm, it can have a significant impact on emotional well-being. Healthcare professionals may experience high levels of stress, anxiety, and emotional distress due to repeated verbal abuse.

2.3 Sexual Harassment: Sexual harassment is an underreported but pervasive issue in healthcare. It involves unwelcome sexual advances, comments, or behavior of a sexual nature. This can create a hostile work environment, leading to emotional distress and potentially compromising the victim's mental health. The power dynamics in healthcare settings can make it challenging for victims to report incidents of sexual harassment.

2.4 Bullying and Harassment: Bullying and harassment can manifest as persistent negative behaviors, intimidation, belittlement, and undermining the professional competence of healthcare professionals. Such behaviors erode the morale and self-esteem of healthcare professionals. They may experience prolonged stress, anxiety, and even develop symptoms of post-traumatic stress disorder.

2.5 Incidence and Prevalence Statistics: The true extent of workplace violence in healthcare is challenging to determine due to underreporting. However, available statistics reveal a concerning situation. According to the Occupational Safety and Health Administration (OSHA), healthcare workers are four times more likely to experience workplace violence compared to workers in private industry. Research by the Emergency Nurses Association (ENA) suggests that nearly 25% of emergency department nurses have been physically assaulted, and over 80% have experienced verbal abuse.

3. CONTRIBUTING FACTORS

3.1 Patient-Related Factors: Various patient-related factors contribute to workplace violence in healthcare. Patients with mental health conditions, substance abuse issues, and a history of violence are more likely to engage in violent behavior. These factors can exacerbate tension and the potential for violence in healthcare settings.

3.2 Environmental Factors: Environmental factors, including inadequate security measures, overcrowding, understaffing, and poorly lit facilities, create conditions conducive to violence. Inadequate security and surveillance can make it easier for individuals with harmful intentions to gain access to healthcare facilities.

3.3 Organizational Factors: Organizational factors also play a role in workplace violence. A toxic workplace culture, a lack of comprehensive training on managing violent situations, and

insufficient support for employees who experience violence can all contribute to the problem.

3.4 Socioeconomic and Cultural Factors: Broader socioeconomic and cultural factors are essential to consider. Disparities in healthcare access, the normalization of violence in society, and the stigmatization of mental health issues all influence the risk of workplace violence in healthcare.

4. CONSEQUENCES OF WORKPLACE VIOLENCE

4.1 Physical and Psychological Health Impacts on Healthcare Professionals: The physical and psychological impact of workplace violence on healthcare professionals is profound. Physically, they can suffer from injuries ranging from minor bruises to severe trauma, such as fractures or concussions. Psychologically, they may experience anxiety, depression, post-traumatic stress disorder, and long-term emotional distress. These effects can lead to absenteeism, decreased job satisfaction, and burnout among healthcare professionals.

4.2 Impact on Patient Care and Safety: Workplace violence has a direct impact on patient care and safety. Healthcare professionals under duress may struggle to provide the highest level of care. A culture of fear within the workplace can deter reporting of safety concerns or errors, which can jeopardize patient safety.

4.3 Economic Consequences for Healthcare Institutions: Healthcare institutions face substantial financial burdens due to workplace violence. These costs encompass increased healthcare expenses for treating injured staff, recruitment and training of new staff, legal expenses related to litigation, and the potential loss of reputation.

5. PREVENTION AND MANAGEMENT

5.1 Pre-Employment Screening and Training: Efficient pre-employment screening should assess a candidate's ability to handle stress, their interpersonal skills, and their potential to engage in violent behavior. Comprehensive training programs should be provided to healthcare professionals, covering conflict resolution, de-escalation techniques, and awareness of potential risks.

5.2 Security Measures: To enhance staff safety, healthcare institutions should invest in security measures such as access control, surveillance systems, panic buttons, and security personnel presence in high-risk areas.

5.3 Reporting and Support Systems: Establishing clear reporting mechanisms and providing support for victims is essential. Encouraging an environment where healthcare professionals feel safe reporting incidents without fear of retaliation is crucial for addressing workplace violence.

5.4 Legal and Policy Framework: National and institutional policies should be developed and implemented to prevent and manage workplace violence. These policies should include



legal consequences for perpetrators and mechanisms for supporting victims.

5.5 De-Escalation Techniques: Training healthcare professionals in de-escalation techniques is essential for defusing potentially violent situations. Healthcare staff should be equipped with the skills to manage confrontations and minimize risks.

5.6 Collaborative Interventions: Interdisciplinary collaboration among healthcare institutions, law enforcement agencies, and community organizations can be effective in addressing workplace violence. Collaboration can help in the development of comprehensive prevention strategies and support systems.

6. CASE STUDIES

This section provides real-life examples of workplace violence incidents in healthcare settings, illustrating the gravity of the issue and highlighting the need for immediate action. These examples can serve as cautionary tales and reinforce the importance of prevention.

Case Study: The Emergency Department Tragedy

In a bustling urban hospital, the emergency department (ED) was known for its fast-paced environment and dedicated staff. On a fateful night, an incident occurred that would haunt the staff for years to come. A severely injured patient, John*, was brought in by ambulance after a car accident. His injuries were extensive, and he was in severe pain.

The initial assessment and treatment proceeded as usual. However, as the medical team worked to stabilize John, his agitation and frustration escalated. His pain, combined with anxiety about his condition, fueled his anger. In a moment of desperation, he lashed out at the attending nurse, Lisa*, with a swift punch to her face, leaving her with a fractured jaw. Chaos ensued in the ED as other staff rushed to restrain the patient and ensure the safety of everyone present.

This incident had a profound impact on Lisa, who had dedicated her career to helping patients. She suffered not only physical injuries but also severe emotional trauma. She began to question her choice of profession, experiencing anxiety and flashbacks that hindered her ability to return to work. The incident had a ripple effect on the entire department, as staff members grappled with feelings of vulnerability and fear.

This case study serves as a stark reminder of the violence that healthcare professionals may face, even while diligently fulfilling their duty to care for patients. It underscores the need for proactive measures to prevent and manage workplace violence, including de-escalation training, improved security protocols, and support systems for the victims. It also highlights the urgency of addressing the emotional and psychological toll that such incidents take on healthcare professionals, who are often expected to endure extraordinary levels of stress and trauma as part of their job.

*Names used are pseudonyms in order to maintain privacy

7. POLICY RECOMMENDATIONS

7.1 International and National Guidelines: International organizations, as well as national governments, should develop and implement guidelines to prevent workplace violence in healthcare. These guidelines should encompass comprehensive strategies for healthcare institutions to follow.

7.2 Proposed Policy Changes and Improvements: Recommended policy changes include increased funding for security measures, mandatory training, and consequences for perpetrators. Developing a national database for reporting and tracking incidents could provide valuable insights into the scope of the problem.

7.3 Promoting a Culture of Safety and Respect: Promoting a culture of safety and respect within healthcare institutions is essential. Initiatives should focus on addressing bullying and harassment, promoting open communication, and encouraging a safe reporting environment for all healthcare professionals.

8. CONCLUSION

8.1 Summary of Key Findings: This review has highlighted the pervasive nature of workplace violence in healthcare, the severity of its impact, and the necessity of comprehensive prevention and management strategies.

8.2 The Need for a Multidisciplinary Approach: Addressing workplace violence in healthcare requires a multidisciplinary approach, involving healthcare professionals, policymakers, law enforcement, and the community. Collaboration among these stakeholders is critical to effecting change.

8.3 Future Directions and Potential Research Areas: Future research should explore the long-term effects of workplace violence, the effectiveness of prevention strategies, and the development of international standards. Additionally, there is a need to continuously monitor the changing landscape of healthcare to adapt to emerging risks.

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ATTITUDES OF SECONDARY STUDENTS' GUARDIANS TOWARD PRIVATE TUITION

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ABSTRACT

Balanced development of various human qualities is possible only through proper education. Like various basic needs, education is now considered a basic need. Every parent wants to give high-quality education to their children, but due to professional reasons or lack of time parents fail to give proper guidance to their children. So nowadays parents are becoming dependent on private tuition to give proper education to their children. Secondary-level courses are long and difficult and therefore require consistent supervision. Parents are willing to give private tuition to their children to provide them with consistent guidance and extra support in their educational careers. The study aims to find out the differences in attitudes towards private tuition according to the educational qualifications of parents and to find out the nature of the attitude of guardians considering differing test items. A descriptive survey method was used in this study. The purposive sampling method was used for data collection. For data collection, 56 parents were selected from two districts. Only those parents selected as the sample, whose children study in secondary school. A self-made questionnaire was developed for data collection, and standardized by the expert. The scale was developed using Likert's method of summarization to assign a five-point rating to each item. The questionnaire used for data collection consisted of 47 items including positive and negative items. In this study, the percentage of opinions of the respondents on each item is shown by the graphical presentation. Finally, after analyzing the data it was found that parents have a positive attitude towards private tuition. Guardians with lower educational qualifications expressed more positive views on private tuition. So here it can be said that parents are largely dependent on private tuition for their child's education.

KEYWORDS: Attitude, Private Tuition, Secondary School Students Guardians.

INTRODUCTION

Education can make a person which makes him successful in society. According to this opinion, education is the improvement of people in the society. A person's education starts from the moment of his birth and continues throughout his life. The term "education" is very broad and constantly changing. Our whole life is bound up in its vast and varied boundaries. It is an important indicator of human development. It is possible to improve the quality of most people through good education. Like nutrition, clothing, and shelter, education is considered one of the most important human needs today. Over the years, rising living standards and economic development of many countries and individuals have increased the demand for quality education.

Nowadays, everyone in society is seeing how important education is in their lives. Since education shapes our lives, the illiterate is compared to the blind. So, every parent wants to give a good education to their children. They want to make a positive impact on their children's education. The truth is that parents invest a lot of money in their children's education but they fail to take responsibility for their children's education. But parents usually cannot fulfill this responsibility. There are several reasons behind this, including lack of education, lack of time, lack of specific skills, etc. Tutoring, often referred to as

"shadow teaching", has become an accepted way to manage this problem and help students access their education.

Effective private tuition may help overcome these gaps or deficiencies in students' learning and build their confidence enabling them to compete with others and experience a happy and pleasant life. (Mark Bray - 2007, Second Edition).

Students, especially in middle school, need appropriate help to heal from recent trauma and attend prestigious schools. Moreover, the secondary school curriculum is long and complex and requires good guidance and constant attention. Some students are taught by regular teachers in the same school, while others are taught by non-professional teachers. Parents prefer private tuition to provide moral support and assistance to their children in their educational life. Private schools have now gained the trust of parents and students.

Although private tutoring is available at all levels of education, they are most effective for middle and high school public exams. Due to increased competition for entry into technical education in upper secondary schools and in later years, through recruitment to appropriate courses in secondary schools. Today, parents invest and hire private tutors to help their children succeed. Parents are ready to do everything to leave a bright future for their children. This article aims to explore the views



of parents of secondary school students about private tutoring. Even in developed or developing countries, private education must be viewed specifically in today's world. It has expanded dramatically over the past twenty years, affecting people of all economic strata in both developed and wealthy countries.

REVIEW OF RELATED LITERATURE

Unal et al. (2010) Conducted a study on the effect of private tutoring on performance in mathematics in Turkey: A comparison across occupational types. The study aims to assess the impact of private tutoring in Turkey on 15-year-old students with parents in four occupational categories. The study found that private math tutoring moderately positively impacted all four occupational strata, with one hour of tutoring equating to 12-15 points on a math achievement exam.

Mwebi & Maithya (2016) conducted a study on the Perceptions of Parents on the Practice of Private Tuition in Public Learning Institutions in Kenya. The objectives of this study were to identify the factors that parents believed supported private tuition. This study used a descriptive survey design and simple random sampling to find that parents have a favorable opinion of private tuition, citing its positive impact on children's grades, school performance, and academic knowledge.

Goutam & Aggarwal (2018) Conducted a study on the Development of Parental Attitudes towards Home schooling Scale. The objectives of the study were to measure the attitude of parents towards homeschooling. A descriptive survey method was used for this study. The final version of the scale only contained highly diagnostic items. The need for examining the individual from the perspective of these fundamental areas is highlighted by the moderate link between diverse areas.

Bidyalakshmi (2016) conducted a study on the Attitude of Parents Towards Private Tuition in Manipur, India. To find out the contribution of the parents towards their children's education. To find out the reason of the parents for sending their children to private tuition. A study using a descriptive survey found that all parents believe private tuition is necessary for their children's future success, as it has become a significant part of the state's educational system.

Madhu and Bhattacharyya (2018) Conducted a study on Parental attitudes toward Private Tuition at the Senior Secondary level. The objectives of the study were to measure the attitudes of parents towards private tuition. The study uses a descriptive survey method to reveal significant differences in parents' attitudes towards private instruction, with urban parents being more favorable towards senior secondary private tuition.

Chingthem and Sharma (2015) conducted a study on the Attitude of Parents toward Private Tuition: A Case Study. The objectives of the study were to find out the opinion of the parents on the causes of increasing private tuition in Manipur.

The study, using simple random sampling, found that frequent bandhs, strikes, and blockades in Manipur have increased private tuition for children's academic performance due to parental stress.

Ponselvakumar (2016) conducted a study on the perception of parents toward private tuition at the higher secondary level. The objectives of the study were to find out the level of perception towards private tuition at higher secondary levels among parents. This study uses a descriptive survey method to reveal that parents prioritize their children's academic success and are interested in private instruction strategies to enhance their higher-secondary children's performance.

Pratama & Firmansyah (2021) Conducted a study on the disengaged, positive, or negative: parents' attitudes toward learning from home amid the COVID-19 pandemic. The study investigates parents' attitudes towards low-income housing (LFH) policy during COVID-19, finding fatherhood negatively impacts attitudes. UK government initiative, PC ownership, increase parental engagement.

OBJECTIVES OF THE STUDY

- To find out the differences in attitude towards private tuition according to the educational qualification of parents.
- To find out the nature of the attitude of guardians considering differing test items.

METHODOLOGY OF THE STUDY

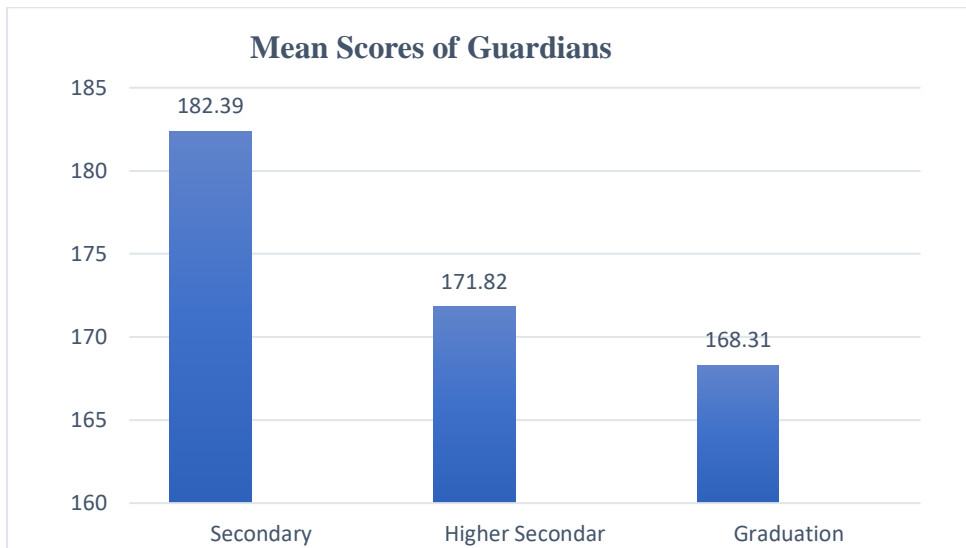
Method: The present study is based on the Descriptive survey method.

Population and Sample: The target population of the present study consists of all the parents of secondary students in Jalpaiguri and Coochbehar district of West Bengal. For conducting the present investigation, the researchers have selected 56 parents as a sample. 56 parents were taken through the purposive sampling technique.

Tools and Techniques: For data collection, the researchers used a self-made questionnaire. The questionnaire consisted of 47 items. The 47 items contained both positive and negative questions. Respondents were asked to rate each statement on a five-point Likert scale. All statements were expressed in five alternative categories, namely, strongly agree, agree, undecided, disagree, and strongly disagree. Questions are prepared according to the objectives of the study and content areas. The self-made questionnaire on private tuition was validated by the expert.

Analysis of Objective No - 1.

Educational Qualification	Number of Guardians	Mean Score	Percentage (%)
Secondary	23	182.39	41.07
Higher Secondary	17	171.82	30.36
Graduation	16	168.31	28.57
Total	56		100



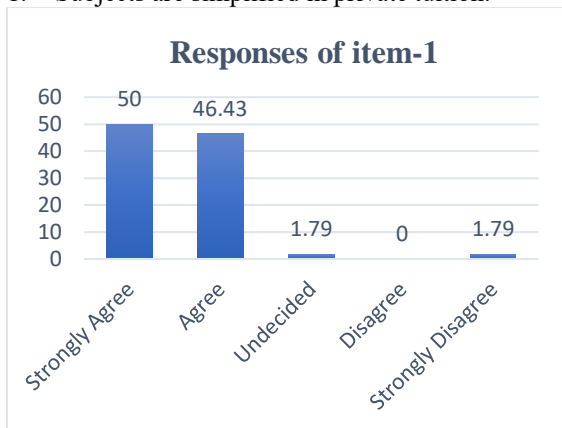
After analysis of the mean score, the researcher can conclude that, Guardians of secondary students' attitudes towards private tuition change in terms of educational qualifications. The attitude of secondary-level guardians toward private tuition is higher than higher secondary-level guardians. Similarly, the

attitude of guardians at higher secondary level is higher than at the graduation level. Finally, graduation-level parents have lower attitudes toward private tuition than secondary and higher-secondary parents. So here it can be said, **Secondary > Higher Secondary > Graduation**.

Analysis of objective no- 2.

Data Analysis and Interpretation: After collecting the data, the question paper has been rated keeping in mind the negative and positive statements. The question paper expresses the views of the guardians of secondary-level students. which is shown below....

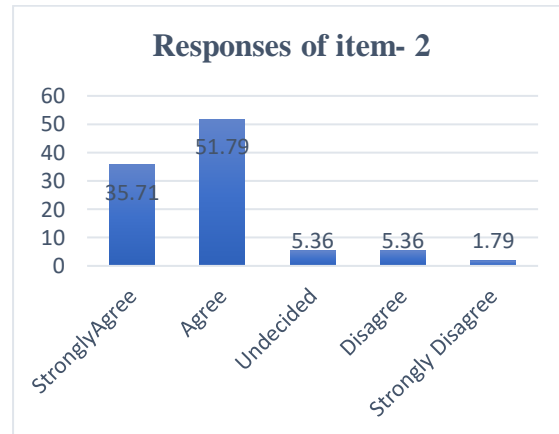
1. Subjects are simplified in private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 50% strongly agreed, 46.43% agreed, 0 % disagreed, 1.79 % completely disagreed, and 1.79 % of guardians expressed no opinion.

INTERPRETATION: According to the data, 96.43% of the guardians agreed that private tuition simplifies the subject explanation for students, while only 1.79% disagreed. This suggests that most guardians believe private tutors are necessary for effective learning.

2. Private tuition is needed to score well in exams.

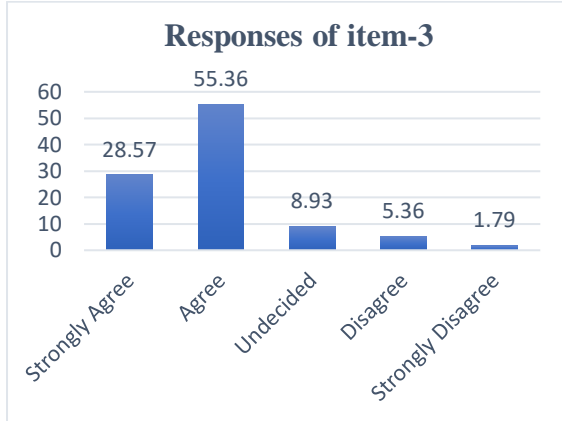


Given the above questions, it is seen from taking the opinion of the parents that, 35.71 % strongly agreed, 51.79 % agreed, 5.36 % disagreed, 1.79 % completely disagreed, and 5.36 % of guardians expressed no opinion.

INTERPRETATION: After analyzing the data, it is evident that 87.5% of guardians agree while 7.15% disagree. Most guardians believe private tuition is necessary for achieving good exam results.



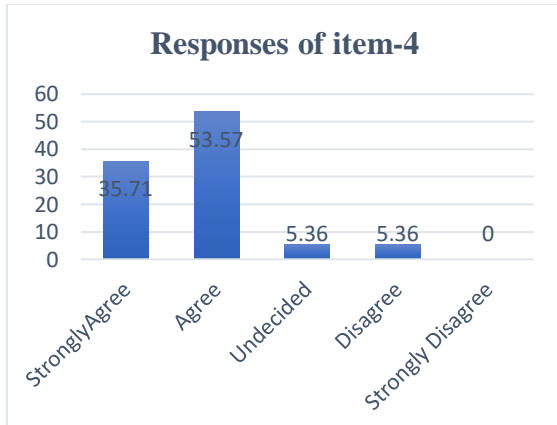
3. Private tuition increases focus on studies.



Given the above questions, it is seen from taking the opinion of the parents that, 28.57 % strongly agreed, 55.36 % agreed, 5.36 % disagreed, 1.79 % completely disagreed, and 8.93 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data, it is seen that 83.93% of guardians have agreed and 7.15% of Guardians have disagreed. Most of the Guardians argue that private tuition increases academic focus.

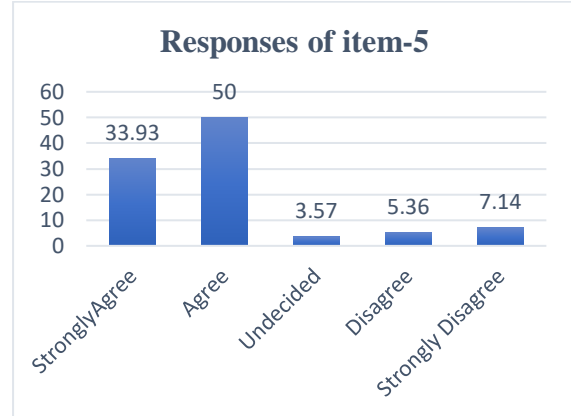
4. Private tuition covers much more than textbooks.



Given the above questions, it is seen from taking the opinion of the parents that, 35.71% strongly agreed, 53.57 % agreed, 5.36 % disagreed, 0 % completely disagreed, and 5.36 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.28% of guardians have agreed and 5.36% of Guardians have disagreed. Most Guardians agreed and very few Guardians disagreed on the basis that Private Tuition has more content beyond content.

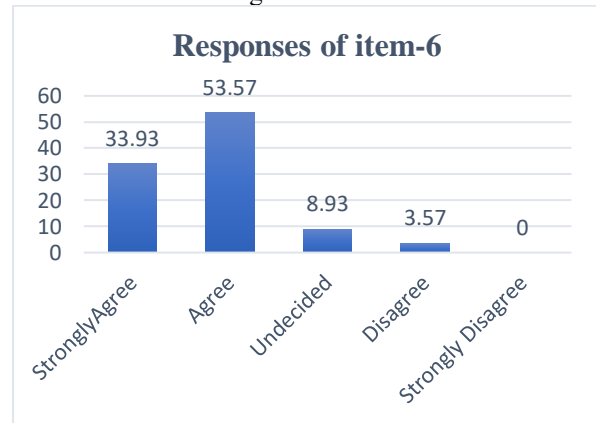
5. Subjects are better understood in private tuition than in educational institutions.



Given the above questions, it is seen from taking the opinion of the parents that, 33.93 % strongly agreed, 50 % agreed, 5.36 % disagreed, 7.14 % completely disagreed, and 3.57 % of guardians expressed no opinion.

INTERPRETATION: After analyzing the data, it is clear that 83.93% of guardians agree, while only 12.5% disagree. The majority of guardians agree that private tuition is more effective than educational institutions.

6. In private tuition there is no fear of discussing with the teacher so learning becomes more accessible.

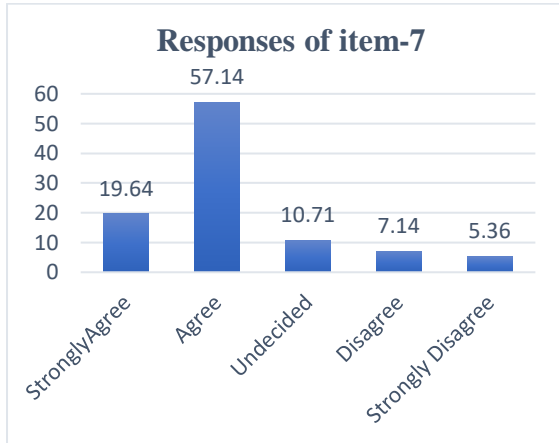


Given the above questions, it is seen from taking the opinion of the parents that, 33.93%strongly agreed, 53.57 % agreed, 3.57 % disagreed, 0 % completely disagreed, and 8.93 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 87.5% of guardians have agreed and 3.57% of Guardians have disagreed. The majority of the guardians agreed that education is easier when students can easily discuss with the tuition master without any fear of private tuition and very few guardians disagreed.



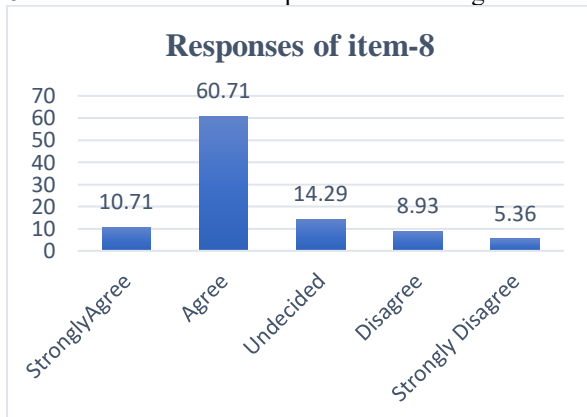
7. Private tuition provides holistic knowledge of the curriculum.



Given the above questions, it is seen from taking the opinion of the parents that, 19.64 % strongly agreed, 57.14 % agreed, 7.14 % disagreed, 5.36 % completely disagreed, and 10.71 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 76.78% of guardians have agreed and 12.5% of Guardians have disagreed. The majority of Guardians agreed and very few Guardians disagreed that Private Tuition provides holistic knowledge of curriculum to students.

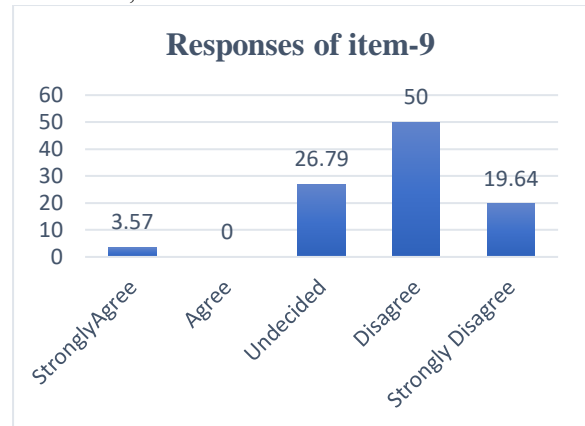
8. Private tuition develops critical thinking skills.



Given the above questions, it is seen from taking the opinion of the parents that, 10.71 % strongly agreed, 60.71 % agreed, 8.93 % disagreed, 5.36 % completely disagreed, and 14.29 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 71.42% of guardians have agreed and 14.29% of Guardians have disagreed. The majority of Guardians agree and very few Guardians disagree that private tutoring develops students' reasoning ability.

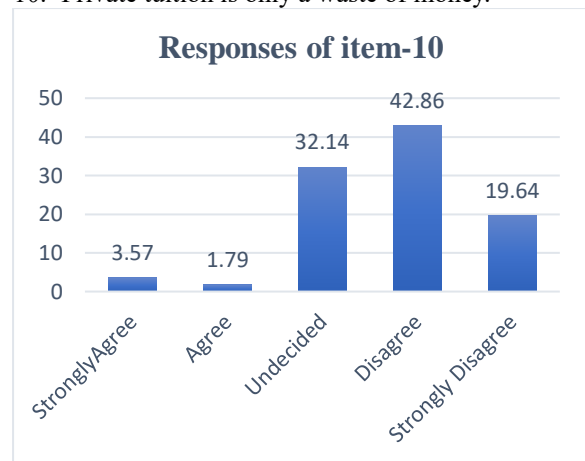
9. To me, tuition is a waste of time.



Given the above questions, it is seen from taking the opinion of the parents that, 3.57 % strongly agreed, 0 % agreed, 50 % disagreed, 19.64 % completely disagreed, and 26.79 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 3.57% of guardians have agreed and 69.64% of Guardians have disagreed. The majority of the Guardians disagreed and less number of Guardians agreed that taking private tuition is just a waste of time.

10. Private tuition is only a waste of money.

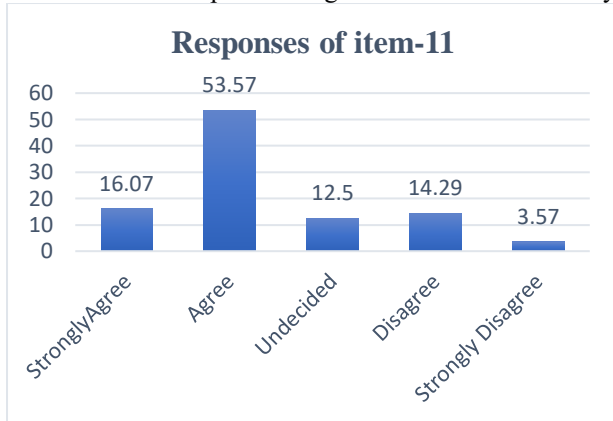


Given the above questions, it is seen from taking the opinion of the parents that, 3.57 % strongly agreed, 1.79 % agreed, 42.86 % disagreed, 19.64 % completely disagreed, and 32.14 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 5.36% of guardians have agreed and 62.5% of Guardians have disagreed. Most parents disagree that private tuition is just a waste of money, while a minority of parents agree.



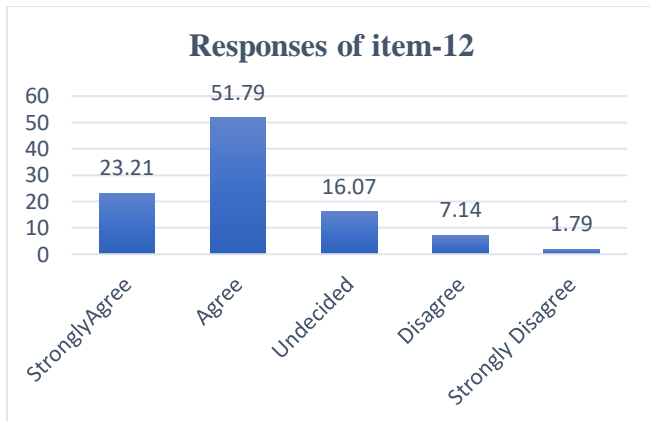
11. Private tuition provides a good environment for studying.



Given the above questions, it is seen from taking the opinion of the parents that, 16.07 % strongly agreed, 53.57% agreed, 14.29% disagreed, 3.57 % completely disagreed, and 12.5% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 69.64% of guardians have agreed and 17.86% of Guardians have disagreed. The majority of Guardians agreed and very few Guardians disagreed that private tuition provides a good environment for studying.

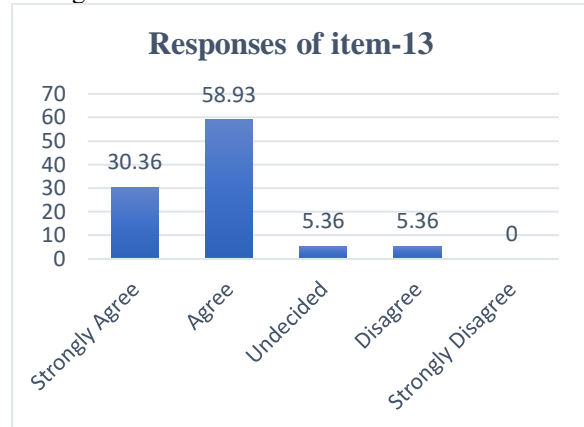
12. Private tuition eliminates the fear of exams.



Given the above questions, it is seen from taking the opinion of the parents that, 23.21% strongly agreed, 51.79% agreed, 7.14% disagreed, 1.79% completely disagreed, and 16.07% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 75% of guardians have agreed and 8.93% of Guardians have disagreed. Students don't have to fear exams when they take private tuition, in this context most of the Guardians agreed and very few Guardians disagreed.

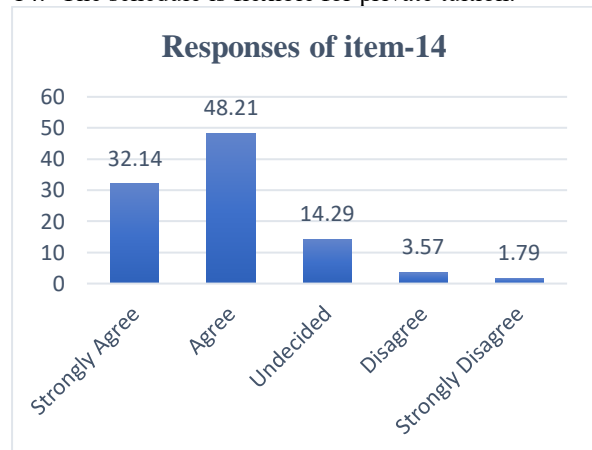
13. Private tuition is necessary to survive in the competitive age.



Given the above questions, it is seen from taking the opinion of the parents that, 30.36% strongly agreed, 58.93% agreed, 5.36% disagreed, 0 % completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.29% of guardians have agreed and 5.36% of Guardians have disagreed. Many Guardians agreed and very few Guardians disagreed that Private Tuition plays an important role in competition nowadays.

14. The schedule is flexible for private tuition.

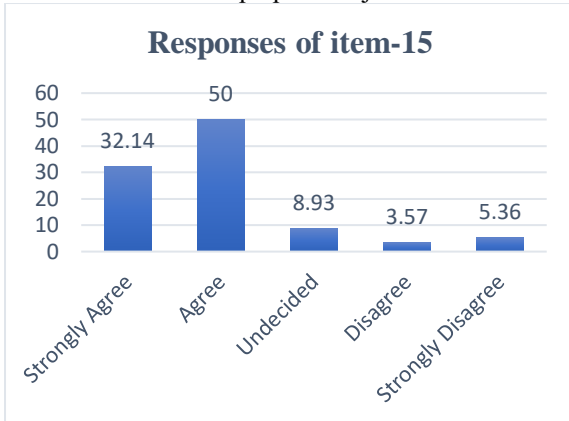


Given the above questions, it is seen from taking the opinion of the parents that, 32.14% strongly agreed, 48.21% agreed, 3.57% disagreed, 1.79% completely disagreed, and 14.29% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 80.35% of guardians have agreed and 5.36% of Guardians have disagreed. Most of the Guardians agreed and very few Guardians disagreed that there is no compulsory timetable for private tuition.



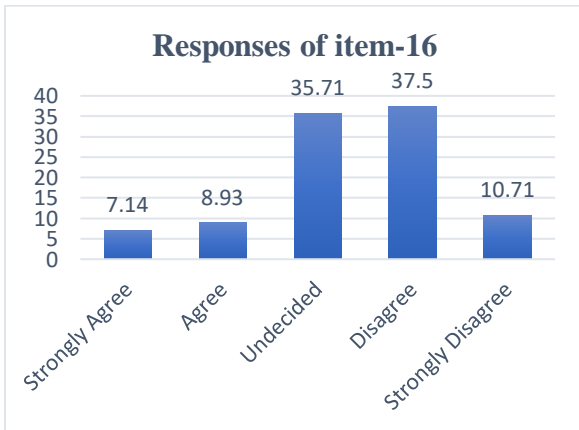
15. Private tuition to prepare for job exams.



Given the above questions, it is seen from taking the opinion of the parents that, 32.14% strongly agreed, 50 % agreed, 3.57% disagreed, 5.36% completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 82.14% of guardians have agreed and 8.93% of Guardians have disagreed. Most respondents agreed that private tutoring prepares students for job exams, while a minority of respondents disagreed.

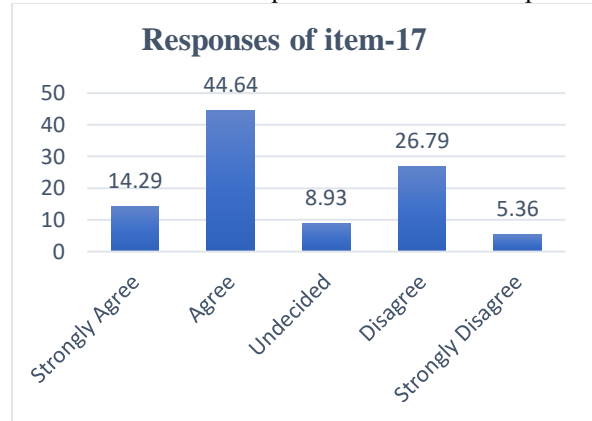
16. Private tuition makes students have a bad attitude about school.



Given the above questions, it is seen from taking the opinion of the parents that, 7.14% strongly agreed, 8.93% agreed, 37.5% disagreed, 10.71% completely disagreed, and 35.71% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 16.07% of guardians have agreed and 48.21% of Guardians have disagreed. The majority of Guardians disagreed and very few Guardians agreed that private tuition creates negative attitudes towards school in students.

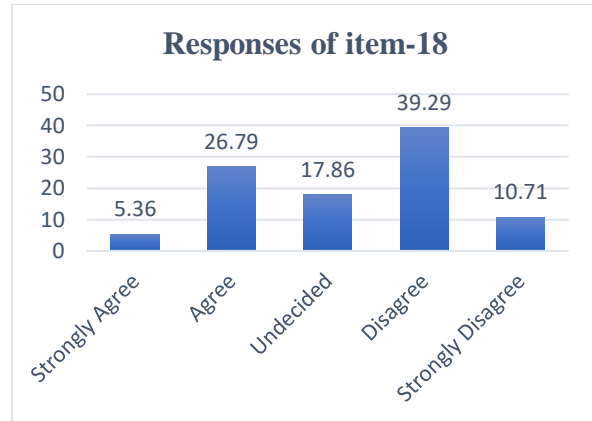
17. Private tuition is required for children with poor results.



Given the above questions, it is seen from taking the opinion of the parents that, 14.29% strongly agreed, 44.64% agreed, 26.79% disagreed, 5.36% completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 58.93% of guardians have agreed and 32.15% of Guardians have disagreed. The majority of the Guardians agreed and less number of Guardians disagreed that private tuition is needed for poor performing children.

18. Tuition increases the financial burden of the family.

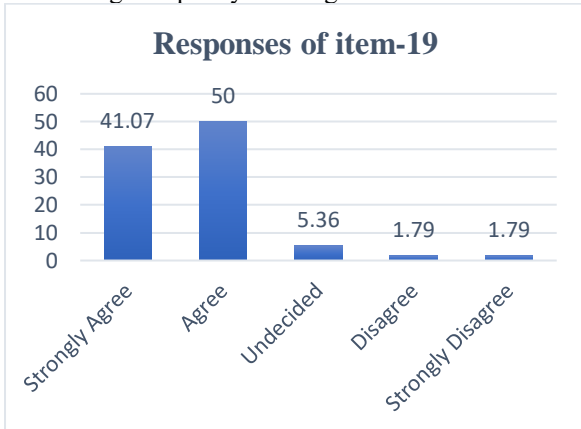


Given the above questions, it is seen from taking the opinion of the parents that, 5.36% strongly agreed, 26.79% agreed, 39.29% disagreed, 10.71% completely disagreed, and 17.86% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 32.15% of guardians have agreed and 50% of Guardians have disagreed. Many Guardians disagreed and very few Guardians agreed that private tuition increases the financial burden on the family.



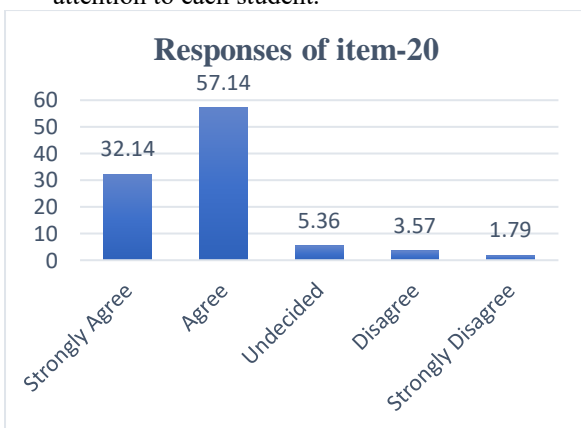
19. Noisy classrooms in educational institutions need tuition for a good quality learning environment.



Given the above questions, it is seen from taking the opinion of the parents that, 41.07% strongly agreed, 50% agreed, 1.79% disagreed, 1.79% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 91.07% of guardians have agreed and 3.58% of Guardians have disagreed. Most of the Guardians agreed and very few Guardians disagreed on the fact that private tuition is necessary for a good quality learning environment because of noisy environment in educational institutions.

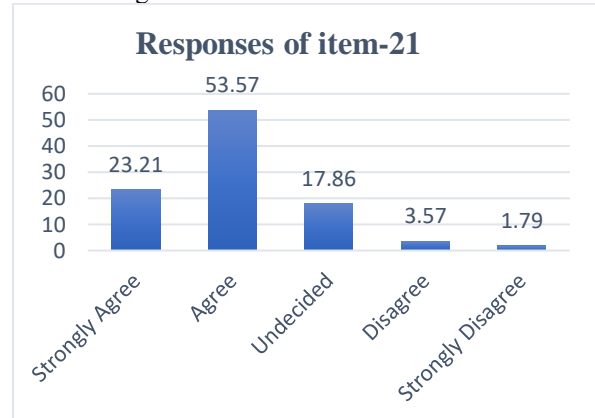
20. In private tuition, the Tuition Master can give individual attention to each student.



Given the above questions, it is seen from taking the opinion of the parents that, 32.14% strongly agreed, 57.14% agreed, 3.57% disagreed, 1.79% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.28% of guardians have agreed and 5.36% of Guardians have disagreed. The majority of guardians agreed and very few guardians disagreed that in private tuition, Tuition Master can give individual attention to each student.

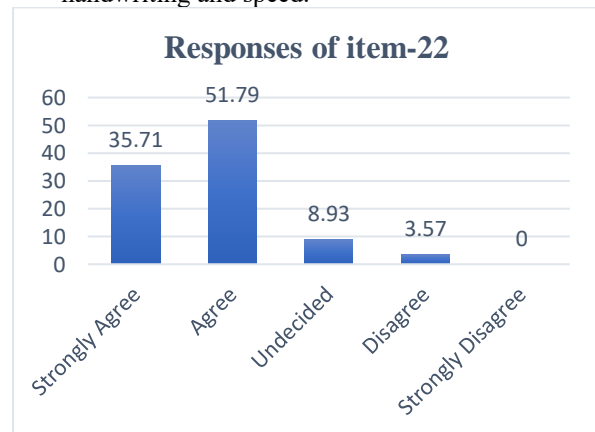
21. Private tuition provides a healthy environment for better learning.



Given the above questions, it is seen from taking the opinion of the parents that, 23.21% strongly agreed, 53.57% agreed, 3.57% disagreed, 1.79% completely disagreed, and 17.86% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 76.78% of guardians have agreed and 5.36% of Guardians have disagreed. In terms of private tuition providing a healthy environment for better learning, most of the Guardians agreed and a small number of Guardians disagreed.

22. Writing notes with private tutoring improves students' handwriting and speed.

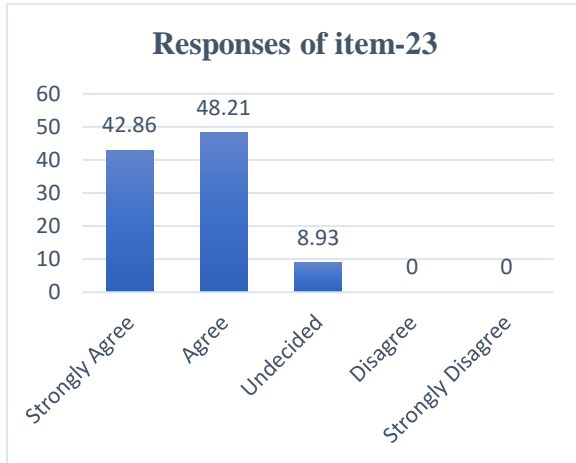


Given the above questions, it is seen from taking the opinion of the parents that, 35.71% strongly agreed, 51.79% agreed, 3.57% disagreed, 0 % completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 87.5% of guardians have agreed and 3.57% of Guardians have disagreed. Handwriting is better for students writing notes in private tutoring and writing speed increases, Most of the Guardians agreed and a small number of Guardians disagreed.



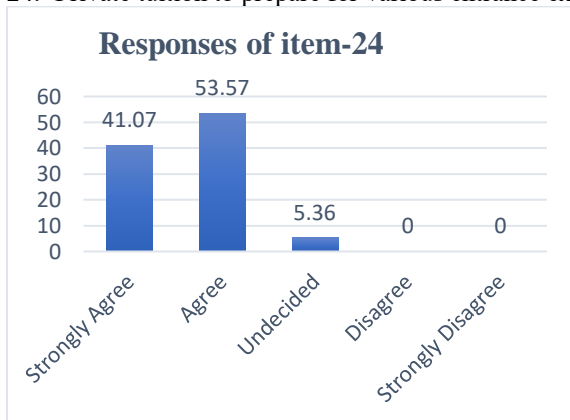
23. Private tuition is needed to get good subjects in higher education.



Given the above questions, it is seen from taking the opinion of the parents that, 42.86% strongly agreed, 48.21% agreed, 0% disagreed, 0% completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 91.07% of guardians have agreed and 0% of Guardians have disagreed. Majority of the Guardians agreed, no Guardians disagreed and very few Guardians had no opinion on the fact that private tuition is necessary to get good subjects for higher education.

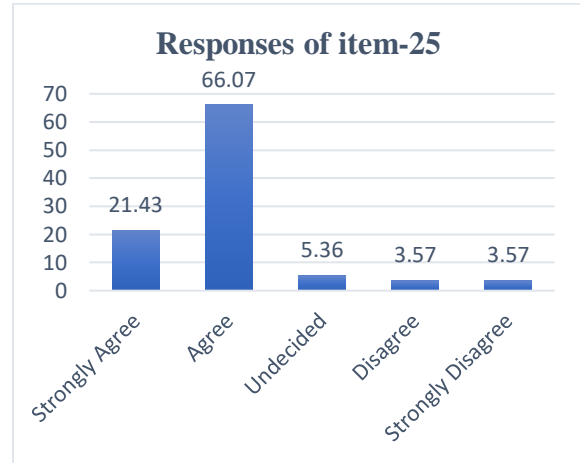
24. Private tuition to prepare for various entrance exams.



Given the above questions, it is seen from taking the opinion of the parents that, 41.07% strongly agreed, 53.57% agreed, 0% disagreed, 0% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 94.64% of guardians have agreed and 0% of Guardians have disagreed. In terms of private tuition preparing students for various entrance exams, most of the Guardians agreed, none disagreed and very few Guardians gave no opinion.

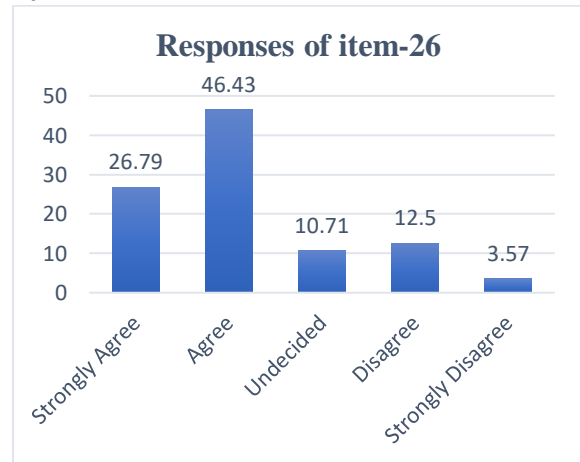
25. Students can easily interact with teachers in private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 21.43% strongly agreed, 66.07% agreed, 3.57% disagreed, 3.57% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 87.5% of guardians have agreed and 7.14% of Guardians have disagreed. The majority of the guardians agreed and very few guardians disagreed that students can easily communicate with the tuition master in private tuition.

26. Tuition Master motivates students to learn.

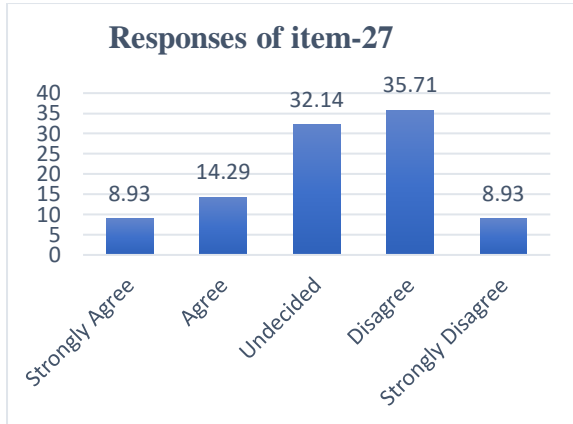


Given the above questions, it is seen from taking the opinion of the parents that, 26.79% strongly agreed, 46.43% agreed, 12.5% disagreed, 3.57% completely disagreed, and 10.71% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 73.22% of guardians have agreed and 16.07% of Guardians have disagreed. The majority of the guardians agreed and very few guardians disagreed in terms of private master motivating students in learning.



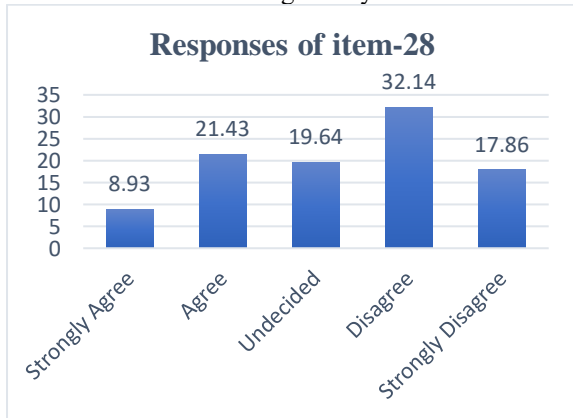
27. Students do not concentrate in class due to tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 8.93% strongly agreed, 14.29% agreed, 35.71% disagreed, 8.93% completely disagreed, and 32.14% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 23.22% of guardians have agreed and 44.64% of Guardians have disagreed. In terms of students not paying attention in class due to tutoring, a small number of guardians agreed and a large number of guardians disagreed, with a significant number of guardians giving no opinion.

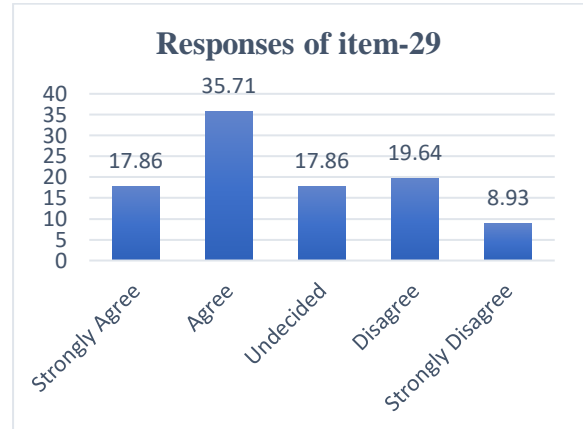
28. Tuition means earning money for teachers.



Given the above questions, it is seen from taking the opinion of the parents that, 8.93% strongly agreed, 21.43% agreed, 32.14% disagreed, 17.86% completely disagreed, and 19.64% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 30.36% of guardians have agreed and 50% of Guardians have disagreed. In terms of teaching, tuition means teachers' income, In this regard, the majority of Guardians disagreed very few Guardians agreed and a certain number of Guardians did not give any opinion.

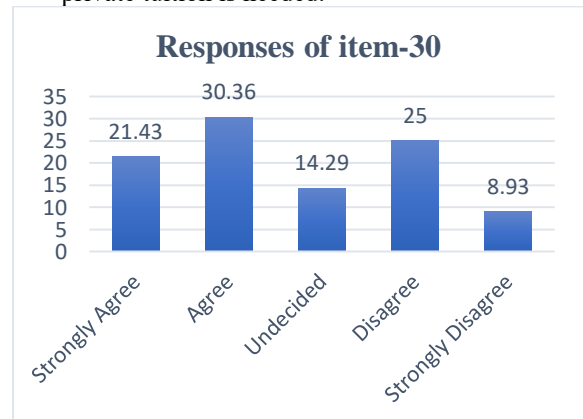
29. Schools do not teach proper techniques, so private tuition is needed.



Given the above questions, it is seen from taking the opinion of the parents that, 17.86% strongly agreed, 35.71% agreed, 19.64% disagreed, 8.93% completely disagreed, and 17.86% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 53.57% of guardians have agreed and 28.57% of Guardians have disagreed. The majority of Guardians agreed and very few Guardians disagreed that schools do not teach proper technique and hence need private tuition.

30. School teachers do not take good care of students so private tuition is needed.

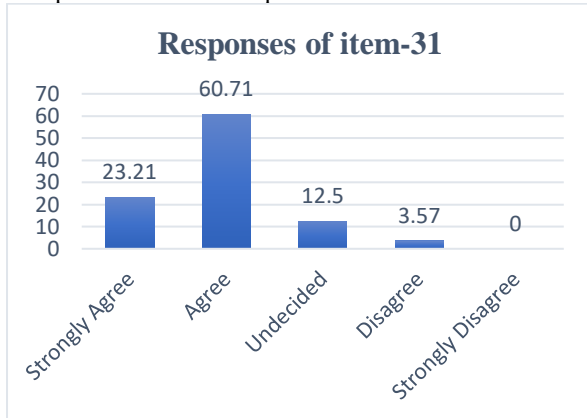


Given the above questions, it is seen from taking the opinion of the parents that, 21.43% strongly agreed, 30.36% agreed, 25% disagreed, 8.93% completely disagreed, and 14.29% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 51.79% of guardians have agreed and 33.93% of Guardians have disagreed. A significant number of Guardians disagreed with the view that school teachers do not take good care of students and thus need private tuition, while slightly more Guardians agreed and few Guardians expressed no opinion.



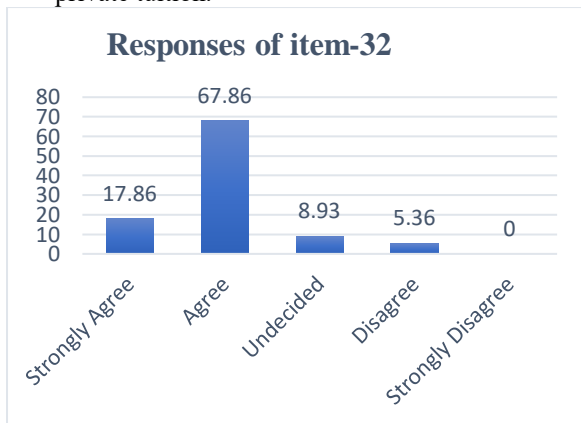
31. To complete the syllabus within the specified time, private tuition is required.



Given the above questions, it is seen from taking the opinion of the parents that, 23.21% strongly agreed, 60.71% agreed, 3.57% disagreed, 0 % completely disagreed, and 12.5% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 83.92% of guardians have agreed and 3.57% of Guardians have disagreed. In terms of needing private tuition to complete the syllabus within the specified time, the majority of the guardians agreed, very few guardians disagreed and several guardians did not express any opinion.

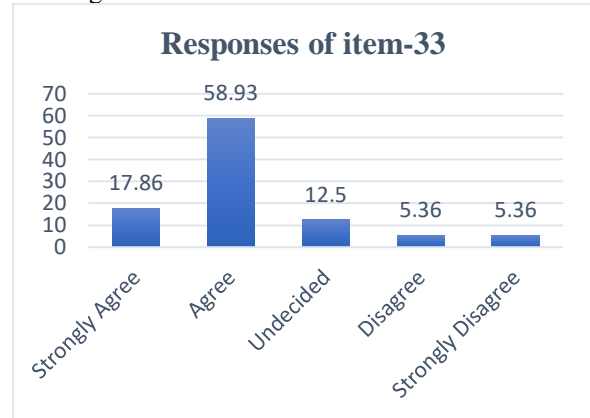
32. Students can understand the subject in detail through private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 17.86% strongly agreed, 67.86% agreed, 5.36% disagreed, 0 % completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 85.72% of guardians have agreed and 5.36% of Guardians have disagreed. Most of the guardians agreed and very few guardians disagreed that students can understand the content in detail through private tuition.

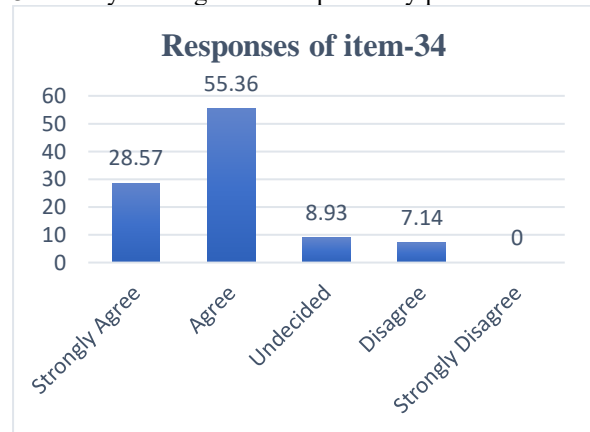
33. If the parents are illiterate then the private master helps to guide the students.



Given the above questions, it is seen from taking the opinion of the parents that, 17.86% strongly agreed, 58.93% agreed, 5.36% disagreed, 5.36% completely disagreed, and 12.5% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 76.79% of guardians have agreed and 10.72% of Guardians have disagreed. Majority of the Guardians agreed and very few Guardians disagreed that private tuition is the only way to educate their children if the Guardians are illiterate.

34. Daily reading is made up of daily private tuition.

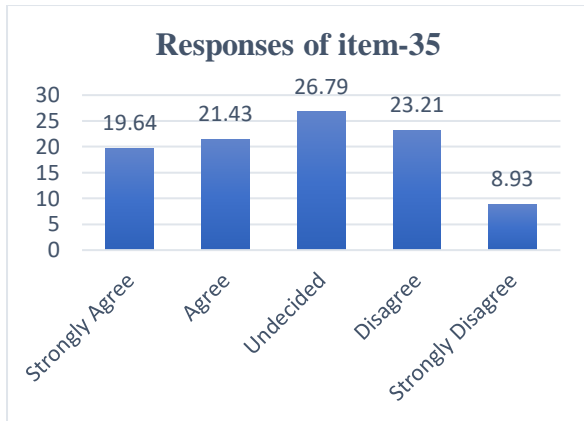


Given the above questions, it is seen from taking the opinion of the parents that, 28.57% strongly agreed, 55.36% agreed, 7.14% disagreed, 0 % completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 83.93% of guardians have agreed and 7.14% of Guardians have disagreed. Most of the guardians agreed and very few guardians disagreed that daily tuition is made up daily in private tuition.



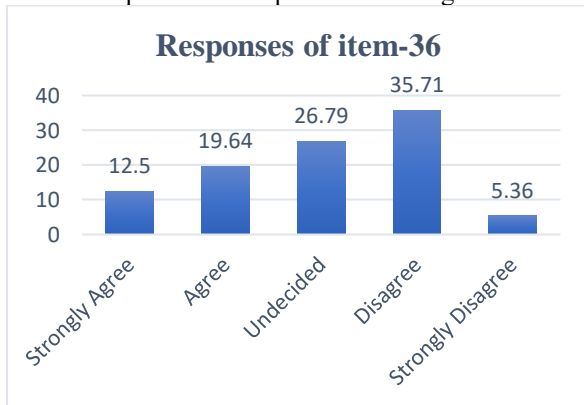
35. Private tuition diverts students from school.



Given the above questions, it is seen from taking the opinion of the parents that, 19.64% strongly agreed, 21.43% agreed, 23.21% disagreed, 8.93% completely disagreed, and 26.79% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 41.07% of guardians have agreed and 32.14% of Guardians have disagreed. A majority of Guardians agreed and several Guardians disagreed, while a significant number of Guardians expressed no opinion regarding the fact that private tuition diverts students from school.

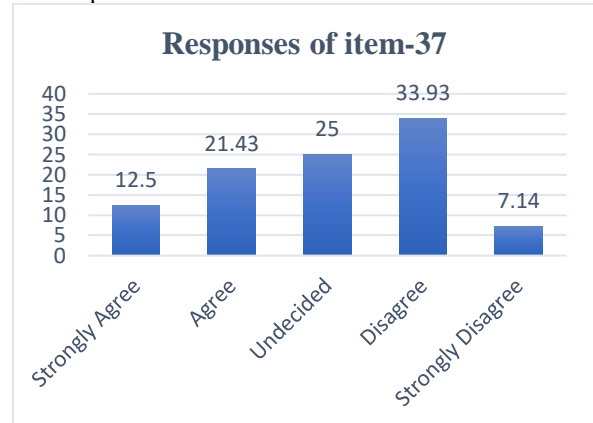
36. Notes-based learning in private tuition hinders the development of independent thinking in students.



Given the above questions, it is seen from taking the opinion of the parents that, 12.5% strongly agreed, 19.64% agreed, 35.71% disagreed, 5.36% completely disagreed, and 26.79% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 32.14% of guardians have agreed and 41.07% of Guardians have disagreed. Most of the Guardians expressed disagreement and some number of Guardians agreed, while a significant number of Guardians expressed no opinion regarding the fact that notes-based learning in private tutoring hinders the development of students' independent thinking.

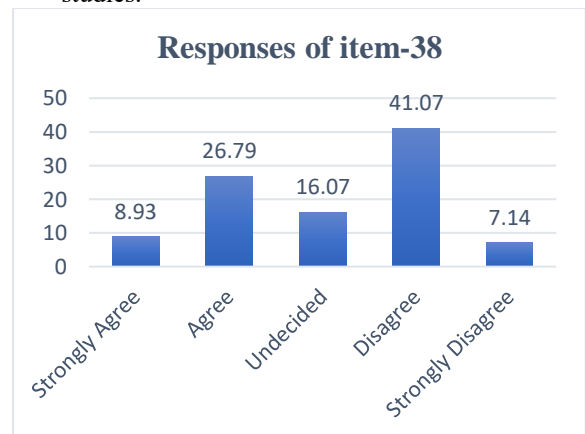
37. By having private tuition, students do not give importance to school studies.



Given the above questions, it is seen from taking the opinion of the parents that, 12.5% strongly agreed, 21.43% agreed, 33.93% disagreed, 7.14% completely disagreed, and 25 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 33.93% of guardians have agreed and 41.07% of Guardians have disagreed. Most of the Guardians disagreed, some Guardians agreed, while several Guardians expressed no opinion regarding the fact that students do not value their schooling due to having private tuition.

38. Students get tired of juggling private tuition and school studies.

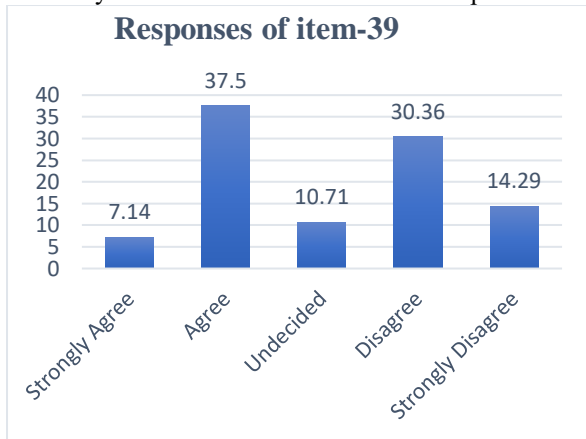


Given the above questions, it is seen from taking the opinion of the parents that, 8.93% strongly agreed, 26.79% agreed, 41.07% disagreed, 7.14% completely disagreed, and 16.07% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 35.72% of guardians have agreed and 48.21% of Guardians have disagreed. Most of the guardians disagreed and several guardians agreed while some guardians expressed no opinion regarding the fact that students get tired of juggling private tuition and school studies.



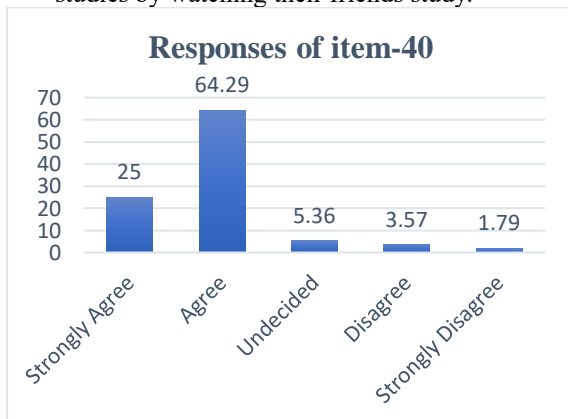
39. Only meritorious students should seek private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 7.14% strongly agreed, 37.5% agreed, 30.36% disagreed, 14.29% completely disagreed, and 10.71% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 44.64% of guardians have agreed and 44.65% of Guardians have disagreed. The number of Guardians who agree and disagree on the view that only meritorious students should take private tuition is almost equal and some number of Guardians did not express any opinion.

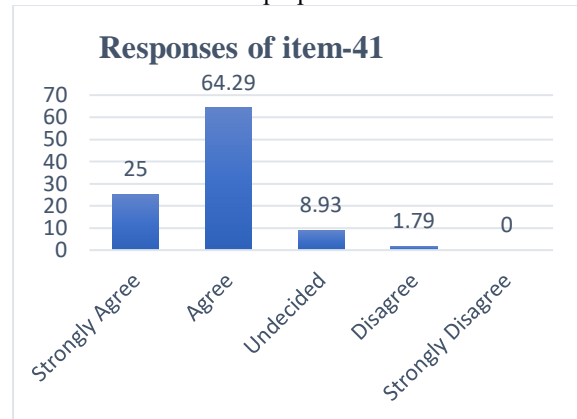
40. In private tuition, students are more interested in their studies by watching their friends study.



Given the above questions, it is seen from taking the opinion of the parents that, 25% strongly agreed, 64.29% agreed, 3.57% disagreed, 1.79% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.29% of guardians have agreed and 5.36% of Guardians have disagreed. The majority of Guardians agreed and very few Guardians disagreed that private tuition students are more interested in their studies by watching their friends study.

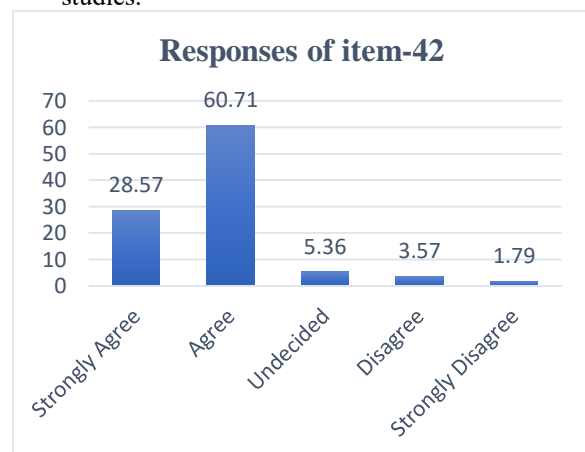
41. Private tuition can prepare students well for final exams.



Given the above questions, it is seen from taking the opinion of the parents that, 25% strongly agreed, 64.29% agreed, 1.79% disagreed, 0 % completely disagreed, and 8.93% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.29% of guardians have agreed and 1.79% of Guardians have disagreed. The majority of guardians agreed and few guardians disagreed that private tuition can prepare students better for final exams.

42. Private tuition helps students maintain continuity in their studies.

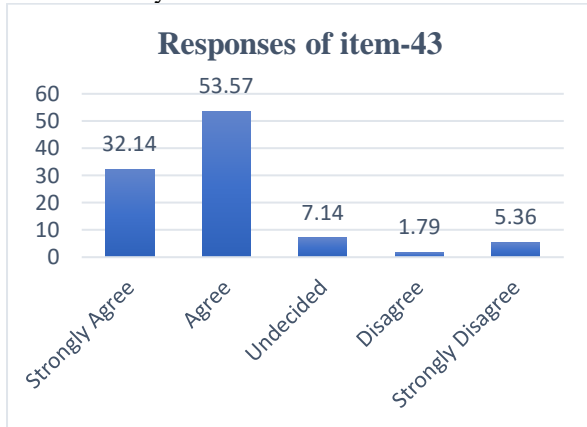


Given the above questions, it is seen from taking the opinion of the parents that, 28.57% strongly agreed, 60.71% agreed, 3.57% disagreed, 1.79% completely disagreed, and 5.36% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 89.28% of guardians have agreed and 5.36% of Guardians have disagreed. The majority of guardians agreed and very few guardians disagreed that private tuition helps students to continue their studies.



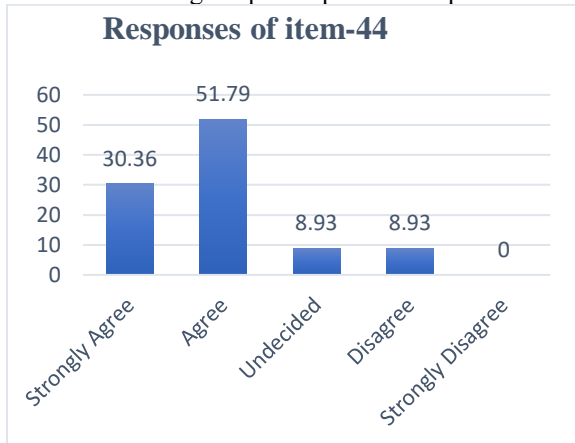
43. Private tuition helps each student understand reading differently.



Given the above questions, it is seen from taking the opinion of the parents that, 32.14% strongly agreed, 53.57% agreed, 1.79% disagreed, 5.36% completely disagreed, and 7.14% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 85.71% of guardians have agreed and 7.15% of Guardians have disagreed. A majority of Guardians agreed and a small number of Guardians disagreed that private tutoring helps each student understand reading differently.

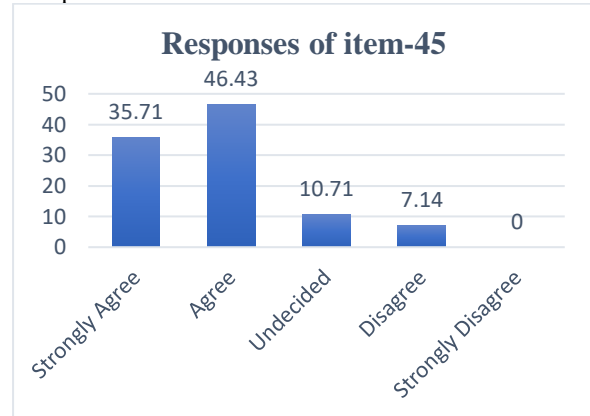
44. All students get equal importance in private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 30.36% strongly agreed, 51.79% agreed, 8.93% disagreed, 0 % completely disagreed, and 8.93 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 82.15% of guardians have agreed and 8.93% of Guardians have disagreed. The majority of guardians agreed and very few guardians disagreed that every student is given equal importance in private tuition.

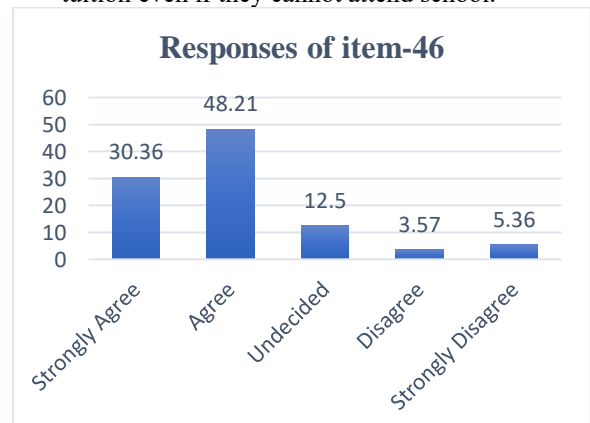
45. Students become much more confident after taking private tuition.



Given the above questions, it is seen from taking the opinion of the parents that, 35.71% strongly agreed, 46.43% agreed, 7.14 % disagreed, 0 % completely disagreed, and 10.71% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 82.14% of guardians have agreed and 7.14% of Guardians have disagreed. The majority of guardians agreed and very few guardians disagreed that students become more confident after taking private tuition.

46. Students can understand the subject through private tuition even if they cannot attend school.

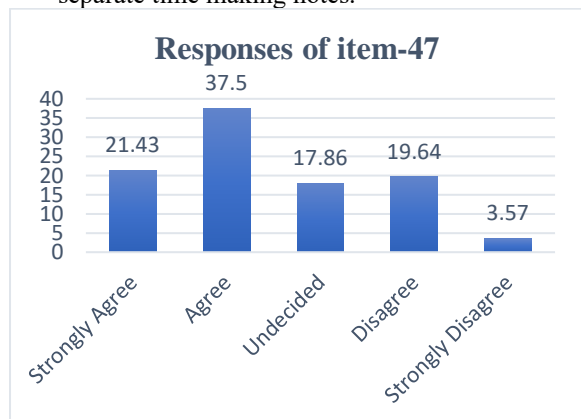


Given the above questions, it is seen from taking the opinion of the parents that, 30.36% strongly agreed, 48.21% agreed, 3.57 % disagreed, 5.36% completely disagreed, and 12.5 % of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 78.57% of guardians have agreed and 8.93% of Guardians have disagreed. Even if the students cannot attend the class, they can understand the reading by going for private tuition most of the Guardians agreed and a small number of Guardians disagreed.



47. With private tuition, students do not have to spend separate time making notes.



Given the above questions, it is seen from taking the opinion of the parents that, 21.43% strongly agreed, 37.5% agreed, 19.64% disagreed, 3.57% completely disagreed, and 17.86% of guardians expressed no opinion.

INTERPRETATION: Based on the above data it is seen that 58.93% of guardians have agreed and 23.21% of Guardians have disagreed. In terms of private tutoring students do not have to spend time making notes separately, most of the guardians agreed, some guardians disagreed and few guardians expressed no opinion.

DISCUSSION

After analyzing all the items, the researcher finds that Secondary school students' guardians have highly positive attitudes about private tuition. Items no 1 to 8 and 12 to 15 & 19 to 26 and 31,32,33,34,40,41,46 All these items show that the Guardian has expressed a completely positive opinion here. Further, in items no 9, 10, 16,18,21,27,28,29, and 35,36,37,38,47 in this case the Guardian has not expressed an opinion although most of the items are negative. Item no 9,10,16,17,18,27,28,29,30,35,36,37,38,39,47 In this case too it appears that the Guardian disagrees, although most of the questions or items here are negative. **Only meritorious students should seek private tuition**, Guardians have an equal number of positive and negative opinions on this item. Also, the Guardians have not given any opinion on the disagreement regarding items 23 and 24. From the above analysis, items for which many Guardians expressed no opinion are negative in nature. Items for which the number of disagreeing respondents is high are also negative in nature. Furthermore, the items that parents agreed with were positive in nature. So, it can be said that the guardians have a positive attitude towards private tuition. Parents enroll children in private tuition to increase their exam scores. Because parents are unable to assist their children in all subject areas and at all levels, getting private tutoring is now considered odd. Many parents pay for private tutors with between 1% and 10% of their monthly income (Bidyakshmi, 2016)

CONCLUSION

In this study, Guardians' positive opinion about private tuition can be seen. Guardians are largely dependent on private tuition to provide extra guidance to their children in addition to school education. Also, in terms of the educational qualification of guardians, it is seen that guardians with less educational qualification are more dependent on private tuition. Because they are not able to give proper guidance to their children and depend more on private tutors.

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TEACHING CHEMISTRY WITH VIRTUAL LABORATORIES IN SECONDARY SCHOOLS

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ABSTRACT

This article provides detailed information about the importance of teaching and learning using virtual laboratories in the school chemistry course, and you will get information about the implementation of virtual laboratory work in the form of a video lesson in teaching the topic of halogens. This article is about facilitating the experimental part of chemistry.

KEYWORDS: *virtual, digital technology, experimental, practical, halogens*

INTRODUCTION

Today, in order to improve the teaching of chemistry in general secondary schools, it is important to carry out scientific and methodological research, to communicate the results and news obtained to students, to produce and isolate the necessary substances in laboratory conditions and to organise interesting experiments. The use of alternative options and the use of computer technology in the organisation of a chemical experiment, the use of computer games in the organisation of a chemical experiment, the importance of digital technologies and the introduction of the targeted use of virtual laboratories.

Digital technologies are associated with innovations in educational programmes and imply the establishment of a completely new type of social and economic development based on computers and knowledge.

At present, general secondary schools are organising lessons integrated with comprehensive modern computer technologies. At the same time, the quality indicator of chemistry education is increasing with the growth of computer technology. Today, it is difficult to imagine young people without modern computer technologies to thoroughly master chemical knowledge. In addition to chemistry in schools, it is necessary to provide basic guidelines for the effective use of computer technology and programming, covering this area of digital technology.

As mediating elements of learning processes, digital technologies allow teachers to move away from the traditional hierarchical model. They form the frameworks and networks through which students write, read, learn, interact, co-construct and define their identities. The implementation of digital technologies in educational processes enhances the quality of educational processes and creates the basis for making lessons interesting and understandable.

One of the tasks of education is to prepare people who are able to exercise their rights as loyal and participating citizens in a society where knowledge is an important source of social and economic development.

Teaching students using multimedia tools has the following advantages

- 1) There is the possibility of a deeper and more perfect reduction of the given materials;
- 2) The passion for close contact with new areas of learning will increase;
- 3) As a result of shortening the time of education, the possibility of saving time is achieved;
- 4) The acquired knowledge will be remembered for a long time and it will be possible to use it in practice if necessary.

Digital technologies - it is also important to train students to use information correctly and effectively.

As chemistry is one of the experimental exact sciences, knowledge and skills are also strengthened in more laboratory activities. In many cases, laboratory training requires the use of toxic and harmful, flammable and explosive reagents and complex equipment. Reviewing them in a virtual state with the help of a computer before starting to perform laboratory work directly - leads to saving reagents, ensuring safety and increasing the efficiency of the educational process. For this reason, many virtual chemical laboratories have been developed.

LITERATURE ANALYSIS AND METHODOLOGY

Nowadays, virtual laboratories have been created for chemistry, as well as for all sciences, and most of them correspond to foreign countries. Therefore, for the effective use of virtual laboratories, it is an urgent task to translate their instructions for use into Uzbek and to develop appropriate methodological instructions. Practical training and laboratory work are of great importance in the teaching of chemistry, as they reinforce theoretical knowledge.

In practical experiments, laboratory equipment and reagents are not always sufficient. In addition, there are experiments in which unfavourable conditions may occur during the performance of some laboratory work. Using experiments in



teaching the subject of halogens in general schools " on the subject v ideodars laboratory experience in the form of laboratory from the students before performing of work purpose, necessary equipment, work performing order with will be introduced. Including this one laboratory of work purpose the extraction of halogens learning that it is necessary equipment potassium permanganate, hydrochloric acid, iron,

tripod, pipette, test tube, iron spoon, gas pipe, gas burner, glass plate composition, work perform in order, the need to observe safety rules, to know the physical and chemical properties of the substances taken for the experiment and formed as a result of the reaction, to properly install the test tube, to hermetically close the stopper, to use the reagents correctly stressed, work automated way done is shown (Fig.1).

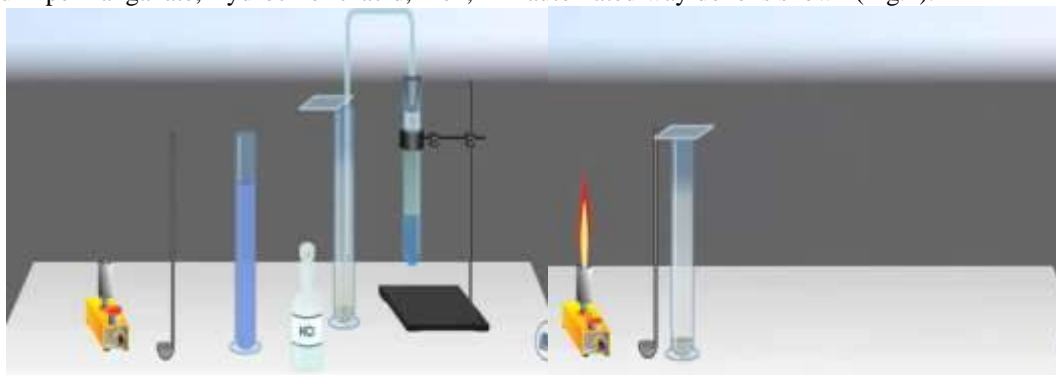


Figure 1 . A view of the performance of virtual laboratory work in the form of a video lesson.

When doing laboratory work, it is said to pay attention to the colour of the solution, after the reaction, the reaction process is analysed based on the colour change and the conclusion is given. The reaction equation is displayed on the computer

screen (Figure 2). This helps students to develop the necessary knowledge and skills to carry out laboratory work independently.

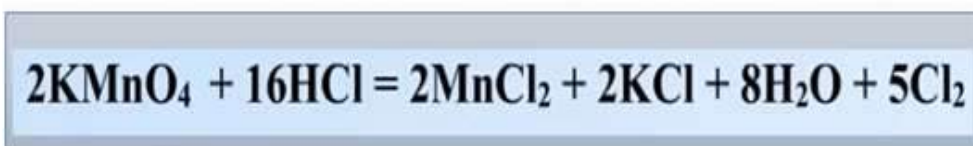


Figure 2. Reaction Equation of Virtual Laboratory Work

The control part of the laboratory work is made up of theoretical materials of the laboratory work and tests that control the knowledge acquired during the laboratory experiment.

In order to check and consolidate the knowledge acquired, the student enters the "evaluation" part of the virtual laboratory, from where he can check and consolidate his knowledge by carrying out tests related to the laboratory work in question (Figure 3)

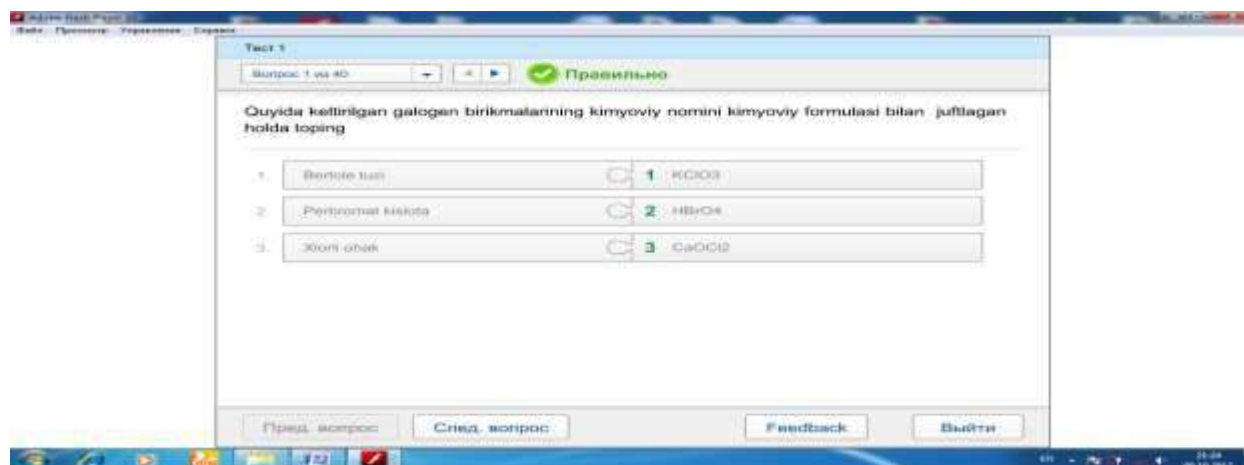


Figure 3. Test execution page.



Currently, there are various chemistry programmes that allow you to perform laboratory exercises in chemistry (Crocodile chemistry 605, Chemistry (class 8-11), Virtual laboratory, Periodic table, Chemsk12, Chemical calculator, ChemDraw Ultra 11.0, CHEMIX 12, GaussView ,Chembalance Wizard32, Khumua42) is the subject of research.

This makes the teaching process more productive and of higher quality if the teacher conducts classes using virtual laboratories to reinforce theoretical knowledge during the course and conducts experiments while working individually with each student during the course.

CONCLUSION

The importance of using virtual laboratory work is that it eliminates the need to build complex apparatus, store and replace equipment and reagents, and repair and wash chemical containers. All laboratory work is stored electronically and in one place on computer memory or external storage. The computer is safe, easy to use and requires the user to work only with specific programmes.

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EMPOWERING BONE HEALTH: THE VITAL ROLE OF NURSES IN CALCIUM SUPPLEMENTATION FOR POSTMENOPAUSAL WOMEN

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ABSTRACT

This review article explores the importance of calcium supplementation in postmenopausal women and the crucial role that nurses play in optimizing the health outcomes of this demographic. We examine the benefits and risks of calcium supplementation, current guidelines, and the various roles nurses can fulfill to support postmenopausal women in their calcium intake and overall well-being.

KEYWORDS: Calcium supplementation, postmenopausal women, nurses, osteoporosis, dietary intake, bone health.

1. INTRODUCTION

The postmenopausal period is associated with a decline in bone density and an increased risk of osteoporosis, which can lead to fractures and reduced quality of life. Adequate calcium intake is essential for maintaining bone health in this population. This review article aims to provide an in-depth analysis of calcium supplementation for postmenopausal women, with a specific focus on the role of nurses in promoting optimal health.

Postmenopausal women face unique health challenges, and one of the most critical concerns is maintaining bone health. Osteoporosis, characterized by low bone density and an increased risk of fractures, is a prevalent condition among this demographic. Adequate calcium intake is crucial for preserving bone health. While dietary sources of calcium are essential, many postmenopausal women may require supplementation to meet their calcium needs.

2. THE IMPORTANCE OF CALCIUM SUPPLEMENTATION

2.1. Bone Health and Osteoporosis Postmenopausal women are particularly vulnerable to osteoporosis due to hormonal changes that accelerate bone loss. Osteoporosis can lead to fractures, disability, and reduced quality of life. Adequate calcium intake, in conjunction with other bone-strengthening measures, is vital for preventing this condition.

Osteoporosis is often described as a "silent disease" because it progresses without symptoms until a fracture occurs. These fractures can have serious consequences, such as hip fractures, which are associated with high mortality rates and a significant decrease in functional independence.

2.2. Dietary Calcium vs. Supplements Calcium is available through dietary sources like dairy products, green leafy vegetables, and fortified foods. However, achieving the recommended daily calcium intake solely through diet can be

challenging for some postmenopausal women. Factors such as lactose intolerance, dietary restrictions, or low-calorie diets may limit their ability to obtain sufficient calcium through food alone.

As a result, calcium supplementation becomes necessary to bridge the gap between dietary intake and recommended levels. Calcium supplements are available in various forms, including calcium carbonate and calcium citrate. Nurses play a pivotal role in helping patients choose the most appropriate supplementation based on individual needs and absorption capabilities.

2.3. Recommended Daily Allowance (RDA) for Calcium The recommended daily allowance for calcium varies with age and sex. Postmenopausal women, particularly those aged 51 and older, have higher calcium requirements. The National Osteoporosis Foundation (NOF) recommends a daily intake of 1,200 to 1,500 milligrams of calcium for this population.

It is important to note that calcium requirements should ideally be met through a combination of dietary sources and supplements. Nurses can assist in educating postmenopausal women about their individual RDA and help them plan a well-balanced diet to meet these needs.

3. BENEFITS AND RISKS OF CALCIUM SUPPLEMENTATION

3.1. Benefits Calcium supplementation offers numerous benefits, primarily for postmenopausal women at risk of osteoporosis. Adequate calcium intake can:

- Help maintain bone density and reduce the risk of fractures.
- Support other vital bodily functions, including muscle contraction and blood clotting.
- Play a role in cardiovascular health and blood pressure regulation.

It's important to emphasize that calcium supplements should be considered in the context of an overall bone health strategy that



includes weight-bearing exercise, vitamin D, and lifestyle modifications.

3.2. Risks and Side Effects While calcium supplementation is generally safe and well-tolerated, it's not without risks. Some potential side effects include constipation, bloating, and kidney stones, especially when calcium intake exceeds the recommended levels.

High doses of calcium should be approached with caution, and nurses should educate patients about the importance of following recommended dosages. For those at risk of kidney stones, it may be advisable to consider dietary sources of calcium or alternative supplements.

3.3. The Calcium Paradox The "calcium paradox" refers to the observation that countries with high dairy consumption and calcium intake often have high rates of osteoporosis and hip fractures. This paradox has led to investigations into the roles of other nutrients, such as vitamin K and magnesium, in bone health. Nurses can play a vital role in educating postmenopausal women about the importance of a well-balanced diet that includes these nutrients in addition to calcium.

4. CURRENT GUIDELINES FOR CALCIUM SUPPLEMENTATION

4.1. National Osteoporosis Foundation (NOF) Guidelines The NOF provides comprehensive guidelines for healthcare professionals and patients. These guidelines address calcium intake, vitamin D supplementation, lifestyle modifications, and bone density testing. Nurses should be well-versed in these guidelines to provide accurate and up-to-date information to postmenopausal women.

The NOF also recommends that postmenopausal women at high risk of fractures consider bone-specific medication in addition to calcium and vitamin D.

4.2. US Preventive Services Task Force (USPSTF) Recommendations The USPSTF provides recommendations on various preventive services, including those related to osteoporosis and calcium supplementation. Their recommendations can influence clinical practices and insurance coverage for postmenopausal women's healthcare.

Nurses need to stay informed about these recommendations to ensure that they are providing evidence-based care.

4.3. Other Global Guidelines International organizations, such as the World Health Organization (WHO), also offer guidelines on bone health and calcium supplementation. It's essential for nurses to consider these global perspectives, as they can provide additional insights into the best practices for managing postmenopausal women's bone health.

5. THE ROLE OF NURSES IN PROMOTING CALCIUM SUPPLEMENTATION

5.1. Education and Awareness Nurses are often the primary source of healthcare information for many patients. In the context of postmenopausal women's health, nurses play a vital

role in educating patients about the importance of calcium supplementation and its potential benefits and risks. Education should encompass the dietary sources of calcium, recommended supplementation, and the need for routine bone density screening.

5.2. Assessment of Calcium Intake Nurses can assess a patient's dietary habits and calcium intake to determine whether supplementation is necessary. This assessment may include a review of dietary preferences, restrictions, and potential barriers to obtaining sufficient calcium through food alone.

5.3. Monitoring Adherence Nurses can monitor patients' adherence to calcium supplementation and dietary recommendations. Regular follow-ups and discussions can help identify and address any challenges or side effects that may arise.

5.4. Providing Emotional Support Osteoporosis and the need for calcium supplementation can be emotionally challenging for postmenopausal women. Nurses can offer emotional support and encouragement to help patients cope with their condition and adhere to treatment plans.

5.5. Collaborative Care Collaborative care involves working in coordination with other healthcare professionals, such as dietitians, physicians, and physical therapists, to ensure that postmenopausal women receive comprehensive care. Nurses can facilitate communication and collaboration among these providers to create a holistic treatment plan.

6. CASE STUDIES AND BEST PRACTICES

6.1. Successful Nurse-Led Initiatives Several nurse-led initiatives have demonstrated the positive impact of nursing interventions in promoting calcium supplementation and bone health in postmenopausal women. These initiatives may involve educational programs, support groups, and adherence monitoring.

For example, a study conducted by Smith et al. (2020) found that a nurse-led educational program increased calcium supplementation adherence by 30% in postmenopausal women.

6.2. Challenges and Solutions Nurses often encounter challenges when promoting calcium supplementation, such as patient reluctance, financial constraints, and the need for ongoing support. Solutions may involve tailored education, assistance with financial barriers, and the development of patient-centered care plans.

7. CALCIUM SUPPLEMENTATION CHALLENGES SPECIFIC TO INDIAN WOMEN

7.1. Traditional Dietary Habits Discuss how traditional Indian diets may differ from Western diets and their impact on calcium intake. Include insights into the consumption of dairy products, leafy greens, and other calcium-rich foods in Indian cuisine.

7.2. Prevalence of Vitamin D Deficiency Highlight the common deficiency of vitamin D in Indian women due to limited sun exposure, which can affect calcium absorption.



Nurses should be aware of this issue and advise on appropriate vitamin D supplementation in conjunction with calcium.

8. CULTURAL AND SOCIOECONOMIC FACTORS AFFECTING CALCIUM SUPPLEMENTATION IN INDIAN WOMEN

8.1. Influence of Cultural Beliefs Explore how cultural beliefs and practices can influence healthcare decision-making, including whether Indian women are more or less likely to embrace calcium supplementation.

8.2. Socioeconomic Disparities Discuss the socioeconomic factors that can impact the affordability and accessibility of calcium supplements for Indian women. Some may face financial constraints, while others may have better access to healthcare resources.

9. THE ROLE OF TRADITIONAL MEDICINE AND AYURVEDA

9.1. Integration of Traditional and Modern Healthcare Recognize that many Indian women may seek healthcare advice from traditional systems like Ayurveda alongside modern medicine. Nurses should understand these traditional practices to provide holistic care.

9.2. Complementary Approaches to Bone Health Highlight how Ayurvedic and herbal remedies are sometimes used to support bone health in Indian women. Explain how nurses can discuss the compatibility of these approaches with calcium supplementation.

10. SUCCESS STORIES FROM INDIAN NURSE-LED INITIATIVES

10.1. Case Studies from India Nurse-led initiatives in India that have successfully promoted calcium supplementation and improved bone health in postmenopausal women.

10.2. Collaboration with Local Healthcare Providers Emphasize the importance of nurses collaborating with traditional healthcare providers to ensure that Indian women receive the best possible care for their bone health.

11. CONCLUSION

This review article highlights the critical role of nurses in ensuring postmenopausal women receive appropriate calcium supplementation to maintain optimal bone health. The importance of this role cannot be overstated, as it bridges the gap between clinical guidelines and patient understanding and adherence, ultimately reducing the risk of osteoporosis and its associated complications.

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A PHARMACEUTICO-ANALYSIS OF SARASAWATA CHURNA BY HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPTLC)

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ABSTRACT

Ayurvedic formulations are recognized to be very effective and to have few adverse effects; yet, there is a gap in the global market for Ayurvedic formulations since there are no validation requirements for identification and quality control. Saraswata Churna is a traditional Ayurvedic concoction used to treat memory loss, psychosomatic illnesses, and other conditions. The goal of the project is to create and standardize Saraswata Churna in accordance with the GMP requirements of the World Health Organization (WHO), which are the first reports of their kind to be made public. The formulation was made at the Shri Krishna Govt. Ayurvedic College and Hospital, Kurukshetra, Haryana, and it was assessed using High Performance Thin Layer Chromatography, powder drug studies, physicochemical parameters (loss in drying, ash value, acid soluble extract, water soluble extract, pH value), and organoleptic characteristics. Powder drug analysis revealed specific identities for crude raw drug, which are useful as markers in the preparation and identification of formulation components. The results of different standardization parameters revealed satisfactory and sufficient data to evaluate the in-house formulation and can be utilized as reference standards in various quality control aspects of the formulation.

KEYWORDS- *Saraswata Churna, Physico-chemical, Pharmaceutical Study, etc.*

INTRODUCTION

The ingredients of Saraswata Churna, an Ayurvedic polyherbal formulation, include parts of several species, including Brahmi (*Bacopa monnieri*) and Vacha (*Acorus calamus*), Maricha (*Piper nigrum*), Pippali (*Piper longum*), Shunthi (*Zingiber officinale*), Kushta (*Saussurea lappa*), Ashwagandha (*Withania somnifera*), and Saindhava lavana (rock salt), Ajamoda (*Apium graveolens*), Sweta jeeraka (*Cuminum cyminum*), Krishna jeeraka (*Carum carvi*), Shunthi (*Zingiber officinale*), Patha (*Cissampelos pareira*), Shankhapushpi (*Convolvulus pluricaulis*), and Kushta (*Saussurea lappa*). In the Bhaishajya Ratnavali literature, Saraswata Choorna is referenced in "Unmada Chikitsa." For the treatment of psychotic illnesses such as Unmada, the churna is useful. Regular Saraswata churna consumption enhances memory power, intelligence, dhriti (control over mind), Buddhi (higher mental processes), and Kavita Shakti (poetic genius) [1].

Despite being the most widely used formulation in Ayurvedic therapy, not much research has been done on standardizing Saraswata churna to date. Since most Ayurvedic remedies contain entire plants, either alone or in combination, the effectiveness of the formulations may change depending on the adulterants used. Therefore, it is critical to use physical and chemical techniques to determine the properties of the raw materials and completed

Ayurvedic products. Due to the intricacy and potential side effects of using allopathic medications, most people on the planet these days are choosing to employ alternative medical systems. As to Bhaishajya Ratnavali's statement [2]

Although 10 herbs make up Saraswata Churna, not even one standard is stated to guarantee the product's identification, potency, purity, safety, and effectiveness. The formulation and quality control assessment of the significant Ayurvedic formulation are the subjects of this article. To verify the authenticity, potency, purity, safety, and efficacy of Saraswata Churna, the research aims to assess the organoleptic characteristics, powder drug analysis, physicochemical parameters, and phytochemical assessment in accordance with the Ayurvedic Pharmacopoeia of India and WHO norms. To the best of our knowledge, this is the first paper that reveals the formulation and assessment of this significant Ayurvedic preparation, according to a thorough review of the literature.

METHODOLOGY

The pharmacy at the Shri Krishna Govt. Ayurvedic College and Hospital, Kurukshetra, Haryana, carries Kushta (*Saussurea lappa*), Ashwagandha (*Withania somnifera*), Saindhava lavana (rock salt), Ajamoda (*Apium graveolens*), Sweta jeeraka



(Cuminum cyminum), Krishna jeeraka (Carum carvi), Shunthi (Zingiber officinale), Maricha (Piper nigrum), Pippali (Piper longum), Patha (Cissampelos pareira), Shankhapushpi (Convolvulus pluricaulis), Vacha (Acorus calamus), and Brahmi (Bacopa monnieri) swarasa (juice).

The Pharmacognosy branch of the Institute performed a macroscopical identification of each constituent, and an organoleptic evaluation was conducted to identify sensory attributes such as color, flavor, texture, size, and fracture. Every component was gathered and thoroughly cleaned. They were each ground into a powder using a pulverize. Except for Vacha, each of the eleven components was weighed individually and combined in equal amounts. Eleven portions of powdered vacha were then added. Fresh Brahmi entire plants were used to harvest Brahmi swarasa. Three bhavanas were performed on the powder, which was stored in new Brahmi swarasa. The powder was shade-dried after bhavana. To create a uniform mix, it was then ground up one again and sent through sieve number 80 [3-5]. To keep it safe from light and moisture, it was stored in airtight containers. In the pharmacy of Shri Krishna Govt. Ayurvedic College and Hospital, Kurukshetra, Haryana, India, Saraswata choorna was made.

QUALITATIVE ANALYSIS AND STORAGE

For standardizing characteristics, such as foreign organic matter, water soluble extractive, methanol soluble extractive total ash, and acid insoluble ash, a quantitative study of the raw material was conducted. The authorized raw material was kept in a cold location after being packaged in sterile, airtight polybags with the appropriate labeling [6-8].

PHYSICO-CHEMICAL ANALYSIS

At the pharmaceutical chemistry laboratory of Shri Krishna Govt. Ayurvedic College and Hospital, Kurukshetra, Haryana, India, Saraswata Choorna was examined based on several factors, including loss on drying, ash value, water soluble extract, methanol soluble extract, pH value, volatile oil concentration, and particle consistency.

RESULT AND DISCUSSION OD SARASWATA CHURNA

ORGANOLEPTIC CHARACTERS

The finely ground Saraswata Churna powder has a fibrous texture, a nice smell, and a greenish brown color. It tastes salty and is like well-made Churna [9, 10].

QUALITATIVE ANALYSIS

The quality of the crude medication may be ascertained using the ash readings. Inorganic radicals found in ash include phosphate, carbonates, and silicates of calcium, magnesium, potassium, sodium, and other elements. Extractive values are helpful in assessing crude pharmaceuticals. It provides insight into the makeup of the chemical components included in the crude medication [11]. The formulation's total Ash value, according to analytical data, was 11.3%. The extractive value of water that dissolves in solution signifies the existence of inorganic chemicals, sugar, and acids. The Saraswata Churna's water soluble extractive value of 24% revealed that the formulation's water-soluble components were more numerous. The plant sample's alcohol-soluble extractive value reveals the existence of polar compounds such as flavonoids, phenols, alkaloids, steroids, glycosides, and secondary metabolites. In the Saraswata churna, the extractive value soluble in alcohol was 20.24%. The sample's pH was 6.7.

High performance thin layer chromatography (HPTLC)

Method of preparation of methanolic extract

3 grams of Saraswata Churna powder and 60 milliliters of 75% methanol were combined to create a solution, which was then stored for 24 hours with sporadic shaking in a clean, dry location. Next, the extract was collected and passed through Whatman No. 1 filter paper for filtration. A 30% w/w yield was obtained by heating 30 milliliters of the aforesaid solution in a thermostatic water bath until a dark brownish residue was produced.

HPTLC

Using a V sample applicator equipped with a 101 µl Hamilton syringe, methanolic extract of Saraswata Churna was spotted on a pre-coated silica gel GF 60343 Aluminium plate. The mobile phase included 7 ml of toluene, 3 ml of ethyl acetate, and 2 ml of acetic acid. Viewing the final HPTLC pattern was possible at 254 nm for short-wave UV light and 366 nm for long-wave UV light.



TABLE 1: INGREDIENTS OF SARASWAT CHURNA

S.no.	Drug name	Latin name	Useful Part	Proportion
1.	<i>Kushtha</i>	<i>Saussurea lappa</i> C.B. Clarke	Root	1part
2.	<i>Ashwagandha</i>	<i>Withania somnifera</i> (L.) Dunal	Root	1part
3.	<i>Saindhava Lavana</i>	<i>Sodium chloride</i>	-	1part
4.	<i>Ajamoda</i>	<i>Apium graveolens</i> -semen	Fruit	1part
5.	<i>Shweta Jeeraka</i>	<i>Cuminum cyminum</i> Linn.	Fruit	1part
6.	<i>Krishna Jeeraka</i>	<i>Carum carvi</i> Linn.	Fruit	1part
7.	<i>Sunthi</i>	<i>Zingiber officinale</i> Roscoe	Rhizome	1part
8.	<i>Maricha</i>	<i>Piper nigrum</i> Linn.	Fruit	1part
9.	<i>Pippali</i>	<i>Piper longum</i> Linn.	Fruit	1part
10.	<i>Patha</i>	<i>Cissampelos pareira</i> Linn.	Root	1part
11.	<i>Shankhpushpi</i>	<i>Convolvulus pluricaulis</i> Forsk.	Whole plant	1part
12.	<i>Vacha</i>	<i>Acorus calamus</i> Linn.	Rhizome	11 parts
13.	<i>Brahmi</i>	<i>Bacopa monnieri</i> (Linn) pennell	Whole plant	Q.S. for <i>Bhavna</i>

Table 2: Quantitative Analysis

Sl. No.	Physico-Chemical Parameter	Result
1	Loss in drying	9.02 % w/w
2	Ash value	11.2 % w/w
3	Water soluble extract	24% w/w
4	Methanol soluble extract	18.93% w/w
5	pH value	6.7

Table 3: HPTLC

Spot	Rf Value at 254 nm	Rf Value at 366 nm
1	0.03	0.02
2	0.17	0.16
3	0.76	-

DISCUSSION

An essential Ayurvedic preparation for therapy was developed, assessed, and resembles some distinguishing characteristics. The formulation's acceptable quality was demonstrated by the organoleptic features, which included a pleasing aroma and adequate look. The existence of certain cellular features, which may be used as a reference identifying feature of the formulation, was amply demonstrated by the histological examination. After a number of physicochemical factors were assessed, it was discovered that the formulation contains mineral salt, which is the reason for the increased ash levels. The completed Saraswata churna product was tested for pertinent organoleptic evaluation, powder drug analysis, physicochemical parameters (loss on drying, total ash, water soluble extractive value, ethanol soluble extractive value), phytochemical evaluation, and HPTLC as part of the standardization procedure and WHO guidelines.

CONCLUSION

In order to prepare and identify the formulation, the findings of the powder drug analysis provided precise IDs for the crude raw drug. An important finding for evaluating quality control criteria for Polyherbal Ayurvedic formulations is the method of Saraswata Churna preparation and the analytical data presented.

CONFLICT OF INTEREST -NIL

SOURCE OF SUPPORT -NONE

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ZOONOTIC DISEASE OUTBREAKS IN KERALA: CAUSES, TRENDS AND MITIGATION STRATEGIES

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ABSTRACT

Zoonotic diseases are a significant public health challenge worldwide, with Kerala, a picturesque state in southwest India, experiencing an increase in the incidence of these diseases. This paper analyses the causes of the increase in zoonotic diseases in Kerala between 2018 and 2023 on a multifaceted basis. A number of factors contribute to the emergence and resurgence of these diseases, such as ecological changes, habitat destruction, climate variability, animal trade, and improper food practices. There is a clear emphasis in the study on the importance of wildlife conservation, sustainable land management, animal trade regulation, public awareness campaigns, a One Health approach, research and surveillance, vector control, occupational safety and health measures, community engagement, and government support in mitigating the impact of zoonotic diseases. By implementing these, Kerala can serve as a valuable case study, revealing insights and making recommendations for other states facing similar challenges, emphasizing the importance of collaborative efforts and proactive measures for ensuring the protection of public health and biodiversity.

ABBREVIATIONS

AES- Acute encephalitis syndrome,

JE- Japanese encephalitis,

LS- leptospirosis,

S.Typhus- scrub Typhus,

KFD- Kyasanur forest disease,

WN- West Nile,

M.pox- Monkey pox,

C- Case,

D- Death,

DIST-District

TVM-Thiruvananthapuram,

KLM- Kollam,

PTA- Pathanamthitta,

ALPY- Alappuzha,

KTM- Kottayam,

IDK- Idukki,

EKM- Ernakulam,

THR- Thrissur,

PKD- Palakkad,

MLP- Malappuram,

KZD- Kozhikode,

WYD- Wayanad,

KNR- Kannur,

KSD- Kasargod.

INTRODUCTION

Infectious diseases that originate from animals are considered Zoonotic Diseases, which are acquired by humans from Zoonotic Reservoirs through either natural transmissions or through zoonotic vectors. Emerging zoonotic diseases are either newly evolved diseases most particularly prevalent in developing nations or have occurred in the past but are now rapidly spreading to new regions, hosts, and vectors¹. Globally, it represents a significant public health issue, with India being a geographical hotspot for these diseases². During the past few years, Kerala, a picturesque state in southwest India, has experienced a significant rise in zoonotic disease incidence. Studies clearly state that more than 75% of contagious diseases in Kerala are due to zoonosis³. As these diseases are transmitted from animals to humans, they pose a significant public health challenge, which requires a thorough understanding of the underlying causes. And they often have wide-ranging implications for both human health and the environment, so understanding the causes is crucial not only for the state, but also for the global community. In order to find these, a

multifaceted analysis is required, taking into account numerous factors such as urbanization, agricultural practices, climate change, and human behaviour. Furthermore, as the ecology changes, new spots, hosts, and vectors emerge, for example, cutaneous leishmaniasis, scrub typhus and Japanese encephalitis. The robust and efficient screening programs of the state are responsible for detecting a number of these diseases. Let's dive deeper to understand why Kerala remains vulnerable to more zoonotic pathogens, what the state can further do to curb the outbreaks, and what can other states learn from this small southern state.

RESEARCH METHODOLOGY

Collected data about predominant zoonotic diseases from Kerala government official websites and newspaper and then arranged them in year wise to understand the increase in its occurrence. Then analysed the probable causes for its emergence and re-emergence. The disease statistics of 2023 is incomplete as the district wise data is not published in the government site. The given data is collected from newspapers.



TREND OF ZONOTIC DISEASES IN KERALA

Table 1: Trend from 2018 to 2022⁴

Diseases	2018		2019		2020		2021		2022	
	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death
Leptospirosis	2079	99	1211	57	1039	48	1745	97	2482	121
Prob. leptospirosis	-	-	-	-	-	-	-	-	2833	169
Japanese encephalitis	5	2	11	2	-	-	-	-	2	0
AES(Prob. JE)	28	15	59	5	15	4	36	1	38	8
Scrub typhus	400	6	579	14	423	8	438	6	727	24
KFD	0	0	8	2	29	3	4	0	1	0
H1N1	823	50	853	45	58	2	1	0	94	11
Confirmed rabies	-	-	-	-	5	5	11	11	15	15
Prob. rabies	-	-	-	-	-	-	-	-	12	12
Zika	-	-	-	-	-	-	90	0	15	0
West Nile	1	0	11	2	-	-	1	0	3	1
Monkey pox	-	-	-	-	-	-	-	-	8	1
Nipah	18	16	1	0	-	-	1	1	-	-

DISTRICT WISE DATA ON ZONOTIC OCCURENCES

Table 2: District Wise Zoonotic Infection Data- 2018⁵

DIST	JE		LS		S.Typhus		H1N1		WN		Nipah	
	C	D	C	D	C	D	C	D	C	D	C	D
TVM	-	-	275	13	262	2	84	11	-	-	-	-
KLM	-	-	134	16	10	2	39	7	-	-	-	-
PTA	-	-	312	11	7	0	15	1	-	-	-	-
ALPY	1	0	254	6	-	-	102	1	-	-	-	-
KTM	-	-	130	2	8	0	61	1	-	-	-	-
IDK	-	-	39	4	5	0	7	0	-	-	-	-
EKM	-	-	77	2	-	-	77	6	-	-	-	-
THR	-	-	83	12	1	0	70	2	-	-	-	-
PKD	-	-	112	7	6	0	43	3	-	-	-	-
MLP	-	-	218	8	6	1	97	9	-	-	4	3
KZD	4	2	261	13	39	0	161	6	1	0	14	13
WYD	-	-	114	1	43	1	22	0	-	-	-	-
KNR	-	-	40	2	9	0	30	3	-	-	-	-
KSD	-	-	2	30	4	0	15	0	-	-	-	-

Table 3: District Wise Data- 2019⁶

DIST	JE		LS		S.Typhus		H1N1		WN		Nipah	
	C	D	C	D	C	D	C	D	C	D	C	D
TVM	-	-	220	10	406	6	41	1	1	0	-	-
KLM	2	2	68	6	16	1	49	5	-	-	-	-
PTA	-	-	78	1	5	0	36	5	-	-	-	-
ALPY	-	-	188	4	6	0	99	5	-	-	-	-
KTM	-	-	80	3	14	0	85	4	-	-	-	-
IDK	-	-	22	1	9	0	18	2	-	-	-	-
EKM	-	-	41	4	1	0	64	2	-	-	1	0



THR	3	0	16	9	3	0	74	2	-	-	-	-
PKD	1	0	55	2	10	0	34	3	-	-	-	-
MLP	-	-	129	3	3	1	67	5	4	2	-	-
KZD	4	0	168	6	32	3	142	7	5	0	-	-
WYD	-	-	83	7	61	3	37	3	-	-	-	-
KNR	-	-	42	1	11	0	83	1	1	0	-	-
KSD	1	-	21	0	2	0	24	0	-	-	-	-

Table 4: District wise data- 2020⁷

DIST	JE		LS		S.Typhus		H1N1		KFD		Rabies	
	C	D	C	D	C	D	C	D	C	D	C	D
TVM	1	1	178	6	323	5	1	0	-	-	-	-
KLM	-	-	48	2	3	0	10	0	-	-	-	-
PTA	-	-	91	1	5	0	-	-	-	-	-	-
ALPY	-	-	131	2	2	0	1	0	-	-	-	-
KTM	-	-	112	2	13	0	-	-	-	-	-	-
IDK	-	-	27	3	4	0	-	-	-	-	-	-
EKM	1	0	65	8	4	0	7	0	-	-	1	1
THR	-	-	43	8	3	0	-	-	-	-	-	-
PKD	6	0	36	1	5	1	-	-	-	-	-	-
MLP	5	2	72	3	1	0	8	1	-	-	-	-
KZD	1	1	73	4	16	0	19	1	-	-	-	-
WYD	1	0	158	4	27	2	-	-	29	3	2	2
KNR	-	-	42	2	17	0	11	0	-	-	2	2
KSD	-	-	3	2	-	-	1	0	-	-	-	-

Table 5: District wise data- 2021⁸

DIST	LS		S.Typhus		H1N1		Rabies		WN		KFD		Nipah		Zika	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
TVM	251	9	357	3	-	-	1	1	-	-	-	-	-	-	85	0
KLM	63	5	6	1	-	-	2	2	-	-	-	-	-	-	1	0
PTA	87	3	2	0	-	-	1	1	-	-	-	-	-	-	-	-
ALPY	235	10	3	0	1	0	1	1	-	-	-	-	-	-	-	-
KTM	202	7	10	0	-	-	-	-	-	-	-	-	-	-	1	0
IDK	20	8	3	1	-	-	-	-	-	-	-	-	-	-	-	-
EKM	231	16	1	0	-	-	-	-	-	-	-	-	-	-	2	0
THR	53	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PKD	78	5	8	0	-	-	-	-	-	-	-	-	-	-	-	-
MLP	124	9	2	0	-	-	1	1	1	0	-	-	-	-	-	-
KZD	174	10	19	1	-	-	3	3	-	-	-	-	1	1	1	0
WYD	111	4	20	0	-	-	-	-	-	-	4	0	-	-	-	-
KNR	38	4	6	0	-	-	1	1	-	-	-	-	-	-	-	-
KSD	78	0	1	0	-	-	1	1	-	-	-	-	-	-	-	-

Table 6: District Wise Data – 2022⁹

DIST	JE		LS		S.Typhus		H1N1		Rabies		KF D		WN		Zika		M.pox	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
TVM	5	2	324	9	535	14	11	1	8	8	-	-	-	-	14	0	-	-
KLM	5	1	155	4	7	0	3	1	1	1	-	-	-	-	1	0	1	0
PTA	0	0	160	4	9	0	3	1	1	1	-	-	-	-	-	-	-	-
ALPY	3	0	293	9	13	0	7	0	2	2	-	-	-	-	-	-	-	-
KTM	3	1	118	5	15	0	-	-	1	1	-	-	-	-	-	-	-	-
IDK	0	0	32	2	6	1	-	-	1	1	-	-	-	-	-	-	-	-
EKM	10	1	258	11	10	0	4	0	0	0	-	-	-	-	-	-	-	-
THR	0	0	174	20	10	2	7	2	5	5	-	-	2	1	-	-	1	1



PKD	9	1	123	16	9	1	18	1	4	4	-	-	-	-	-	-	-
MLP	2	1	185	17	37	4	10	2	1	1	-	-	-	-	-	4	0
KZD	2	0	129	14	27	2	18	2	2	2	-	-	-	-	-	-	-
WYD	1	1	424	4	27	0	4	0	-	-	1	0	-	-	-	-	-
KNR	-	-	50	6	18	0	0	0	1	1	-	-	-	-	-	1	0
KSD	-	-	57	0	4	0	9	1	-	-	-	-	-	-	-	1	0

Table 7: District wise data -2023(Jan – November)

Disease	Incidents
JE	1 case in Kozhikode district ¹⁰
LS	till July 36 confirmed deaths and 53 suspected deaths in Kerala. June- 395 cases& 23 deaths, July – 149 cases and 10 deaths ¹¹ , August- 274 cases and 11 deaths, September – 210 cases and 6 deaths, October – 338 cases and 14 deaths, November(till 4) – 40 cases and 2 deaths ¹²
H1N1	January – 15 cases and 2 deaths, February – 27 cases and 1 death, March 1 to 21 – 68 cases and 1 death, June – 373 cases and 12 deaths, July – 100 cases and 3 deaths ¹³ . In August 2023, an African swine flu was identified among pigs in a private farm located in Kanicher village of Kannur ¹⁴
WN	Kozhikode – 6 cases and 2 deaths, Ernakulam – 2 cases and 1 death ¹⁵ Alappuzha – 2 cases ¹⁶
ST	Reported in Alappuzha ¹⁷
Rabies	In first five months of 2023 itself, Kerala reported around 1 lakh dog bite cases. Cases reported in each district are ¹⁸ , Thiruvananthapuram – 19854, Kollam – 14755, Pathanamthitta – 6212, Alappuzha – 10072, Kottayam – 14159, Idukki – 3831, Ernakulam – 12128, Thrissur – 14164, Palakkad – 12451, Malappuram – 6501, Kozhikode – 8893, Wayanad – 2612, Kannur – 7586, Kasargod – 3919. The number of deaths due to rabies stood at 7 during these months. Deaths occurring even after the anti-rabies vaccination increases the public concern.

DISCUSSION

Leptospirosis which is a bacterial zoonotic disease spread through the urine of infected animals especially rats¹⁹. Humans can get the infection through direct contact with urine from infected animals or through water, soil or food contaminated with their urine. The statistical data says leptospirosis is the major zoonotic disease in Kerala which killed 290 people in the year of 2022. From 2018 to 2021 even though there was a reduction in the cases, the death rate is almost similar. But in 2022 the cases and death were multiplied which is a threat to the health system.

Japanese encephalitis is also a re-emerging disease in Kerala which took life of 2 affected people out of 5. Acute encephalitis syndrome (AES) which showed same symptoms of JE even though not clinically proved also caused death of 15 people in 2018. In the next year the number of infected individuals were doubled but the death rate remained as two. For the following two years case of clinically proven JE was nil, at the same time there were cases of probable JE which resulted in death of 4 and 1 people in 2020 and 2021 respectively. In 2022 also the cases of confirmed JE were present, but could treat successfully. In contrast the cases of AES raised to 38 and 8 of the affected were dead.

Scrub typhus is an emerging zoonotic disease in Kerala caused by a rickettsial organism in human. People get infection when they visit infected ecological areas like poorly maintained kitchen garden, abandoned plantations, overgrown forest clearings, shrubby fringes of fields and forest, grassy fields, river banks and mites are also present on the body of animals such as mice and rats²⁰. we can see a gradual rise in the reported

cases of scrub typhus from 2018 to 2022. If the cases of scrub were 400 in 2018, then the number reached to 727 in 2022 and 24 of them died. even though the disease is not that much fatal, the mortality rate is increasing year by year from odd numbers to even number which actually a trend to consider seriously.

Kyasanur forest disease (KFD) is another zoonotic infection endemic to Karnataka state and it transmitted to Kerala. It first appeared in Wayanad district in Kerala and then reappeared in other districts during 2014 – 2015 years. This is a viral haemorrhagic disease caused in human by tick bites which mainly live in bodies of monkeys, that gives a second name to the disease 'monkey fever'. Direct contact with an infected animal, most importantly a sick or dead monkey increases the chances of infection. Forest dwellers, forest workers, wood collectors and livestock rearers are come under risk group²¹. After the 2014-15 incidence, the disease again appeared in 2019 and 2 out of 8 infected persons were died. The data shows that the fatality of KFD is less but the number of infected individuals is increasing each year. In 2021 and 2022 it does not caused death, but it is not a point the state can relax. Because it is not a disease which spread from human to human and from 2019 itself there is continuous reported cases of KFD which is a warning to the state pointing to the weak current precautionary methods.

H1N1 or swine flu or pig influenza is a human respiratory infection caused by an influenza strain that started in pigs. Human being gets the infection from close contact with the pigs and then it spread to human to human²². There is a considerable decrease in the cases and death rate of the flu from 2018 to 2022



but every year there is an outbreak of the disease which exists as an alarming sign to the state.

Among the prevalent zoonotic diseases rabies is the most fatal one. Since many years a lot of people especially kids lost their lives due to this deadly virus. From the data it is clear that since 2020 it has an outbreak every year which took the life of all patients infected with the virus. That is its fatality rate is 100%. People get the virus from the saliva of an infected animal. It usually transmitted through animal bite especially stray dog bite²³. The alarming rise in rabies cases point to the tremendous increase of stray dogs in the state and practice and implementation of rules to manage stray dogs is not that much fruitful.

Zika virus is a newly emerging disease in Kerala. It was first reported in 2021 from Thiruvananthapuram district of Kerala state. The number of cases reported from various districts were 90 and were survived. In the next year also, there was a re-emergence of the disease, however the number of confirmed cases were 15, which showed a considerable reduction in the occurrence rate. It was first discovered from a rhesus monkey and isolated from the Aedes mosquito in Zika forest, which is the zoonotic origin of the infection²⁴. In 2023, there is no reported cases of Zika till the date. West Nile fever is another emerging zoonosis in Kerala and it first detected in the state in 2011. After 7 years it reappeared in 2018 but the mortality rate was zero. In coming years, there were continuous outbreaks except 2020. In 2019, two were dead and in 2022 one lost the life. Birds serve as the reservoir for West Nile virus and the transmission occurs mainly through mosquitoes²⁵.

Monkey pox is also a newly emerged zoonotic disease in Kerala in 2022. The confirmed cases were 8 and out of that one person died. Since the government is trying to curtail the re-appearance of zoonotic diseases, these newly forming diseases stand as a question mark to the community health status of the state.

Last but not least is the outbreaks of Nipah. The first emergence of Nipah was in 2018 which resulted in the death of 16 people out of 18 affected with the virus. Even though there were occurrences of other zoonotic diseases in Kerala, the government and people became more vigilant about the zoonotic diseases after the attack of Nipah virus. Like rabies, its fatality rate is almost 100% which makes it as one of the prevalent zoonoses in Kerala. Later in 2019 and 2021 two more outbreaks were happened in the state. In both years, only one case was reported. In 2021 the affected individual died. The state's effective coordination of health department was the cause behind the reduced mortality of Nipah outbreaks. They could find the reservoir of virus as fruit bats even after one or two reported cases which helped to implement effective isolation and thereby to reduce further spread of the infection²⁶. In Kerala, it appeared continuously in 2018 and 2019 in Kozhikode district, but in 2021 its origin was in Malappuram district. The latest outbreak is in the current year of 2023. 6 cases were reported again in Kozhikode and two of the diseased were died.

CAUSES OF EMERGENCE AND REEMERGENCE

1. Ecological changes – due to the increase in human population, they are forced to invade the unexploited territories of natural resources by construction of roads, artificial lakes, dams etc which finally result in deforestation. Large scale expansion of agricultural resources and unsustainable land-use patterns lead to alteration in the feeding habits of the blood sucking vectors and changes in the population of reservoir animals. Pathogens of zoonotic diseases naturally exist in the ecosystem. The unnatural stress on the ecosystem created by deforestation or people entering wild habitats for agro-forestry purposes could trigger or even bring diseases to human habitations². A recent example is Nipah Virus, caused by fruit bats taking over agricultural products and causing food-borne zoonosis in Kerala²⁷.

2. Natural geographical specifications of Kerala - Kerala is enriched with rich wetlands and uncountable waterbodies that keep the state's greenery alive. Such places are the main habitats for flocks of migratory birds which cause transmission of zoonotic diseases such as avian flu from wild to domestic bird populations.²⁷

3. Destruction of natural habitat – urbanization and industrialisation have largely affected the existence of natural habitats of wild animals such as monkeys, bats, and civet cats which have forced them to move to domestic habitations and establish new interfaces with human beings. And these new interfaces lead to the spread of zoonotic diseases. The recent incidents of appearance of wild animals in Kerala's domestic areas which naturally live in inner forest is an example of this. It may result in the transmission of disease pathogens to domestic animals.²⁸

4. Global warming & Climate change - It plays an important role in the spread of zoonotic diseases. There is an individual ideal temperature for breeding and growth of each vector and host vertebrates. If the atmospheric temperature of a place, which was earlier unsuitable for these hosts, turns favourable due to global warming and associated weather changes, the pathogen and the vector will grow there. This will lead to the spread of such diseases in new areas. When coming to Kerala, since some years the weather conditions are becoming unpredictable and the seasonal changes are unnatural. The flood occurred in 2018 is an example of this change. These all may become favourable environment for the growth of pathogens.²⁹

5. Handling animal by-products and wastes (occupational hazards) – The disease rate in workers, who are in close contact with animals during the course of their occupation, is higher than the rest of the population, e.g., anthrax in carpet weavers, livestock raisers and workers with animal hair in the textile industry, tick borne diseases in wood cutters, salmonellosis in food processors, bovine tuberculosis in farmers etc.³⁰

6. Increased animal population & trading - Countries which import animals, wool, bone meal, meat, etc. from an area where some of the zoonoses are endemic, are likely to introduce the disease into their territories, e.g., salmonellosis, anthrax, etc. In Kerala there are about 18 animal check posts through which



animals are imported from nearby states for many purposes. It is a major cause for emergence of new infections in Kerala.³⁰ In addition, Rabies was the result of stray dogs and other rabid animals ravaging freely and attacking people, leading to outbreaks of the disease. Over the past 5 years, the number of dogs infected with rabies has doubled in Kerala³¹. Mismanagement of street dogs, including disruption of vaccination and birth control activities, has also played a role in the development of this problem.

7. Improper food practice - it is a fact that the Kerala people largely depends on animal protein as a part of their diet. Experts' opinion that this has increased the prevalence and re-emergence of viral pathogens.³²

CONCLUSION AND RECOMMENADATIONS

In conclusion, the rising incidence of zoonotic diseases in Kerala underscores the urgency of developing comprehensive strategies to mitigate their impact on public health. According to the multifaceted analysis presented in this paper, ecological changes, climate variability, habitat destruction, and human behaviour all play a significant role in promoting the emergence and re-emergence of these diseases. There is a need for proactive measures to curtail the spread of zoonotic pathogens as Kerala struggles to address this significant public health issue.

In order to mitigate the risk of disease transmission, wildlife conservation efforts should be strengthened, sustainable land management practices should be implemented, and animal trade should be regulated. It is possible to prevent the entry of diseases into the state by strengthening check-posts by posting veterinary doctors and implementing point-of-care testing methods. To reduce the number of infected stray dogs and thereby to prevent Rabies, local municipalities need to be strengthened in terms of resources and funding for the development of effective control measures. The number of ABC centres should be increased and their activities should be monitored thoroughly.

Foodborne zoonoses should be reduced through public awareness campaigns that emphasize the importance of proper food handling and preparation. It is also essential to invest in research that will enable us to understand the evolving nature of zoonotic diseases and their transmission patterns in order to guide evidence-based interventions. In order to address this pressing issue successfully, more impactful collaboration between governmental agencies environmentalists, healthcare professionals, and the community is imperative.

Kerala now itself serve as an example for other regions by effective management of Nipah outbreak and can be a complete model for other states by implementing these recommendations in order to safeguard public health, protect the unique biodiversity of the region, and promote the health of its citizens.

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PSYCHOLOGICAL IMPACT OF SHARENTING: A COMPREHENSIVE REVIEW

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ABSTRACT

In the digital age, the practice of sharenting, where parents share their children's photos and personal information on social media, has become ubiquitous. This article presents a comprehensive review of the psychological impact of sharenting, delving into the motivations behind it, the types of content shared, and its consequences on children's privacy, self-esteem, and parent-child relationships. It explores the ethical considerations and offers guidelines for responsible sharenting practices, emphasizing the importance of protecting children's digital privacy.

KEYWORDS: Sharenting, Parenting, Social Media, Children's Privacy, Psychological Impact, Cybersecurity, Online Identity, Digital Footprint, Digital Literacy

INTRODUCTION

In the modern era, digital technology and social media have redefined the way we share, connect, and construct our personal narratives. At the heart of contemporary parenting lies "sharenting," a portmanteau of "sharing" and "parenting," which refers to the practice of parents sharing their children's photos, videos, and personal information on social media. Sharenting, though popular, has raised critical questions about the privacy, self-esteem, and overall well-being of the children who find themselves at the center of their parents' digital narratives.

The rise of sharenting is undeniable, with parents utilizing various social media channels to document and share their children's lives, from monumental milestones to everyday moments. Motivated by the desire to connect, share joy, and seek social validation, parents find gratification in sharing these moments on social media. Furthermore, this article elucidates the psychological motivations underpinning sharenting, unraveling the complex interplay of parenting, digital culture, and the satisfaction derived from constructing an online identity closely intertwined with one's children.

Beyond motivations, sharenting practices encompass a diverse array of posts, ranging from photographs and videos to personal anecdotes and achievements, contributing to the children's digital footprint. The types of content shared, the extent to which they become part of a child's digital identity, and the implications thereof form the second crucial dimension of this examination. As the prevalence of sharenting continues to grow, a comprehensive understanding of its implications is imperative. The psychological and emotional effects on children, the ethical considerations surrounding sharenting, and the responsible practices parents should adopt constitute the core themes of this review. Consequently, the subsequent

sections delve into these areas, shedding light on the intricate dynamics of sharenting and its multifaceted consequences for the youngest participants in this digital narrative.

SECTION 1: SHARENTING PRACTICES

Motivations for Sharenting

The motivations behind sharenting are multifaceted. Parents are driven by a desire to connect with others, seek affirmation, and construct a digital record of their children's lives. In the digital age, sharing on social media provides a sense of belonging and satisfaction, and this section delves into the psychological fulfillment that parents derive from sharenting. While sharenting can be a means of connecting with friends and family, it can also serve as a way for parents to receive validation and praise for their parenting efforts. Understanding these motivations is vital in comprehending the practice and its effects on both parents and children.

Types of Sharenting Posts

Sharenting encompasses a wide range of content, from photographs and videos capturing memorable moments to personal anecdotes and updates on a child's achievements. These posts not only offer a window into the child's life but also contribute to their digital footprint. This section delves into the types of content shared on social media platforms, highlighting the extent to which they shape the child's online identity. It also addresses the implications of creating a digital presence for children, which may have long-term consequences.

SECTION 2: PSYCHOLOGICAL IMPACT ON CHILDREN

Children's Privacy

Sharenting has far-reaching implications for a child's privacy. It creates a digital footprint for children, often without their



consent, which includes personal information and images. This section explores the concept of a digital footprint, its potential risks and vulnerabilities, and the legal and ethical considerations surrounding the protection of children's digital privacy. The article emphasizes the need for legal safeguards and ethical guidelines to protect children's digital privacy.

Self-esteem and Identity

Sharenting can influence a child's self-esteem and self-identity. The public sharing of a child's life can lead to exposure to comparisons with others and judgments, which can affect their self-worth. This section delves into the psychological implications of sharenting on a child's self-concept and its potential influence on peer relationships. Children may experience teasing or bullying based on what is shared online, and their online presence can significantly impact their social interactions.

Parent-Child Relationships

The dynamics of parent-child relationships are a critical aspect of sharenting. Trust, consent, and autonomy are essential elements in maintaining a healthy parent-child bond. This section explores the importance of parental consent and child autonomy in determining what is shared. Effective communication and open dialogue between parents and children about sharenting are crucial for mutual understanding, setting boundaries, and addressing any concerns the child may have. Parent-child relationships must be built on trust, respect, and open communication, ensuring that sharenting practices do not compromise these vital aspects.

SECTION 3: RESPONSIBLE SHARENTING PRACTICES

Ethical Considerations

Responsible sharenting involves finding a balance between sharing cherished moments and protecting a child's privacy. Ethical dilemmas arise when parents decide what to share and what to keep private. This section delves into the ethical considerations surrounding sharenting, emphasizing the need to navigate the fine line between parental sharing and safeguarding children's digital privacy. The right to digital privacy for children should be respected, and parents play a pivotal role in ensuring this.

Guidelines for Responsible Sharenting

Practical guidelines for responsible sharenting are imperative. Setting clear boundaries and guidelines for sharenting is essential for parents to navigate the complexities of sharing their child's life on social media. This section offers advice on establishing these boundaries, understanding the potential consequences of sharenting on children, and safeguarding children's digital identities. It emphasizes the importance of educating parents about the potential effects of sharenting on their children's privacy, self-esteem, and overall well-being.

SECTION 4: FUTURE DIRECTIONS AND RECOMMENDATIONS

Education and Awareness

Promoting digital literacy is crucial in the context of sharenting. This section highlights the need to integrate education on digital literacy into school curricula and parenting programs. Children and parents should be informed about the potential consequences of sharing personal information on social media. Schools and parenting programs can play a vital role in educating individuals about responsible sharenting and the importance of respecting children's digital privacy.

Technology and Security Measures

Protecting children's data in the digital age requires robust technology and security measures. This section explores the role of technology in safeguarding children's data and the responsibility of social media platforms in ensuring the privacy of shared content. Social media platforms should actively contribute to protecting children's privacy, providing tools and resources for parents to control the visibility of shared content.

CONCLUSION

Summarizing Key Findings

In summary, sharenting is a complex and multifaceted practice with both positive and negative consequences. Responsible sharenting involves navigating the benefits of sharing cherished moments while protecting children's privacy and well-being. It is imperative to balance the advantages and risks associated with sharenting, taking into account the rights and digital privacy of children.

The Road Ahead

Looking toward the future, it is essential to nurture a responsible digital culture where the rights and privacy of children are respected. While acknowledging the concerns surrounding sharenting, we should also recognize the positive aspects, such as staying connected with distant family and friends and preserving memories.

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A BRIEF STUDY OF INTERNATIONAL LAW IN THE AGE OF CYBERSECURITY

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ABSTRACT

The rapid evolution of cyberspace has transformed the global landscape, giving rise to a complex and interconnected digital realm. As nations and individuals increasingly rely on digital technologies, the need to establish a robust framework for cybersecurity within the realm of international law has become paramount. This paper explores the evolving landscape of international law in the age of cybersecurity, focusing on key challenges, developments, and the imperative for international cooperation. The digital domain transcends geographical boundaries, making traditional notions of state sovereignty and jurisdiction inadequate for addressing cyber threats. This has necessitated the development of international norms and regulations to govern cyberspace. The paper delves into the prominent developments in international law, including the Tallinn Manual and the United Nations Group of Governmental Experts, which have sought to clarify the application of existing legal principles to cyberspace. Cybersecurity challenges such as state-sponsored cyberattacks, cyber espionage, and the weaponization of information have strained the existing framework of international law. The paper discusses the critical need for a consensus on defining cyberattacks and determining proportionate responses in accordance with the principles of self-defense and the law of armed conflict. Furthermore, this paper emphasizes the importance of international cooperation and the role of multilateral organizations in promoting cyber stability. It explores the potential for global cyber norms and confidence-building measures to enhance international security and reduce the risk of cyber conflict. However, as the digital age continues to reshape the global landscape, the adaptation and evolution of international law in response to cybersecurity challenges is imperative. The paper highlights the ongoing developments and challenges in this arena, underscoring the necessity for collaborative efforts among nations to establish a secure and stable digital environment for all.

KEYWORDS: Cybersecurity, International Law, Cyberspace, Norms, Cooperation

INTRODUCTION

In our increasingly interconnected world, the rapid proliferation of digital technologies has ushered in an era where the boundaries of physical space no longer define the extent of human activity. The advent of the internet and the pervasive use of digital systems have transformed the way individuals, organizations, and nations interact, communicate, and conduct business. However, with these technological advancements comes a new frontier of challenges, most notably in the realm of cybersecurity. The age of cyberspace has given rise to a complex web of legal, ethical, and strategic dilemmas that transcend traditional territorial and jurisdictional boundaries, necessitating the evolution of international law to address these novel issues.

The intersection of international law and cybersecurity is a dynamic and rapidly evolving field, demanding a nuanced understanding of both the digital landscape and the principles of law that govern it. This domain encompasses a wide array of issues, from state-sponsored cyberattacks and cybercrime to data privacy and the regulation of emerging technologies like artificial intelligence and quantum computing. As the world becomes increasingly reliant on interconnected digital systems for critical infrastructure, communications, and economic

transactions, the need for a robust legal framework to safeguard against cyber threats has become paramount.

This paper seeks to explore and analyze the multifaceted dimensions of international law as they pertain to the ever-evolving landscape of cybersecurity. Through a comprehensive examination of treaties, conventions, state practices, and evolving norms, this work aims to provide a comprehensive overview of the current state of international law in addressing cyber threats and incidents. Furthermore, it delves into the challenges faced by the international community in harmonizing disparate national approaches to cybersecurity and balancing the imperatives of national security with the protection of individual rights and global stability.

In the following paper, we will delve into the complexities of state responsibility in cyberspace, the attribution of cyberattacks, the role of non-state actors, and the challenges of enforcing international cyber norms. Additionally, we will explore the potential for diplomatic and legal mechanisms to manage cyber conflicts and foster international cooperation in this critical domain. By examining the evolving contours of international law in the age of cybersecurity, this paper aims to contribute to the ongoing discourse surrounding the



development of a cohesive and effective international framework to navigate the challenges of the digital age.

INTERNATIONAL LAW AND CYBERSECURITY

International law plays a crucial role in addressing the challenges posed by cybersecurity. As our world becomes increasingly interconnected and reliant on digital technology, the need for a legal framework to govern cyberspace and protect nations from cyber threats has become evident. Here's an overview of how international law intersects with cybersecurity:

Sovereignty: The principle of state sovereignty is a fundamental aspect of international law. In the context of cybersecurity, it means that a nation has the right to regulate and control the activities within its own cyberspace. Cyberattacks on a nation's critical infrastructure or cyber espionage can be seen as violations of this principle.

Treaties and Agreements: There are various international agreements and treaties that address cybersecurity issues. One of the most notable is the Budapest Convention on Cybercrime, which promotes international cooperation in investigating and prosecuting cybercrime.¹ Additionally, the United Nations has been working on developing norms and rules for responsible state behavior in cyberspace, although these efforts are still evolving.

Attribution: One of the challenges in cyberspace is attributing cyberattacks to specific actors or states. International law plays a role in establishing rules and procedures for attributing cyber incidents.² For instance, states may rely on technical evidence, intelligence sharing, or diplomatic channels to attribute cyberattacks and hold responsible parties accountable.

Use of Force and Self-Defense: The use of force in cyberspace is a complex issue in international law. States have the right to self-defense under Article 51 of the United Nations Charter. However, determining when a cyberattack constitutes an armed attack and justifies a self-defense response can be challenging. The Tallinn Manual 2.0, a non-binding legal framework, provides guidance on how international law applies to cyber conflicts.³

Human Rights: International human rights law applies to cyberspace, ensuring that individuals' rights to privacy and freedom of expression are protected online. Surveillance and

censorship measures by states must comply with these principles, as established in various international treaties and conventions.

Diplomacy and Cooperation: Diplomatic efforts and cooperation between nations are essential in addressing cybersecurity challenges. States often engage in bilateral or multilateral discussions to share information, develop norms of responsible behavior, and coordinate responses to cyber incidents.⁴

Cybersecurity Capacity Building: International organizations and developed nations may provide support to less developed countries in building their cybersecurity capabilities. This can include technical assistance, training, and capacity-building programs to help nations protect their critical infrastructure and combat cybercrime.

Non-State Actors: International law not only governs the actions of states but also increasingly addresses the activities of non-state actors, such as cybercriminals and hackers. States may be held responsible for failing to prevent or respond to cyberattacks originating from within their territories.⁵

Moreover, the above landscape of international law in cyberspace is still evolving, and challenges persist in achieving consensus on certain issues. The application and interpretation of existing laws to new cyber threats continue to be a subject of debate and negotiation among states and international organizations.⁶ Nevertheless, international law provides a crucial framework for addressing cybersecurity challenges and promoting stability and security in cyberspace.

CHALLENGES AND GAPS

While international law is beginning to address cybersecurity challenges, several significant challenges and gaps still exist in effectively governing cyberspace. These challenges and gaps include:

Definition of Aggression: Determining when a cyber operation constitutes an act of aggression, justifying a state's use of force in self-defense, remains a contentious issue. International law does not provide clear criteria for classifying cyber incidents as acts of war, which can lead to ambiguity and uncertainty in responding to cyberattacks.⁷

Norms and Rules: While there have been efforts to develop norms of responsible state behavior in cyberspace, these norms are not legally binding, and there is no universal agreement on

¹ Nye, J. S. "Cyber Power." 36(2), "International Security," 7-40, 2011.

² Fidler, D. P. "The Fog of Cyberwar: Why the Laws of War Do Not Apply." 12, Yale Journal of International Affairs, 97-109, 2017.

³ Liis Vihul. "Applicability of International Law to State Behavior in Cyberspace: A Critical Survey." 12(2), "Chinese Journal of International Law," 331-366, 2013.

⁴ Ohlin, J. D. "Cybersecurity and International Law: The Role of the United Nations." 29, Connecticut Journal of International Law, 201-236, 2013.

⁵ Rid, T., & Buchanan, B. "Attributing Cyber Attacks." 38(1-2), Journal of Strategic Studies, 4-37, 2015.

⁶ Fidler, D. P. "The Fog of Cyberwar: Why the Laws of War Do Not Apply." 12, Yale Journal of International Affairs, 97-109, 2017.

⁷ Luk, S. C. Y. *Strengthening cybersecurity in Singapore: challenges, responses, and the way forward.* In R. Abassi, & A. B. Chehida Douss, *Security frameworks in contemporary electronic government* 96-128, 2019.



what constitutes acceptable behavior. States often interpret and apply these norms differently, leading to inconsistent practices.

Arms Control and Disarmament: There is a lack of international agreements akin to arms control or disarmament treaties that specifically address cyber weapons. This gap leaves open the possibility of a cyber arms race and the development of increasingly sophisticated cyber capabilities.⁸

Enforcement and Accountability: International law's effectiveness depends on states' willingness to abide by and enforce its provisions. In cyberspace, there are challenges in holding states accountable for cyberattacks, particularly when they are state-sponsored but not officially acknowledged. The lack of an international enforcement mechanism is a notable gap.

Cross-Border Jurisdiction: Determining jurisdiction in cyberspace is complex, especially when cybercrimes and cyberattacks span multiple jurisdictions. International law struggles to provide clear guidance on which state has the authority to investigate and prosecute such cases.⁹

Private Sector Involvement: Cyberspace is primarily owned and operated by private entities, which often fall outside the direct scope of international law. Cooperation between states and the private sector is crucial, but the legal framework for this cooperation is still evolving.

Response to Non-State Actors: International law is traditionally designed for interactions between states. However, many cyber threats, such as those from cybercriminal organizations and hacktivists, involve non-state actors. Developing effective legal mechanisms to address non-state cyber threats remains a challenge.¹⁰

Digital Espionage: While some forms of cyber espionage may be seen as violations of international law, the line between cyber espionage and legitimate intelligence-gathering activities is blurry. States often engage in cyber espionage, making it difficult to establish clear norms and rules in this area.

Divergent National Approaches: States have varying interests, capacities, and approaches to cybersecurity.¹¹ Achieving consensus on international norms and rules can be

challenging when states have different priorities and views on cyber issues.

Addressing these challenges and gaps in international law and cybersecurity requires ongoing diplomatic efforts, cooperation among states, and the development of internationally agreed-upon norms and principles. Additionally, the involvement of relevant stakeholders, including governments, the private sector, and civil society, is crucial for building a more robust legal framework for cyberspace governance.

EMERGING NORMS AND INITIATIVES

As the field of international law and cybersecurity continues to evolve, several emerging norms and initiatives have been developed to address the challenges and gaps in governing cyberspace. These efforts aim to promote responsible state behavior, enhance cybersecurity, and ensure stability in the digital domain.¹² Here are some notable emerging norms and initiatives in international law and cybersecurity:

The United Nations Group of Governmental Experts (UN GGE): The UN GGE is a forum of experts from various countries that works to develop consensus-based norms, rules, and principles for responsible state behavior in cyberspace. While their reports are not legally binding, they have contributed to shaping international discussions on cyber norms and security.¹³

The United Nations Open-Ended Working Group (OEWG): In addition to the GGE, the UN established the OEWG to further explore and advance discussions on international norms and rules for cyberspace. The OEWG focuses on the development of a new international treaty on cybersecurity.¹⁴

The Paris Call for Trust and Security in Cyberspace: The Paris Call, initiated by the French government, is a multi-stakeholder initiative that encourages governments, companies, and civil society to commit to common principles for securing cyberspace. Signatories agree to work together on issues like preventing cyberattacks on critical infrastructure and protecting individuals' rights.¹⁵

The Global Commission on the Stability of Cyberspace (GCSC): The GCSC is an independent organization that seeks to develop norms and policies to enhance the stability and

⁸ Denning, D. E. *Cyberterrorism: The Logic Bomb versus the Truck Bomb*. 2(4), *Global Dialogue*, 29–37, 2000.

⁹ Vergne J., Duran R. *Cyberspace et Organisations Virtuelles L' état Souverain at-Il Encore un Avenir? [Cyberspace and "Virtual" Organizations: Does the Sovereign State Still Have a Future? 1 (14), Regards Croisés sur L'Économie*, 126–39, 2014.

¹⁰ Teplinsky M. *Fiddling on the Roof: Recent Developments in Cybersecurity*. 2 (2), *American University Business Law Review*, 225–322, 2013.

¹¹ Tranter K. *Nomology, Ontology, and Phenomenology of Law and Technology*. 2 (8), *Minnesota Journal of Law Science & Technology*, 449–74, 2007.

¹² Schatz D., Bashroush R., Wall J. *Towards a More Representative Definition of Cyber Security*. 12 (2), *The Journal of Digital Forensics, Security and Law*, 53–74, 2017.

¹³ *Convention on Certain Conventional Weapons – Group of Governmental Experts on Lethal Autonomous Weapons Systems*, https://en.wikipedia.org/w/index.php?title=Convention_on_Certain_Conventional_Weapons_%E2%80%93_Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems&oldid=1070768862 (last visited Nov. 12, 2023).

¹⁴ *Intergovernmental Negotiations framework*, https://en.wikipedia.org/w/index.php?title=Intergovernmental_Negotiations_framework&oldid=1096959737 (last visited Nov. 12, 2023).

¹⁵ *Paris Peace Forum*, https://en.wikipedia.org/w/index.php?title=Paris_Peace_Forum&oldid=1177736782 (last visited Nov. 12, 2023).



security of cyberspace. It has proposed a set of norms, including a call to protect the public core of the Internet and to avoid tampering with the routing and addressing of the Internet.¹⁶

The Tallinn Manual 2.0: While not an official treaty or norm-setting initiative, the Tallinn Manual 2.0 is a comprehensive guide on how existing international law applies to cyber operations and conflicts. It provides legal interpretations and principles for state behavior in cyberspace.¹⁷

The Cybersecurity Tech Accord: This is a voluntary initiative involving leading technology companies that commit to protecting users and customers from cyberattacks and ensuring the integrity and security of digital products and services.¹⁸

Regional Initiatives: Various regional organizations and alliances have also developed cybersecurity initiatives. For example, the European Union has established the Network and Information Security Directive, which sets cybersecurity standards and cooperation mechanisms among EU member states.

Bilateral Agreements: Many countries have engaged in bilateral agreements and negotiations to address cybersecurity concerns and promote responsible state behavior in cyberspace.¹⁹ These agreements often focus on information sharing, confidence-building measures, and cooperation in responding to cyber incidents.

National Cybersecurity Strategies: Many countries have developed or updated their national cybersecurity strategies to address evolving cyber threats. These strategies often outline a nation's approach to cybersecurity, including legal and policy frameworks.²⁰

Capacity Building: International organizations and developed countries provide support to less developed nations in building their cybersecurity capabilities. Capacity-building initiatives aim to help countries strengthen their cybersecurity infrastructure, legal frameworks, and human resources. These emerging norms and initiatives represent ongoing efforts to establish a more stable and secure cyberspace governed by international law. However, achieving consensus and widespread adherence to these norms remains a challenge, and the field of international law and cybersecurity continues to evolve as new threats and technologies emerge.

¹⁶ Global Commission on the Stability of Cyberspace, https://en.wikipedia.org/w/index.php?title=Global_Commission_on_the_Stability_of_Cyberspace&oldid=1139385541 (last visited Nov. 12, 2023).

¹⁷ Tallinn Manual, https://en.wikipedia.org/w/index.php?title=Tallinn_Manual&oldid=1123460199 (last visited Nov. 12, 2023).

¹⁸ Trend Micro, https://en.wikipedia.org/w/index.php?title=Trend_Micro&oldid=1184693310 (last visited Nov. 12, 2023).

¹⁹ Vergne J., Duran R. *Cyberspace et Organisations Virtuelles L'état Souverain at-Il Encore un Avenir? [Cyberspace and "Virtual" Organizations: Does the Sovereign State*

RECOMMENDATIONS FOR STRENGTHENING INTERNATIONAL COOPERATION

Strengthening international cooperation in the realm of international law and cybersecurity is essential to address the growing challenges and threats in cyberspace effectively. Here are several recommendations for enhancing such cooperation:

Promote Multilateral Diplomacy

- Encourage regular and structured multilateral discussions among nations to foster cooperation and consensus on cyber norms, rules, and principles.
- Support existing international forums, such as the United Nations Group of Governmental Experts (UN GGE) and the Open-Ended Working Group (OEWG), for inclusive discussions on cybersecurity issues.²¹

Develop and Promote Norms of Responsible State Behavior

- Advocate for the adoption of clear and universally accepted norms of responsible state behavior in cyberspace, including norms related to critical infrastructure protection and the prevention of cyberattacks on civilian targets.
- Emphasize the importance of adherence to existing international law, such as the UN Charter, in the context of cyber conflicts.

Strengthen Attribution Capabilities

- Enhance international cooperation in cyber attribution, information sharing, and the exchange of threat intelligence to identify cyber threat actors more effectively.
- Develop and implement internationally recognized standards and procedures for attributing cyberattacks.²²

Establish Confidence-Building Measures (CBMs)

- Encourage the adoption of CBMs, such as agreements for rapid communication in case of cyber incidents, to reduce the risk of misunderstandings and escalation.
- Promote transparency in national cybersecurity policies and strategies.

Facilitate Capacity Building

- Support capacity-building efforts in less developed countries to enhance their cybersecurity capabilities,

Still Have a Future? 1 (14), Regards Croisés sur L'Économie, 126–39, 2014.

²⁰ National Strategy to Secure Cyberspace, https://en.wikipedia.org/w/index.php?title=National_Strategy_to_Secure_Cyberspace&oldid=1146352962 (last visited Nov. 12, 2023).

²¹ Orji U. J. *The African Union Convention on Cybersecurity: A Regional Response Towards Cyber Stability*. 12 (2), *Masaryk University Journal of Law and Technology*, 91–129, 2018.

²² O'Connell M. *Cyber Security Without Cyber War*. 17 (2), *Journal of Conflict & Security Law*, 187–209, 2012.



including legal frameworks, technical expertise, and incident response capabilities.

- Establish mechanisms for knowledge sharing and technical assistance between more advanced and less advanced nations.

Engage the Private Sector and Civil Society

- Foster collaboration between governments, private sector organizations, and civil society to address cybersecurity challenges comprehensively.
- Encourage industry self-regulation and the adoption of best practices for cybersecurity.²³

Establish Rapid Response Mechanisms

- Develop international mechanisms for swift and coordinated responses to cyber incidents that may have significant international implications, such as large-scale cyberattacks or data breaches.

Promote Cyber Diplomacy Training

- Provide training and education for diplomats and international actors on the intricacies of cyber issues, international law, and diplomatic negotiations in cyberspace.

Encourage Voluntary Codes of Conduct

- Encourage nations and relevant stakeholders to voluntarily adopt codes of conduct that promote responsible behavior in cyberspace and respect for international law.²⁴

Expand Public-Private Partnerships

- Facilitate public-private partnerships to share information on emerging threats, vulnerabilities, and best practices for cybersecurity.
- Engage technology companies, academic institutions, and civil society organizations in collaborative efforts to enhance cybersecurity.

Foster Regional Cooperation

- Promote regional cooperation on cybersecurity issues by facilitating dialogue and information sharing among neighboring countries.
- Encourage regional organizations to develop cybersecurity frameworks and mechanisms tailored to the specific needs of their regions.²⁵

Advocate for Accountability

- Call for accountability for state-sponsored cyberattacks and violations of international law in cyberspace through diplomatic channels, sanctions, or legal actions.

Strengthening international cooperation in cybersecurity is an ongoing and complex process that requires diplomatic efforts, trust-building, and a commitment to shared principles and norms.²⁶ Collaboration among nations and various stakeholders is essential to create a more secure and stable cyberspace governed by international law.

CONCLUSION

Finally, in the age of cybersecurity, international law stands at a critical juncture, grappling with the challenges posed by the digital revolution. Cyberspace knows no borders, and the interconnectivity it offers has created tremendous opportunities for innovation and global cooperation. However, it has also exposed vulnerabilities that demand robust legal frameworks and international cooperation. The emergence of norms and initiatives, such as those by the United Nations and regional organizations, signifies progress in shaping responsible state behavior in cyberspace. Yet, significant gaps persist, notably in attribution, enforcement mechanisms, and consensus on definitions. As cyber threats evolve, the international community must adapt swiftly to address these deficiencies. In this context, fostering multilateral diplomacy, strengthening attribution capabilities, and promoting capacity building are essential steps. International law can provide the foundation for peaceful, secure, and accountable conduct in cyberspace. Success in this endeavor hinges on the willingness of nations to collaborate, the active engagement of the private sector and civil society, and the commitment to upholding the principles of sovereignty, human rights, and accountability.

The future of international law in the age of cybersecurity relies on collective efforts to construct a cohesive legal framework, facilitating cooperation, and mitigating the risks inherent in the digital era. Only through sustained dedication and collaboration can we ensure that cyberspace remains a force for progress and security in the international community.

²³ Niemann K. *Unternehmensarchitektur und Digitalisierung: Eine Disziplin im Wandel [Enterprise Architecture and Digitalization: A Discipline in Change]*. 55 (5), *HMD Praxis der Wirtschaftsinformatik*, 907–27, 2018.

²⁴ N. Kshetri (2009) *Positive Externality, Increasing Returns and the Rise in Cybercrimes*. 52 (12), *Communications of the ACM*, 2009.

²⁵ Mitrakas A. *The Emerging EU Framework on Cybersecurity Certification*. 42, *Datenschutz und Datensicherheit*, 411–4, 2018.

²⁶ Markopoulou D., Papakonstantinou V., de Hert P. *The New EU Cybersecurity Framework: The NIS Directive, ENISA's Role and the General Data Protection Regulation*. 35 (6), *Computer Law & Security Review*, 1–11, 2019.



HOW MARRIED AND UNMARRIED FEMALE STUDENTS OF KERALA DIFFERS IN THEIR ACADEMIC CONFIDENCE AND SUBJECTIVE WELL-BEING?

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ABSTRACT

The purpose of the present study was to find out whether there exists any significant difference in Academic Confidence and Subjective Well-being of female students of Kerala and to find out the relation between both. The sample of the study consisted of 100 female students who undergo various regular courses across Kerala. The data were collected using Academic Confidence Scale (Hameed & Safiya, 2017) and Subjective Well-being Inventory (Hameed & Safiya, 2017). The statistical analysis consisted of computation of Descriptive statistics, Mean Difference Analysis and Correlation Analysis. Result of the study shows that there exists no significant difference in Academic Confidence and Subjective Well-being of married and unmarried female students of Kerala with respect to marital as well as economic status and their Academic Confidence and Subjective Well-being are moderately correlated.

KEY WORDS: Academic Confidence, Subjective Well-being

It is often considered that marriage and higher studies are not so easy to go hand in hand that most of women drop their higher studies in half way. Early marriage and child bearing is one among the most frequently quoted stumbling blocks to female education (Singh, 2007). Though there are progressive changes in the status of women in higher education in India over years, certain challenges and difficulties still exists. The gender role expectation associated with women demand them to accept the care taker role, of everyone in the family especially the kids and the old age one. It compels women to prioritize domestic activities over education. Even male partner enjoys the privilege of being taken care.

Besides the expected gender roles, there are many such factors that hinders a student mother's way to higher education; she may enthusiastically embrace the simultaneous roles of mother and student; however, undertaking these two roles, even in ideal conditions, can pull one person in two directions; prejudice towards student mothers and the labelling of them as non-productive stimulate avoidance behaviours and a discriminatory allocation of educational resources to other students. (Springer et al., (2009). Therefore, student mothers avoid bringing their child with them or hide their parenting roles. Williams et al., (2006)

In spite of these hurdles those who come for higher studies are so motivated that they manage both houses hold activities and studies at the same time. They compromise a lot, and adjust often. Many potential areas of stress exist for the married college women; the ability to manage multiple roles becomes imperative to avoid strain (Van Meter & Agronow, 1892). In their study Nijimbere and Hussain (2017) says that married graduate students experience higher academic stress than

unmarried ones. Since one's well being is negatively correlated to stress, married students need to acquire the skill of adapting to stress and to device more coping strategies.

Academic Confidence is defined as a student's belief about performing a task at a particular level in order to attain a specific academic goal (Sander & Sanders, 2005). Self efficacy and self reliance make one to be confident in her academics. A confident student can tackle the problems and stressors she faces during her studies and thus can promote a sense of well being in her. Subjective Wellbeing is people's evaluation of their own lives, which may be cognitive or may consists of the frequency with which they experience positive and negative emotions (Diener, Suh, & Oishi, 2006). The negative emotions associated with the stress can have an effect on the Subjective Wellbeing of students.

The present study aims to find out whether there exists any significant difference in Academic Confidence and Subjective Well-being of female students of Kerala with respect to their marital status and economic status. Since both the constructs; Academic Confidence and Subjective Wellbeing are closely related to the learners' accomplishments, it was worth analysing the correlation between the variables.

OBJECTIVES OF THE STUDY

The study is having the following objectives.

- To find out the level of Academic Confidence among female students of Kerala enrolled in different academic courses.
- To find out the level of Subjective Wellbeing among female students of Kerala enrolled in different academic courses.



- To study whether there exists any significant difference in Academic Confidence of female students of Kerala with respect to their marital status and economic status.
- To study whether there exists any significant difference in Subjective Wellbeing of female students of Kerala with respect to their marital status and economic status.
- To analyse the relation between Academic Confidence and Subjective Wellbeing among female students of Kerala enrolled in different academic courses.

HYPOTHESES OF THE STUDY

The following three hypotheses are set for the study.

- There will be no significant difference in Subjective Wellbeing of female students of Kerala with respect to their marital status and economic status.
- There will be no significant difference in Academic Confidence of female students of Kerala with respect to their marital status and economic status.
- There will be no significant relationship between Academic Confidence and Subjective Wellbeing among female students of Kerala enrolled in different academic courses.

MATERIALS AND METHODS USED

Present study comes under the purview of Descriptive Research Design, and particularly Descriptive Survey Method was opted.

Sample of the Study

Sample size of the study is confined to 100 female students enrolled in different academic courses. Convenient sampling was the sampling technique used for the selection of the sample.

Tools Used for the Study

Main tools used were General Data Sheet, Scale of Academic Confidence (Hameed & Safiya, 2017) and Subjective Wellbeing Inventory (Hameed & Safiya, 2017).

Statistical Techniques Used

Computation of Frequencies and percentages, Mean Difference Analysis using Paired sample t test, Socio Demographic Analysis using Independent sample t test, and Pearson's correlation Analysis were the statistical techniques for analysing the data.

RESULTS AND DISCUSSIONS

The following tables show the results, Frequencies and percentages showing the level of Academic Confidence among female students in Kerala are presented in Table 1.

Table 1
Frequencies and Percentages Showing the Level of Academic Confidence among Female Students in Kerala

Levels	Frequency	Percentage
High	38	38%
Average	50	50%
Low	12	12%

From Table 1, presenting the levels of Academic Confidence, half of the sample is having average level of Academic Confidence; 38% are with high level of confidence, and 12% are with low level of Academic Confidence.

Frequencies and percentages showing the level of Subjective Wellbeing among female students are presented in Table 2.

Table 2
Frequencies and Percentages Showing the Level of Subjective Wellbeing among Female Students in Kerala

Levels	Frequency	Percentage
High	18	18%
Average	64	64%
Low	18	18%

The same numbers of samples, i.e., 18 %, show high and low level of subjective wellbeing, 64% of the sample found to be with average level of subjective well being.

Comparison of Academic Confidence of female students with respect to their marital status is presented in Table 3.

Table 3
Comparison of Academic Confidence of Female Students with Respect to their Marital Status

Sl. No.	Type of Family	N	Mean	SD	t - value
1.	Married	67	120.24	12.47	
2.	Unmarried	33	116.52	16.68	1.60

From table 3, the obtained t value of 1.60 is not found significant even at 0.05 level of significance. The results show that Academic Confidence of female students is not differentiated by their marital status. Both married and

unmarried students are found similar in their Academic Confidence.

Comparison of Academic Confidence of female students with respect to their Economic status is presented in Table 4.



Table 4

Comparison of Academic Confidence of Female Students with Respect to their Economic Status

Sl. No.	Determinants	N	Mean	SD	t - value
1.	APL	77	119.73	11.49	
2.	BPL	23	116.6	9.04	1.19

Table 3 shows that the obtained t value (1.19) is not found significant even at 0.05 level of significance. The t value says that the mean value of Academic Confidence is not significantly different for APL and BPL groups. Hence, it can

be assumed that the Academic Confidence of students is not differentiated by their economic status.

Comparison of Subjective Wellbeing of female students with respect to their marital status is presented in Table 5.

Table 5

Comparison of Subjective Wellbeing of Female Students with Respect to their Marital Status

Sl. No.	Determinants	N	Mean	SD	t - value
1.	Married	67	90.04	10.26	
2.	Unmarried	33	86.81	10.27	1.47

The obtained “t” value is 1.47 is not even significant at 0.05 level . It shows that marital status is not a factor that determines female students’ Subjective Wellbeing.

Comparison of Subjective Wellbeing of female students with respect to their Economic status is presented in Table 6.

Table 6

Comparison of Subjective Wellbeing of female students with respect to their Economic status

Sl. No.	Determinants	N	Mean	SD	t - value
1.	APL	77	89.5	10.07	
2.	BPL	23	86.9	11.09	1.095

The “t” value obtained is 1.095 which is not even significant at 0.05 level . It shows that marital status is not a factor that influence female students’ Subjective Wellbeing.

The data and results of the Correlation Analysis regarding the relation between Academic Confidence and Subjective Wellbeing among female students is presented in Table 7.

Table 7

Relation between Academic Confidence and Subjective Wellbeing among Female Students

Determinants	r	p
Academic Confidence		
Subjective Wellbeing	0.54**	.000

The obtained r value is 0.54 which shows that Academic Confidence and Subjective Wellbeing is correlated. It clearly indicates that persons having enhanced Academic Confidence will be reporting higher Subjective Wellbeing.

indicators of Subjective Wellbeing such as positive and negative affect.

CONCLUSION

Mean Difference Analysis reveals that both marital status and economic status of female students in Kerala do not differentiate their Academic Confidence and Subjective Wellbeing. The result is in alignment with the study done by Dinisman and Ben-Arieh (2015) in children, which specifies that Subjective Wellbeing does not differentiated by their socio demographic characteristics. Neither marital status nor economic status affects Subjective Wellbeing of students.

EDUCATIONAL IMPLICATIONS DERIVED

As Subjective Wellbeing is found related with Academic Confidence, the educational institutions must ensure a conducive environment to promote Academic Confidence. Proper reinforcement and motivation have to be provided from time to time. All the discouraging and devastating events may be forbidden. Academic tasks should be simplified in according to the perceptual level of the student. Since stressful events have tremendous effect on Subjective Wellbeing and Academic Confidence, the students must be equipped to adapt coping strategies which help to tackle the issues. Proper guidance and counselling service must be ensured. Personal as well as academic stressors of students must be identified by teachers and frequent counselling interventions may be provided in a long-term basis.

From the statistical analysis, it is also evident that Academic Confidence and Subjective Wellbeing are moderately correlated. Thus, it can be said that female students who are confident in their academics are reporting better wellbeing. The result is conforming to the study done by Robins (2001) which says that self-esteem was found to be associated with



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REASONS FOR THE ORIGIN OF KHAVORIJ

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ABSTRACT

The period of emergence. This period covers the period from the emergence of Islam to the caliphate of Uthman in 34 A.H. The origin of Khavorij can be attributed to the category of secularists. Because this category is the category where religious sects were formed in the following centuries. Sufi ascetics (tobakatul-quroi) and Kharijites emerged from this category. Because the historians who have studied their character and history say that the Khawarij pray to a level that fills you with exhaustion, wake up to the point of drying your skin, perform a lot of prostration, and the Prophet (pbuh) said about them, "before their prayer, your prayer, before their fasting they say that your fast will be fulfilled.

KEY WORDS: Al-Khawarij, Battle of Siffin, Kharijism, Ali and his followers, Haruris, Hidden Age, Abdullah bin Saba', Shayyaites, caliph, fitna.

Al-Khawarij (the dissenters) is the first religious-political group to break away in the history of Islam. 12,000 people left his army saying that "only God can judge" in the battle of Ali Siffin in protest of his acceptance of the verdict of the neutral side. They went to a place called Harura, not far from Kufa, that's why they were originally called "Haruris".

Kharijiyyah is a common name for a faction that does not recognize the true Imam, with which the Islamic Ummah is united at any time.

Khavorij are those who accuse criminals of blasphemy and consider them to be apostates.

In historical literature, they are given the following names:

- 1) **Khawarij**
- 2) **Al-Muhakkima al-ula**
- 3) **Al-Haruriyya**
- 4) **Bugot**
- 5) **Morika**
- 6) **Ash-Shurot**
- 7) **People of Nahravan**
- 8) **Mukaffira**
- 9) **Nawasib**

Khawarij - (the plural form of the Arabic word "foreigner" "separate") - a name used to refer to any category that fought against the "legal" authority.

Al-Muhakkima al-ula - the first to accept the invitation of Muawiya's people to judge with the book of God, and when he saw that Ali agreed with the judges, he did not recognize such a verdict and for several years "only God can judge" They used the word as a slogan.

Al-Haruriya is the name given to the village of "Harura" in Iraq, where the Kharijites separated from Ali and the Companions.

Bugot is a word used by Ali and his supporters against Khavorij because they disbelieved people, unjustly considered their wealth and lives to be theirs, and opposed the ruler. They got this name from Surah Hujurat verse 9.

Ahli Nahravan is used in relation to the name of the place where the battle between Ali and Kharijites took place.

Ash-Shurat is the name used by the Khawarij against themselves, by which they considered themselves as those who bought the obedience of God or sold their souls to God (Tawba, 111).

Morika - this name was used by historians because they were described by Muhammad (pbuh) as a group that came out of religion like an arrow from a bow.

Mukaffira - (ar. disbeliever) who disbelieves those who have committed great sins and those who are against them. This name is used generically for all groups that follow this path.

Nawasib - (plural of the word nasibi-enemy in Ar.) This name is used because they are hostile to Ali and his family.

In the book "Al-khawarij fi mizani fikr al-islami" the author divides the emergence of Kharijism into 2 stages. These are:

1. Secret period

2. Announcement and public display period

The name "Khavorij" was not used for this community before the "Tahkim" incident in 37 AH and the Battle of Siffin. The fact that the name was used after Siffin does not mean that the course was born after this event. Maybe they appeared long ago. Their separation from Ali and the community of believers was only the impetus for the transition from the 1st stage to the 2nd stage. The Battle of Siffin marks the historical boundary between these 2 phases.

The first stage is the period of formation of the main rules of this direction, scientific-theoretical views, and it includes 2 periods. These are:



- **Emergence and rooting period**
- **The advanced stage of sectarianism and theories**

In the second stage, the method of his sect is formed, and the leaders who will support the further actions and ideas of the direction emerge from among them, and it also includes 2 periods. These are:

- **The period of ripening (maturity).**
- **The period of fading and extinction**

Secret period - includes the period before the event "Tahkim" in 37 AH. As we noted above, this stage is divided into 2 periods:

1. The period of emergence. This period covers the period from the emergence of Islam to the caliphate of Uthman in 34 A.H. The origin of Khavorij can be attributed to the category of secularists. Because this category is the category where religious sects were formed in the following centuries. Sufi ascetics (tobakatul-quroi) and Kharijites emerged from this category. Because the historians who have studied their character and history say that the Khawarij pray to a level that fills you with exhaustion, wake up to the point of drying your skin, perform a lot of prostration, and the Prophet (pbuh) said about them, "before their prayer, your prayer, before their fasting they say that your fast will be fulfilled.

Imam Malik narrates from Muhammad (pbuh) in Muwatta. He said: "A people will emerge from you. You will see your prayer before their prayer, and your deeds before their actions. They read the Qur'an, but their recitations do not pass through their throats. They leave religion as quickly as arrows from a bow. You look at the tip of the arrow and you see nothing (blood). You look at the shaft of the arrow and you see nothing. You look at Pat, you see nothing..."

Shahristani in "al-milal wa an-nihal" quotes some phrases of this hadith with other words and says that the first of them is Zu-l-Khuwaisira. There are many narrations about this man who says that he did injustice to the Prophet (pbuh) in the distribution of booty during the Battle of Khaybar. Then Umar tried to kill him. Then Rasulullah (s.a.w.) said: "A people will emerge from this man's essence, who will consider your prayer before their prayer, your fast before their fast, and your recitation before their recitation. They read the Qur'an, but their recitations do not pass through their throats..." . And they say that they don't want it to be said that the prophet killed his companion, so they turn Umar away from this work.

Ibn Javzi says: "Zu-l-Khuwasira was the first foreigner." His misfortune is that he relied on his own opinion, because if he had relied on knowledge, he would not have had such an opinion about the Messenger of Allah (pbuh). Those who followed him were the Kharijites, who opposed Ali in the incident of Siffin and later fought with him.

2. The advanced stage of sectarianism and theories.

This period includes the period from 24 to 37 A.H., that is, the caliphate of Uthman and 2 years of Ali's caliphate, approximately 13 years. At this stage of the history of Khavorij,

signs of an ideological sect with a religious method and a political basis began to appear. The position of Khavorij in this period reveals the basis of what we want to talk about. The most important of these is that they were among those who organized a conspiracy against Caliph Usman. Their enmity towards Usman was caused by the following:

a) **Al-Hakam bin Abu-l-As**, who was expelled from Medina by Muhammad (pbuh) and was also in exile during the caliphate years of Abu Bakr and Umar, was allowed to stay in Medina by Uthman. With this, he opposed Rasulullah (s.a.w.) and the Companions

b) **Uthman** made his relatives governors and governors of Islamic lands. He appointed Walid bin Uqba as governor of Kufa, even though he was one of those who were informed of his death by Muhammad (pbuh). Again, he made Abdullah bin Abu Saroh governor of Egypt, Muawiya bin Sufyan of Sham, and Abdullah bin Amir of Basra.

c) **Uthman** harmed several Companions. Among them, he forbade Abdullah bin Mas'ud, Ammar bin Yasir and Abu Zar al-Ghifari to go to Makkah.

g) **Uthman** was not an entrepreneur in politics and state affairs, but was subordinate to his uncle's son Marwan bin Hakam. He was a person who was angry with people.

Abu Bakr al-Baqilani doubts the opinions expressed by the Kharijites against Uthman. Especially in the matter of his harming the Companions and appointing a governor. He says that his case was ijihad and that a mistake in ijihad does not lead to disbelief and execution.

We will suffice to say that Osman was one of the 10 people who were given the prophecy of paradise.

In 33 AH, a conspiracy was organized against Uthman in Kufa. Abdullah bin al-Kawa (who later became a prominent representative of the Kharijites) was also one of its organizers. Uthman gave them to his governor in Kufa, Said bin al-As

The governor of Syria orders Mu'awiya to send and sends a letter to Mu'awiya saying that they are going to Syria and that he will accept them if they reform, and if they don't, he will send them back to Kufa. Mu'awiya meets them according to the order of the caliph, and there is an argument between the two. Seeing their enmity towards Quraysh, Ali and Uthman, Mu'awiya aims to send them to their desired destination and sends the following letter to Uthman. "A people came to me who had neither reason nor religion. Islam was difficult for them and justice made them angry. They don't want God at all, they don't speak with documents at all. Perhaps, they are interested in sedition and the wealth of the people..." The people leave Damascus and go to Jazira. Abdurrahman bin Khalid bin Walid, the governor of that land, calls them and treats them rudely. After that, relying on his repentance, they ask for his forgiveness.

Tabari quotes the text of the conversation between them and Muawiya. In this conversation, it can be learned that Kavo and his associates accuse Usman of blasphemy and support the



revolution. Their participation in this conspiracy was the first political action of Khavorij in the history.

While narrating the events of 35 AH, Tabari writes about Abdullah bin Saba'. Abdullah bin Saba', originally a Jew, converted to Islam during the Caliph Uthman's reign and traveled to Islamic lands to mislead Muslims. He starts this work first from Hejaz, then goes to Basra, Kufa and Sham. In the evening, he is expelled from there without being able to reach his goal. Then he went to Egypt and said to the inhabitants of the land: "Wow, they say that Jesus will return - they are lying about the return of Muhammad (pbuh)!" After all, Allah the Exalted says: "(O Muhammad,) verily, the One who made (this) Qur'an obligatory for you, is the one who will return you to the place of return (Makkah)..." (Al-Qasos, 85). Muhammad (s.a.v.) is more worthy of return than Jesus (a.s.), A thousand prophets have passed. Every prophet has an heir. And Ali was the heir of Muhammad (pbuh).

Muhammad (pbuh) is the last prophet, so Ali is the last heir. Then Uthman started them to act, saying that he had taken the caliphate unjustly. His call passed from one country to another and finally reached Medina and ended with the death of Uthman. The participation of the Khavorij in this conspiracy was their first political act, indicating the foundations of their madhhab, and their war against Aisha, Talha and Zubair in the ranks of Ali's army in Jamal (Camel) was the declaration of the second "foundation" of their madhhab. is counted. That is, "Aisha, Talha and Zubayr did not follow the 59th verse of Surah Nisa and became disbelievers by fighting against Ali."

After Jamal (Camel) won the battle, Ali and Kharijites started another battle. It is known that at this time Muawiya did not pledge allegiance to Ali and intended to take revenge for the execution of Usman. This battle was one of the manifestations of the Khawarij sect in this period. Because Muawiya was considered more dangerous for Islam than Ali.

In 37 AH, both sides tried to come to an agreement. However, when the discussions did not help, both sides started appointing generals to their soldiers. Ali commanded al-Ashtar al-Nakhai to the Kufa cavalry, Sahl bin Hanif to the Basra cavalry, Ammar bin Yasir to the Kufa people, and Mas'ar bin Fadaqi al-Tamimi to the ascetics of the Basra.

The appointment of Mas'ar bin Fadaqi al-Tamimi, who declared Kharijism after the "Tahkim" event and was one of their leaders, as a commander shows that until then the Khawarij were in a hidden state and that Ali regarded them only as a class of ascetics. .

Knowing that he would be defeated after a three-month long battle, Muawiya used a trick. He tied the pages of the Qur'an to the tip of a spear, held them up high, and demanded that the word of God pronounce judgment.

Ali reluctantly accepted the arbitration. This event played a key role in the transition to a new stage in the history of Khawarij, i.e. to the stage of open activity.

A period of open activity. This stage started with the arbitration event and continued until 138 Hijri. This stage, in turn, includes two periods:

- the period of ripening (maturity).
- the period of fading and extinction

The period of ripening (maturation) includes 38-130 Hijri. The second period lasted until the end of this phase in 130 Hijri.

The period of ripening (maturity). At this stage, they became stronger as a "religious sect" that followed the first political ideas of Islam, not as a "community of ascetics" in the previous two stages. This power manifests itself to us in the following 3 forms:

First of all, the views, opinions and fundamental principles (whether they were decided in advance or arise during the events of the period) were openly stated, and it was manifested by openly challenging the ruling system and its leaders. These resistances began with Ali and continued in the form of debates, sermons, treatises, face-to-face meetings with the caliphs and governors against the later caliphs from Mu'awiya and Bani Umayyad.

Secondly, they began to spread takfir and with it other ideological bases to other Islamic countries, both secretly and openly, without taking into account the danger that threatens them.

Thirdly, the idea that every member of this faction has settled in their hearts and minds that they are Mujahideen who put their wealth and life in the way of God, and in their eyes, this sect has either victory or martyrdom as their goal. It is characterized by eating.

As a proof of our above opinion, we present the following: Khavorij and the incident of "arbitration". In the Tahkim event, it became clear that Khawarij is an independent community with its own independent ideological base and opinion. Khavorij accused Ali of treason for agreeing to arbitration. However, they plotted against Caliph Uthman, claiming that Ali was the true heir, they were the first to pledge allegiance to Ali, and they told Ali that he would answer when he was called to the book of God, and if he did not do so, they would do what they did to Ibn Affan.

Later, when Ali represented Abdullah bin Abbas on his behalf in the arbitration, they opposed him and demanded that Abu Musa al-Ash'ari be the representative.

Seeing that Amr bin al-As "betrayed" the mutual agreement of the two arbitrators in the case of arbitration, the Kharijites accused Ali of agreeing to the arbitrator's work and separated from Ali's army saying that "only God can judge" and the village of Haruro near Kufa came and settled in At that time, they had 9 leaders: Abdullah bin al-Kawa, I'tab bin al-Awar, Abdullah bin Wahb al-Rasibi, Ura bin Jarir, Zayd bin Abi Asim al-Muharibi, , Harqus bin Zuhayr al-Bajli, Ash'as bin Qays, Mas'ar bin Fadki al-Tamimi and Zayb bin Husain al-Ta'iy. At that time there were 12 thousand Khavorij.



This is when takfir reached its peak. They declared the two judges, Ali, Muawiya, and all the Companions who accepted the ruling to be infidels. As evidence for this, the Qur'an says: "...Those who do not judge by what Allah has revealed (verses), those are the disbelievers." ("Moida", 44) were documented. "... then, until (the aggressor group) returns to the command of Allah, fight with the aggressor (group)!" (Surah Hujurat, verse 9) and declared war against everyone. They said that Ali's leaving the battle against Muawiya is leaving God's order and he is a disbeliever.

Thus, they forgot or pretended to forget that they were the first to agree to arbitration and forced Ali. Ali and Ibn Abbas went to Harura and had a discussion with the Kharijites. But it did not give the expected result.

Khavorij used to gather people here and "test" their belief, especially their attitude to Ali and Muawiya and the events that were happening. If he was in the same position as them, they would let him go, but if he was in a position against them, they would immediately kill him. In particular, they killed Abdullah bin Habbab bin al-Irs and his wife. Knowing this, Ali sent a messenger to them. They also killed the ambassador. At this time he was preparing to march against Muawiya. People asked Ali to march against the Khavorij first. Ali sent an ambassador to the Kharijites asking for the killer of Abdullah. But they told Ali, "We are all his killers." We all consider their and your blood to be halal..." they refused.

After that, Ali decided to wage war against them. Knowing this, the Khavorij march towards Nahravon. They chose Abdullah bin Wahb al-Rasibi as their leader. They wrote letters to their supporters in Basra and called them to join them. The people of Basra set out under the leadership of Mas'ar bin Fadaki.

When the two armies were facing each other, Ali told Abu Ayyub al-Ansari to shout: "Whoever returns from here is safe." Again, he orders his troops not to enter the battle first. Some Khavorij who accepted Ali's invitation returned to their places of origin. Then there was a fierce battle between the two. Most of the Khavorij and their chiefs, Zayd bin Husain, Abdullah bin Wahb al-Rasibi, Abdullah bin Shajaro al-Sulami and Harqus bin Zuhayr al-Bajli were killed.

"...out of 12,000 soldiers, 4,000 were killed, 4,000 surrendered, and the remaining 4,000 scattered throughout the caliphate."

The surviving Khavorij split into several factions and went to different directions. Two of these factions went to Oman, two to Kirman, two to Sijistan, two to Jazira and one to Yemen. They continued their da'wah in those places and gained their supporters.

Defeated in the battle, the Khavorij began to fight harder against their opponents. "They decided to kill all the claimants to the caliphate and used a single method of terror." They appointed Abdurrahman bin Muljam to kill Ali, al-Birak bin Abdullah to kill Muawiya, and Amr bin Bakr to kill Amr bin

al-As. In 40 AH, Muljam killed Ali with a poisoned dagger. The other two did not achieve their goal.

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THE ROLE OF MORPHONOLOGICAL UNITS IN DESCRIPTION OF TYPOLOGICAL FEATURES OF FUSIONAL LANGUAGES

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ABSTRACT

The article deals with issues related to the fusion of the Russian language. According to the author, it manifests itself in such morphonological phenomena as alternation of stress, alternation of phonemes and alternation of affixes. They are units of morphonology that participate in the process of synthesizing the sound image of a word in inflection and derivation of the Russian language. Stress and alternations have been described in works by prof. V.A. Red'kin. An affix as a morphoneme representing variants (allomorphs) of a derivational suffix is considered in the works by S.B. Im.

KEY WORDS: *Morphonology, Morphoneme, Fusion, Agglutination, Alternation.*

INTRODUCTION

Morphonological units express and determine the unity of a word in the Russian language. The use of morphonemes is a necessary condition for the construction of word forms, word recognition in speech and the construction of new words according to the rules of word formation. The phenomenon of fusion in the Russian language is just beginning to be studied. The foundations of morphonology as an independent discipline were laid by N.S. Trubetsky and his followers – members of the Prague Circle. However, the morphonological research of the Prague residents affected only the area of syntagmatics, i.e. laws for constructing sound circuits. Scientists have not touched upon the issues of phoneme alternation and stress classes at the level of inflection. They were described in part by Professor V.A. Red'kin in Academic grammar -70 [9, 425-485; 10]. The issue of alternating phonemes and stress is at a certain stage of research, and the issue of alternating suffixes has not been practically studied, although it is touched upon in the works by S.B. Im.

AIM OF THE STUDY

The aim of the work is to study the significance of morphonological phenomena in identifying the fusional nature of the Russian language.

The fusional nature of the Russian language, in contrast to agglutinating languages, in particular Uzbek, is manifested in the alternation of phonemes, mobility of stress in declension, conjugation, and word formation.

The object of our research is the fusion of the Russian language, which is expressed in the alternation of stress, phonemes, and suffixes.

RESULTS

Theoretical justifications for the named 3 types of alternation were obtained in the works of Professor V.A. Red'kin, S.B. Im. However, the description of fusion affects only individual

moments of inflection and Russian nominal word formation [2, 3, 4, 5, 6].

The concept of “morphonology” was first introduced by N.S. Trubetsky. The object of study of morphonology, in his opinion, is alternations of phonemes, i.e. alternations not determined by phonetic position, for example, *lechu – letish'*, where *ch//t*; *myat'- mnu*, where consonant *nu* alternates with vowel *a*, *sokhnut' - sushit'*, vowel alternates with vowel *o//u* [11, 116].

N.S. Trubetsky called the general idea of alternation a morphoneme. This refers to the alternating characteristics of the entire set of word forms. The member of the alternation is named an alternative by N.S. Trubetsky. So, alternation *ch//t'* in pair of words *lechu – letish'*, stress alternation like *vodá - vódu* and alternation of suffixes *zhelíná - zheltizná (- ina // - izna)* were not considered by N.S. Trubetsky [11, 116].

N.S. Trubetsky considered the phenomenon of sandhi, which is phonetic changes that occur at the junction of morphemes, composites, words, as another object of morphonology. In fact, N.S. Trubetsky identified paradigmatic phenomena of morphonology – morphonemes – and syntagmatic ones – sandhi. Subsequently, the ideas of N.S. Trubetsky were developed in «Projet de terminologie phonologique standardisee» [16, 309-326], as well as in the works of a number of American linguists – followers of L. Bloomfield [12, 105; 13, 38-59; 180-181].

systematic approach to the problems of fusion involves resolving questions about the A level status of morphonology. Differences in the interpretation of this issue have already emerged in literature. So, E.A. Makaev and E.S. Kubryakov attribute morphonology to the inter-level tiers of the Russian language, since, in their opinion, the morphonology of the Russian language uses units of phonology (phonemes) and



morphology (morphemes) [7, 114]. N.S. Trubetsky considered morphonology as a branch of phonology [11, 116], and M. Komarek and E. Stankiewicz included it in the morphology section [15, 145-161; 17, 353-356]. Professor A.A. Abduazizov believes “that morphonological alternations are determined by word formation,” but are the object of study of morphonology. “Morphonological series of alternations are quite common in Slavic languages, which is associated with their inflectional structure, while they are not found at all in Turkic languages, which belong to the agglutinative system, according to the morphological (typological) classification of languages” [1, 43].

Professor V.A. Redkin and S.B. Im are allocated an autonomous morphonological level. This level is characterized by its own special units – morphonemes, differential features, correlations and neutralization of correlations, which proves the autonomy of the morphonology level. Currently, there is only one study that describes word-formation categories in terms of morphonemes: alternations of stress, alternation and suffixes as expressions of morphonological units, proving the fusional nature of the Russian language using the example of word formation [2, 63-73; 2, 315-322; 6, 16-30].

Recognition of the status of morphonology gives the right to identify autonomous morphological units that do not belong to either the level of phonology or the level of morphology. This problem was solved within the framework of the Moscow morphonological school, represented in the works of Professor V.A. Redkina.

The basis for the formation of the idea of a morphonological unit is the idea of morpheme identity of the Moscow phonological school: morphemes are considered identical if their differences are expressed in a certain rule. But the rule determining the identity of a morpheme is morphonological. If the identity of the morpheme expresses the unity of the word, then the morphonological rule is a means that expresses and determines the unity of the word. This is the meaning of the further evolution of morphonological views. The initial premise of the Moscow School of Morphology, presented in the works of Professor V.A. Redkin's explanation of morphonological means creates a tendency towards the isolation of morphonology into a special tier of language with its own units. As A.A. rightly notes. Reformatsky, “morphonology has its own positions, but they are not the same as for phonology. This is a very interesting topic, you can write and report about it.” [10, 22].

Based on the description of morphonological units of stress and alternation of phonemes produced by Professor V.A. Redkin, we can give a preliminary definition of the morphoneme as a unit of the morphonological level of language. A morphoneme is a class of DP alternations of stress or phonemes that characterizes a given class of words.

In his doctoral dissertation S.B. He “Morphonological phenomena in the process of synthesis of the sound appearance of a word (based on the material of nouns)” revealed the fact of

alternation of affixes, which showed that the alternation of affixes is a mandatory and universal property of the fusion of the Russian language, at least in nominal word formation. The description showed that the relationship of irreversible predictability in the construction of the sound appearance of a word can go not only from stress and alternation of phonemes to the affix, but also vice versa, then there is a complex system of dependence in which the nature of dominance can change, which reveals the essence of the fusional nature of the Russian language, with in which the stress and class of alternants of the producer predict the allomorph, and the allomorph can predict the alternant of the stress and the alternant of the derivative (variability of the allomorph). An allomorph is understood as a specific manifestation of a variant of a word-forming affix, which, in addition to a segmental element, contains accentual and alternating morphological characteristics interconnected by relations of dominance, then units considered as morphonemes and units considered as an allomorph can be included in a certain, more a wide system of morphonological units. It follows that any structurally significant component, including the affix, can be considered in abstraction from the content plan and be included in the system of morphonological units.

DISCUSSION

Based on this, the work provides formulations of fusion and agglutination that do not contradict generally accepted ones, since the definition of agglutination is based on the same principle of autonomy, and the definition of fusion is based on the principle of interdependence of stress, alternation of phonemes and affixation. Traditional definitions of fusion do not explain the causes of fusion. We tried to reveal the nature of the fusion and how it manifests itself, since in the traditional understanding everything comes down to the morphological isolation of morphemes. At the same time, when determining agglutination, the same principle of autonomy of morphonological components is observed, and when determining fusion, the principle of their interdependence is observed.

Hence, agglutination is a system for constructing the sound appearance of a word in which affixation is autonomous, and other morphonological elements (stress and alternation of phonemes) are subordinate to it.

Fusion is a relationship between stress, alternation of phonemes and affixation in the construction of the sound appearance of a word, in which the non-autonomy of the listed elements, especially affixation, takes place.

Thus, to clarify the fusion of the Russian language, which consists in choosing a morphonological variant of a derived word, morphonology takes into account the paradigmatic characteristics of the producers, representing the stress and consonantal outcome of the stem of the producer, i.e. rules for the alternation of morphonemes in various morphonological positions, and rules for the syntagmatics of morphonological objects within the same sound chain. This solves the problem of an exhaustive description of the morphonological system of



the Russian language within the framework of Ferdinand de Saussure's dichotomy – paradigmatics – syntagmatics.

CONCLUSION

The practical application of the work is determined by the social function of the Russian language as a language of interethnic communication and one of the world languages. To recognize and reproduce the Russian language, skills and abilities in the field of fusional characteristics of the Russian language are required. Which dictates the need for theoretical research concerning the fusion of the Russian language.

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INDO-MALAWI RELATIONS UNDER BINGU WA MUTHALIKA [2004-2012]: GAINS, CHALLENGES AND LESSONS LEARNT

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ABSTRACT

Indo-Malawi relations became more observant and functional during the period Bingu wa Muthalika became president of Malawi, that is from 2004-2012. Bingu made all necessary efforts to open Malawi's resident mission in New Delhi for the first time in 2007, for Malawi to benefit from trade, aid and other social advantages which were not forthcoming at that time from the traditional Western donors. Bingu's track record of human rights violations made him unpopular among Western countries. The first objective of the study was to discuss the gains Malawi made from its ties with India which included access to loans, grants, capacity building programmes, trade and investment. The second objective was to identify the challenges, the Indo-Malawi relations, encountered during the period Bingu was in power. Limited connectivity because of the long route to India from Malawi to transport goods and services and trade imbalance were some of the challenges registered. The third objective was to digest the lessons learnt. The lessons learnt, the study unearthed, were on the importance of having a strategic choice for a bilateral partner for mutual and maximum benefit from the ties, and also that agreements made have to be followed up and implemented accordingly for mutual benefit of the two countries. Additionally, People of Indian Origin [PIOs] in Malawi remain a partner in development, as their companies and businesses create jobs for the locals. The PIOs need full support and cooperation from the host country. The study used library research to collect secondary data from articles, official documents, periodicals, newspapers and YouTube videos. The data was analysed using Content analysis.

KEY WORDS: Aid, Bilateral Relations, Development Cooperation, Mutual Interest, Foreign Policy Choice

1. INTRODUCTION

India and Malawi have been in bilateral relations since 1964 when Malawi became independent from Britain. The relations have been revolving around areas of mutual interest including political, economical, social, cultural and in many other aspects of mutual significance. However, due to some administrative reasons, the Indian High Commission in Malawi was closed in 1993, though India continued to have diplomatic relations with Malawi. During this period, Malawi was concurrently accredited to India's mission in Zambia until February 2007. The resident mission was re-opened in March, 2012 in Lilongwe Malawi [High Commission of India to Malawi, 2017].

The re-opening of the resident mission occurred during the tenure of office of Bingu wa Muthalika, as Malawi president, that run from 2004 to 2012. During this period, the diplomatic ties with India were uplifted higher than the time of his predecessors, Kamuzu Banda and Bakili Muluzi.

According to Xinhua News Agency [2011], India then was ready and open to help African countries including Malawi in poverty alleviation, Millennium Development Goals [MDGs] realisation, creation of new and just international political and economical order. As discussed by Rajiv [2015], the principles of India's foreign policy were all allowing to a

robust and beneficial relations with developing countries. The principle of south-south cooperation and the principle of solidarity with the third world attested to this mutually strong and viable accommodation of other countries by India, to foster development and goodwill for the benefit of a common man and their respective countries.

Thus when Bingu became Malawi president, he saw an opportunity of increasing cooperation and uplifting social and economic status of Malawians with the helping hand of India, a country that was politically stable, financially strong and socially viable.

2. OBJECTIVES

The specific objectives of this study were to find out the gains Malawi realised from its relations with India spanning from 2004 to 2012 when Bingu wa Muthalika, who ironically, got his university education from India, ruled Malawi as Head of State. The second objective was to detail the challenges Malawi faced in its efforts to foster the diplomatic ties with India and the third objective was to list down the lessons learnt from the relations between Malawi and India during the period Bingu wa Muthalika was president of Malawi.



3. DEFINING STRATEGIC ASPECTS OF INTERNATIONAL RELATIONS

Countries on the globe are in relations with each with for varying of reasons. It is also a fact, that some countries are not in any kind of relations with other countries owing to among other factors differences in ideology, security differences and many more. However, relations between countries are also strategic, other than general and normal relations, as is the case with private companies and corporate organisations. According to Vaidya [2011], strategic relations are a kind of collaboration between two or more countries on a particular aspect of importance. Furthermore, Jakada [2014] is of the view that strategic aspects of international relations are anything relating to long term interests and goals between organisations or countries. The author argues that the nature of partnership is more on a regular objective and that the agenda is development-based as well as issue-based rather than on anything else. Another angle of describing these strategic aspects of relations between countries, can be that of 'long term shared interests and ways of achieving and improving them' [Chang et al, 2008]. In addition, other scholars have defined strategic relations as 'agreements and arrangements between two or more countries to follow a set of agreed upon objectives while remaining independent of each other' [Jakada, 2014]. The strategic interests may be in different forms of style, ranging from shared agreements to contractual cooperation. The nature of working together is therefore relaxed and bases on the requirements and the necessities of the countries involved. For example Malawi's strategic aspects of relations with India, as depicted by the High Commission of Malawi in Delhi [2023], dwells much on trade, migration, education, culture and aid.

As the definitions of strategic relations have clearly explained, countries enter into relations with both common good and interests. Common good and cooperation which is idealism in great debates of IR, comes in as countries believe and reason that cooperation is vital for a positive world. On the other hand, interests, which in IR great debates falls under realism paradigm, may not be avoided as it describes the realistic view of the world. Realism is the pragmatic aspects of reality, including the national and personal interests of the ruling elite [Wilkinson, 2007].

What pushes a country to enter into a relationship with another? Literature has shown that there are a number of factors and interests that pushes countries to enter into relations with each other and that these strategic aspects and planned interests between two or more countries may not be avoided. TRT World, [2021] and Sinha [2010] have argued that countries select their preferred aspects of international relations so as to increase their geo-political influence and to promote their business interests. However and according to Beri [2011], these factors are many and they include political, economical, social and cultural. Bhattacharya [2010] added more aspects in the examples of diplomatic, scientific and historical aspects. On his part, scholar Rajagopalan [2017] included a security aspect to the list. The author discussed that countries align themselves with stronger nations militarily for

balance of power and to get the needed protection in times of external aggression and attack.

4. REASONS MALAWI IMPROVED BILATERAL RELATIONS WITH INDIA DURING BINGU WA MUTHALIKA PRESIDENCY

It is a non disputable fact, that every diplomatic relation is for mutual benefit of the two countries and their peoples in all aspects of importance, be it political, social, economical, cultural, security and many others. As a matter of a preamble, the paper discusses the key reasons Malawi uplifted and strengthened its diplomatic ties with India during Bingu wa Muthalika presidency. The reviewed literature has unearthed that the flexible principles of India's foreign policy gave space and energy for the two countries to enhance their relations. In particular were the principles of south-south cooperation and the solidarity with the third world [Rajiv, 2015]. These allowing principles of foreign policy cemented the confidence in both countries mainly Malawi as a small country both in size and economy, that the relations will be of mutual benefit. This development was unlike with the relations Malawi had with the West, where the relations centred much around dictations, sanctions in times of non compliance and dominance by the powerful partner [Ott, 2013]. Therefore Bingu wa Muthalika wanted to capitalise on the accommodative principles of foreign policy to improve Malawi's cooperation with India and benefit immensely in areas of economic cooperation, trade and investment, infrastructure, mining, coal, agriculture, human resource development, micro, small and medium enterprises [Targeted news 2010].

The other reason for a quick re-establishment of relations between Malawi and India when Bingu assumed presidency of Malawi rested upon trade, investment and economic cooperation. Bingu had to look to the East, India and China, as the traditional donors from the West were holding on to aid due to perceived Malawi's governance shortfalls during his presidency. Bingu had to fill up the gap with India and China. To strengthen trade and investment, in 2010 India vice president Hamid Ansari and Malawi vice president Joyce Banda signed four important bilateral agreements to support Malawi's economic development agenda spanning from 2009 to 2014 with nine priority areas including agriculture, mineral resource development, small and medium enterprises development, health and foreign office consultations. In the agreements Malawi was to benefit from India's technological advancements in various sectors especially agriculture and irrigation [HT Digital Streams Limited, 2010].

It has to be noted also, according to Xinhua News Agency [2010] that trade grew by 100 percent from 2004 -2008 from 43.2 million dollars to 79.7 million dollars. Furthermore, 56 companies that registered to invest in Malawi during that period, 10 were of Indian origin representing 10 percent of total investment inflows in Malawi [High Commission of India to Malawi, 2017].

Prominent Indian companies that exerted their strength in Malawi to boost trade and industry during the Bingu



presidency, as discussed by Global Information Network [2011], included Bharti Airtel, TATA, Mahindra, Godrej, Kirloskar, Ashok Leyland, TVS, Bajaj Auto, Eicher, Sukam, Atul, Sonalika, Escorts, Soil Master, L & T, Kalpataru Power Transmission Ltd, Escort and many others. In 2012, M/s Dhunseri Petrochem & Tea Ltd (DPTL) invested in Tea Estates in Malawi. About 10-12 alcoholic beverage companies were also set up by Indian nationals with an approximate investment of US\$ 15-20 million.

Additionally, one of the Indian companies that registered an incredible mark was Rab processors, a company in agro industry that employed over 1500 workers. The company was founded by the Jakhura family. Another Indian company Airtel had 2.5 million subscribers by 2010 and invested over 100 million US dollars in Malawi.

Development assistance in the form of loans, grants and lines of credit, was another priority aspect of relations between India and Malawi during Bingu's presidency. Bingu's intention was to see accelerated economic growth through foreign direct investment. In a positive response, India provided a 50 million dollars line of credit as part of cooperation to be used in cotton ginning and spinning facilities, green belt initiative, one village one product programme. Another 30 million dollars line of credit was successfully used for irrigation, grain storage and tobacco threshing projects in Malawi [High Commission of India to Malawi, 2023].

The other focal aspect of Indo-Malawi relations during the presidency of Bingu wa Muthalika was in the area of capacity building. India assisted Malawi in the field of capacity building through human resource development, using its India Technical and Economic Cooperation [ITEC] programme and Indian Council for Cultural Relations [ICCR] scholarships. The ITEC slots were 10 in 2007-08 and were increased to 60 in 2012-13. Statistics indicated that from 2007-08 to 2014-15 over 300 Malawians received ITEC civilian training programme in India. For long term courses, Malawi has been utilizing the ICCR scholarships where qualifying students undertake various programmes at graduate and post graduate levels.

Furthermore, under the Government of India's Pan African e-network project, VVIP video conferencing facility at the New State House, Tele-medicine facility at the Kamuzu Central Hospital, and Tele-education facilities at the University of Malawi, Zomba, were made functional. The multi-million dollar project was inaugurated through video-conferencing at the University of Malawi on August 16, 2010 by Shri Krishna, former External Affairs Minister of India and Symon Vuwa Kaunda, the then Minister of Information and Civic Education of Malawi. The Chancellor College held its first graduation ceremony for e-learning students on 14 December 2012. More than 1,000 Malawians benefited under this programme. Every year approximately 100 students graduate from Chancellor College, under the e-network programme' [High Commission of India to Malawi, 2017].

Furthermore, the most visible and healthy aspect of relations between India and Malawi during Bingu's tenure of office was the enhancement of cultural relations. The Indian community in Malawi has been present since time immemorial. From 2004 to 2012 PIOs in Malawi were estimated to be around 7000. Most of the PIOs originated from Gujarat State in India and settled in Malawi's major cities of Lilongwe, Blantyre, Zomba and Mzuzu. Primarily the PIOs engaged in trading, agriculture, agro business, pharmaceutical, hospitality, besides other professions [High Commission of India to Malawi, 2017]. Conversing on the reasons India puts much importance on cultural relations, Pal [2013] discussed that the cultural relations are meant to minimise the anti-Indian feeling among the locals and to encourage the heart of tolerance and solidarity as one of the principles of Indian foreign policy dictates.

5. NOTABLE GAINS

Right choice of a politically and economically stable India was the first gain Malawi got from its relations with India. Sinha [2010] stressed on the choice for a right partner country. The author argued that it is a daunting task to be in partnership with a country and stakeholders with similar policies and values and with its peoples who are dedicated, honest and full of integrity. Countries that are politically stable, register an impeccable economic growth and have impressive credit ratings. Bingu enhanced relations with India during his time in office, as India was politically stable, economically viable and doing well on national and international security. Bingu wanted to ride on the successes of India, the connectivity of India to the global village and the rapid developing status of India to leverage register Malawi's advantage to SADC region and the world at large.

Secondly, Malawi gained immensely from India's respect for sovereignty. Mukerji [2023] discussed that India respects other countries' right to making their own laws governing the access of goods and markets, human rights and governance. Malawi was free to use its sovereignty to trade or enter into political relations with other countries without problems, thereby improving its economic stance and political standing worldwide for the benefit of its people. More importantly, India's respect to sovereignty was best of an example of good relations as it produced no sacred status like other developed countries including the UK and the US. Bobby [2020] argued that sovereignty on both political and economical pillars of other countries, even with less standing economic and political power in the world, should be respected the way India does. India's foreign policy principle of solidarity with the third world, signifies this approach to respecting of other countries' sovereignty, which is one of the strategic aspects of international relations.

Thirdly, a greater opportunity of reaching out to new markets was created. The partner companies from a stronger country helps increasing the size of the market as it has already established links [Chang et al, 2008]. Agricultural commodities that were being exported to India had an open access to new markets at competitive prices. Also, other markets for Malawi's priorities areas, that included mining,



tourism and hospitality were given the priority and the platform that they deserved, thereby increasing local job creation and foreign exchange generation.

Access to new customer base was another important gain. In strategic alliance it is possible to develop new and creative ways to expand the customer base. This is possible with a trusting and solid partnership [Buckles, 2011]. It was a known fact that Malawi was producing commodities including pigeon peas and cotton that attracted minimal local market. However, the MOUs signed between India and Malawi increased the customer base for these commodities. In 2009 for example cotton prices hovered around 30 cents per kilogram in Malawi [Mpaka, 2009]. However, with the increased customer base brought in by India, the raised prices were of significance to Malawi in terms of foreign exchange generation and profit returns to local farmers. India also gained in terms of commodity availability and security. As Chang et al [2008] argued, people have confidence and companies have wealth effect and realise significant gains where a country is in a strategic relationship with a strong and reputable partner. For example the US-Japanese firms realise significant gains when they are in a strategic alliance than when they are not.

Another gain Malawi had from its relations with India was the easy accessing of supplementary services. In terms of health services, Malawi gained a great deal as specialised medical cases were being referred to India where health services were top notch. Also, Malawians got employed by Indian companies, including Bharti Airtel, TATA, Mahindra, Godrej, Kirloskar, Ashok Leyland, TVS, Bajaj Auto, Eicher, Sukam, Atul, Sonalika, Escorts, Soil Master, L & T, Kalpataru Power Transmission Ltd, Escort and many others. Most Malawians who benefited from ITEC and ICCR scholarships, improved their skills and knowledge in diverse sectors and helped in fostering the development of Malawi further.

6. CHALLENGES

Several challenges may be outlined from the relations between India and Malawi during Bingu wa Muthalika era. The first was that of distance from Malawi to India and limited connectivity. Logistically, both countries were disadvantaged because of the long route to delivery of goods and services, and most importantly because Malawi is landlocked. As a result, some Indian companies opted to trade with nearby and easy to reach counterparts to profit more. The same was with Malawi; commodity producers rather opted to trade with neighbouring countries like Zambia and Tanzania, than India to cut transport costs.

Furthermore to challenges, only a few of the agreements signed were put to use. The other signed MOUs were neglected and forgotten due to lack of seriousness in following up matters of concern. Inadequate funding to planned projects was one of the factors leading to neglecting of some of the MOUs and that the local farmer and the business man that could have benefited at the end of the day, became losers. During the 2004-2012 period seven influential MOUs were signed including the a MOU in the field of Agriculture and

allied sectors. On ground, most of these signed MOUs were not being implemented as expected. Some of the MOUs that did not tick as required were the National small industries corporation of India and the One village one product for cooperation in the development of small scale enterprises in Malawi and also the MOU in the field of mineral resources and development.

Trade imbalance was another challenge to the Indo-Malawi relations. Vaidya [2011] argued that one partner most often benefit more than the other, particularly the strong partner. Malawi's major export commodities were pigeon peas, chickpeas and other pulses. Major imports from India were textile yarns, fabrics, transport equipment, pharmaceuticals, machinery, generators, invertors, motor pumps. The balance of trade was dominantly in favour of India. It is very clear that India was working to the advantage mainly of trade relations, as it was supplying Malawi with the most essential products than Malawi was exporting to India. Only pigeon peas were favourably being exported to India from Malawi their by creating a visible trade imbalance. The same applies to health care. Medical experts and top notch medical facilities were available in India and that Malawians in need of medical attention had to travel to India which was expensive owing to transport costs. Health experts and hospital equipment needed to be right in Malawi for more patients to benefit.

7. LESSONS LEARNT

Right and strategic choice of a partner country is essential. The choice of India to enhance relations and to subsequently improve Malawi's economic status was very strategic for Bingu wa Muthalika. It has to be noted also that it was the very same time that Malawi closed its relations with Taiwan and opened diplomatic ties with Mainland China. The choice of India as a bilateral partner, had the much anticipated outcomes that included aid, trade and economic acceleration, human resource development and people to people ties. Malawi benefited from India's increased trade in agro business and acquired flagship infrastructure projects from China including the state of the art mountainous Chitipa-Karonga road, Malawi University of science and Technology campus, state of the art parliament building, International conference centre and the five star hotel complex and the magnificent national stadium. These projects accelerated the economic growth of Malawi as road infrastructure improved, tourism industry enhanced and tertiary education gave much priority in the field of science and technology which is vital for growth of any country.

Building a mutually beneficial alliance is another important lesson learnt. Indo-Malawi relations needs regular re-assessment to verify its effectiveness. The capacity of the locals in Malawi should be improved with the help of Indian experts to enable the locals maintain the projects and not relying on foreign experts only. As discussed by Buckles [2011], relations have to strive not on domination but on growth and innovation. Therefore, the relations have to be favourable to both sides, the weaker country and the strong country, their shareholders and their peoples.



Maintenance of Professional standards in business is essential in instilling confidence in customers. This is another lesson to learnt. Reputable Indian companies like Airtel, Tata, and many others are helping in giving confidence in Malawians of desirable service delivery as they already proved their prowess in India where operating standards are not compromised but maintained through government regulation and compliance inspection. Airtel Malawi for example, is one of the leading mobile network providers in Malawi because of its Indian roots and most local companies in Malawi are following on the same discipline and standards to instil sense of confidence in their customers the same way the Indian companies do.

Another lesson learnt is that social and cultural factors are key in relations between countries as they help in promoting cooperation, exchange and cultural development, gain new experiences and help in the proliferation of technological innovations [Kumar, 2016]. From social development cooperation, it has been learnt that mega farms are an option for national food security. With MOUs on agri business targeting local farmers in cotton and pigeon peas production, farmers may produce more and satisfy the Indian market adequately for their own benefit economically and socially. Furthermore, the given quota of commodity exports to Indian market has to be secured with diplomacy to bring the needed stability in the market.

It has also been learnt that PIOs are a partner in development, and that they need to be accorded all the needed support for their full realisation of their goals. The PIO in Malawi are another source of employment creation to the locals. The locals work in the shops, companies, hotel and lodges, being owned the PIOs. The PIOs also advance the cultural aspects of relations through Hindi religion, dressing, food and spiritual integrity.

8. CONCLUSION

From the findings gathered, the conclusion states that the Indo-Malawi bilateral relations during the presidency of Bingu wa Muthalika, were of mutual interest to both countries with Malawi benefiting more from India's immense advantage in democracy consolidation, stable political standing, economic superiority and capacity building programmes. Trade Imbalance and limited connectivity between Malawi and India as the route to India is long and complicated for trade and investment, stand as some of the challenges to the rather strategic and beneficial ties between the two countries. The PIOs in Malawi running businesses and companies are a part of source of employment to Malawians and that Bingu wa Muthalika was very strategic in his foreign policy choice of uplifting relations with India, which were rather being ignored by his predecessors.

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MODERN EDUCATION AND CULTURAL DEVELOPMENT: NURTURING GLOBAL CITIZENS IN THE 21ST CENTURY

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ABSTRACT

The article illustrates the main factors of communication that cover significant successful teaching of language via computer technology. Development of research activities are characterized by the existence of number variety methods of communication which scientists of current era have a great investigation. The article is aimed at determine the linguistic and psycholinguistic peculiarities to the issue of interrelationship in bilingual education.

KEY WORDS: linguists, psychologists, teachers, foreign, modern, language.

INTRODUCTION

In the fast-paced and interconnected world of the 21st century, education has evolved beyond the mere transmission of knowledge. There is the responsibility of researching with investigators to direct the complexities of a globalization of society, where cultural understanding and appreciation are not well accepted for personal growth and societal harmony as well. Modern education systems are founded the vital of cultural development in shaping well-rounded persons and nurturing the global citizens. This article explains the interaction of modern knowledge and cultural development, highlighting the significance of cultural competence in increasing empathy and open-mindedness of the learners.

DISCUSSION. CROSS-CULTURAL COLLABORATION AND EXPERIENTIAL LEARNING

Modern education plays the main role for the worth of cooperation in cross-cultural and experiential study in cultural development. Furthermore, educational establishments as schools are the main partnerships with educational institutions from different countries, enabling students to motivate in virtual exchanges, study oversea programs and cultural experiences. This modernity fulfill experiences of different cultures, providing students to increase cultural competence and global perspectives. According to the experiential learning activities, such as service-learning projects and community engagement programs, permit students to apply their cultural knowledge in real-world contexts, fostering empathy and a sense of social responsibility.

Social knowledge is the knowledge about people's social and professional status, educational and cultural level, gender, age, provision and psychological character. Extralinguistic factors include social and cultural context of the text. In other words, in order to understand the deep layers of the text, the addressee should be aware of socio-cultural background which includes the information about social and political system of the country

to author belongs to the economic development of the country, its national cultural specifics, ideology, etc. One more factor is called historical context that includes the time or the period in which the literary work is written. This context influences the reader's understanding of the text. These settings embrace culture, education, people, institutions with whom people interact, ideology, traditions and values of the people. All these factors have influences on text perception and understanding of the text on reader.

Historical knowledge is the knowledge about history, historical periods, historical characters, etc. There are also phraseological units in English literature that reflect historical facts. Let's mention some of them.

The curse of Scotland (card) - nine of diamonds (the playing card which is similar to the emblem of the Count of Dilprim Steyner who caused hatred in Scotland by his pro-British policy);

Hobson's choice – no choice (on behalf of Hobson, liveryman in Cambridge (XVI century), which required his customers to purchase only the horse closet to the exit door.

Literary knowledge is the knowledge of literary trends, literary personages, literary phraseological units, etc.

Robin Hood, the Merry man, Alice in Wonderland, Headless Horseman, Humpty Dumpty, Cinderella, Prince Charming, Romeo and Juliet, Othello, Robinson Crusoe are the best examples of literary personages which can be widely used as allusions expressing literary knowledge.

It should be noted that literary knowledge structures can be expressed by phraseological units. Here are some examples:

- The last of the Mohicans - the last generation);
- The bard of Avon - William Shakespeare);



- A dog in the manger - not for himself, not for anybody);
- Be under somebody's hand – entirely in the hand of someone, under the heel of his wife (S. Richardson, The History of Sir Charles Grefindson);

When we analyze the literary knowledge structures we cannot overestimate the role of intertextuality in the literary works.

Intertextuality can be understood as a peculiar quality of certain texts to correlate with other texts. The problem of intertextuality can be analyzed from the two approaches: from the position of theory of literature and from the linguistic point of view.

Any text is considered to be an intertext in literature. The fact shows that all texts are related to our knowledge of the world, reflect people's cultural and historical experience. For this reason, any text includes elements of other texts in a more or less recognizable form.

From the linguistic point of view intertextuality is limited to those texts which have explicit reference to other texts. In such cases the author deliberately conceptualizes the relationships between two texts with the help of special formal means. In other words, there must be special intertextual signals, indicators, and markers in the text. Special literature on this subject marks various kinds of intertextual relationships. Such intertextual relations can be title, epigraph, "sounding names", antonomasia, parody, repetition of text forms (structure, rhythm), lexical units, allusions and etc.

Encyclopedic knowledge is the general knowledge embracing all other types of knowledge. In other words, it is the knowledge about politics, pedagogy, media, scientific, religion, sport, medicine, juridical, etc. Britannica is the most famous dictionary that includes all types of knowledge of the world.

In short, encyclopedic knowledge is widely used in linguistics especially in cognitive linguistics. In our opinion it embraces all types of knowledge which we have already discussed.

In conclusion, knowledge structures are one of the main notions of cognitive stylistics. It can be of two types: linguistic and nonlinguistic. Linguistic knowledge includes the knowledge of lexics, grammar, semantics, syntax, etc. Non-linguistic knowledge can be of various types such as cultural, communicative, social, religious, historical, mythological, literary, encyclopedic, etc.

Teacher Training and Professional Development:

To effectively promote cultural development, modern education emphasizes the importance of teacher training and professional development. Educators receive training on cultural competence, inclusive teaching practices, and strategies for creating culturally responsive classrooms. They are equipped with the necessary skills to facilitate meaningful discussions on cultural diversity, address biases, and promote a

positive classroom environment that celebrates and respects students' cultural identities.

CONCLUSION

Modern education plays a vital role in cultural development by nurturing global citizens who possess cultural awareness, appreciation, and intercultural competence. By integrating cultural education into the curriculum, promoting cross-cultural collaboration, and providing experiential learning opportunities, education systems prepare individuals to thrive in an interconnected world. Cultural development in education is not only essential for personal growth but also contributes to societal harmony, fostering empathy, respect, and understanding among diverse communities. As we continue to navigate an increasingly diverse and interconnected global landscape, modern education must prioritize cultural development to shape a generation of individuals who can celebrate diversity, promote inclusivity, and contribute to a more harmonious and prosperous world.

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HISTORICAL AND CURRENT RESEARCH ON EDUCATIONAL TECHNOLOGY: Juggling Strictness and Significance to Influence Academic Achievement

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ABSTRACT

The focus and significance of educational technology research have increased significantly in the modern era due to the exponential growth of technology utilization in education through applications like Internet access, simulations, educational games, and distant learning. In order to promote learning in schools, we look at both historical and contemporary research trends in this study, focusing on the function and value of research findings in guiding instructional methods and policy. The following specific subjects are covered in detail: (a) differing perspectives on what constitutes "effective" technology use in the classroom as research topics; (b) historical trends in research approaches and inquiry topics; (c) alternative research designs that strike a balance between internal (rigor) and external (relevance) validity; and (d) recommendations for future research directions. In addition to employing mixed-methods research to examine and comprehend technology applications in challenging real-life contexts, attention is paid to outlining several experimental designs as alternatives for attaining the proper rigor and relevance of study data.

KEYWORDS: Educational Technology, Learning, Research, Research Designs and Trends, Effect of Technology on Education

1. INTRODUCTION

Researchers have been interested in comparing the effects of technology vs traditional forms of training since the debut of 16mm film in the 1950s and the first drill-and-practice computer programs in the 1970s and 1980s (Morrison, Ross, Kemp, & Kalman, 2010). This focus has been greatly increased by the exponential expansion in the use of technology in education today, including distance learning, Internet access, instructional games, and simulations. For instance, the number of yearly paper submissions to Educational Technology Research and Development (ETR&D), a highly regarded worldwide magazine, increased by 72% from 2004 to 2009 to 129 in the Research section. Robert Calfee (2006), recently quoted by Nolen (2009, p. 286), described educational technology as one of the "Really Important Problems (RIP)" that future scholars in educational psychology should look at.

However, questions have been expressed concerning the caliber and significance of research on educational technology. Regarding impact, Nolen (2009) recently came to the conclusion that, as a focus of research in the larger field of educational psychology, technology noticeably lagged behind other topics like classroom achievement, learning and memory, motivation, and cognition. This conclusion was drawn from an analysis of the content of 758 educational psychology studies published in prestigious journals. The number of experimental studies on

educational interventions, particularly those utilizing technology, has been declining over the past 20 years, which is a cause for concern (Hsieh et al., 2005; Levin, 2004; Ross & Morrison, 2008). This change directly contradicts the current focus on more rigorous research in education to encourage the application of evidence-based approaches (e.g., Eisenhart & Towne, 2003; Slavin, 2008).

There are too many different ways to look into technology applications in education, making it impossible to evaluate or even characterize the study topic as it stands today. One might argue that there are equally compelling justifications for the significance of research methodologies ranging from: (a) Extensive, controlled basic research studies of cognitive processes resulting from computer interactions (Kaufman, 2004; Lee, Lim, & Grabowski, 2008), to (b) descriptive and exploratory studies of how students use ICTs as teaching tools (Greenhow, Robelia, & Hughes, 2009); to (c) contextually-specific "design-based research" studies of how specific technology products work in particular environments (Richey & Klein, 2008; van den Akker & Kuiper, 2008); to (d) applied research focused on finding solutions to particular issues confronting large education providers in our society, such as schools and training centers (see, e.g., Karr, Weck, Sunal, & Cook, 2003; Ringstaff & Kelly, 2002; Ross, Lowther, Wang, Strahl, & McDonald, 2004).



Therefore, a more focused approach than the "entire domain" of applications is needed to attempt to meet the aims we have set for this work, which include "evaluating" the past contributions of educational technology research and proposing future prospects for it. Considering our backgrounds as K–12 education academics, we have chosen to focus on using technology to improve teaching and learning in classrooms. The following sections cover specific topics related to educational technology research: (a) different perspectives on what constitutes "effective" uses of technology in schools; (b) historical trends in educational technology research; (c) alternative research designs for striking a balance between internal (rigor) and external (relevance) validity; and (d) recommendations for future directions for areas of inquiry and research methodologies.

1.1. Is Technology Useful in Education? Research Domains with Significance

Does technology work well? Researchers, practitioners, and policy makers who concentrate on applications in schools often ask that question. The majority of the time, "effect sizes"—which show accomplishment improvements for the treatment (technology-supported) condition over the control condition—are used to determine efficacy exclusively or mostly (e.g., Bernard et al., 2004; 2009; Dynarski et al., 2007; Russell, 1999). Perhaps the most forcefully expressed objections to this strategy were made in the seminal paper by Richard Clark (1983) that discouraged "media comparison" studies.

Clark contended that comparing various media-based instruction modalities (such as lecture versus computer-based instruction) in order to determine which was "best" was illogical. Depending on the caliber of the instructional tactics used, any kind could either be beneficial or useless. According to him, the media is like grocery trucks—they provide food, but they don't actually feed you. (i.e., instruction). There are opposing viewpoints that contend that special "affordances" offered by educational technology cause instructional activities to differ from those conducted using traditional methods (such as "teacher-led") (Kozma, 1994). Morrison et al. (2010) state that these affordances also include increasing student accessibility to instruction and simplifying instructor management:

"For instance: By offering the training in several places rather than in one central location, we can save time and money and reach more people of our target audience through the use of a distance education delivery method. Similar to this, we might use a drill-and-practice application that can control the content and sequence of the material and give instant feedback to teach foreign vocabulary words to a learner. In contrast to an instructor, the program is able to carry out these duties indefinitely without growing weary of them or losing interest in them (Chapter 10, p. X)."

The study topics that are explored and the methodology (e.g., qualitative vs. quantitative vs. mixed design) used to answer them are influenced by the researchers' perspective on the role of

technology in classroom learning. We concur with Clark and have argued for several decades that using media comparison studies to "prove" the efficacy of technology seems rather narrow and is likely to under represent potentially significant contributions to enhancing education (Morrison, 2001; Ross & Morrison, 1989; Ross, Morrison & Lowther, 2005). Educational technology encompasses a wide range of learning modes, tools, and tactics rather than being a single, uniform "intervention." Therefore, the degree to which it assists educators and learners in achieving the intended learning objectives determines its efficacy. Based on a recent work (Ross & Lowther, 2009), the author outlines three broad areas that should be the main focus of future research.

1.1.1. Using Technology to Teach

The use of computers to aid with instruction is the most established and studied use of educational technology. Drill-and-practice exercises and tutorial lectures tailored to the needs of pupils are offered by modern CAI programs. The products are more intriguing and engaging than workbooks and textbooks because of the graphics and animation. Is CAI, however, likely to result in more effective learning than traditional, teacher-led instruction? Numerous studies over the years indicate that both strategies typically yield comparable outcomes (Dynarski et al., 2007; Kulik, 2003; Slavin et al., in press). Effective teachers also employ a number of evidence-based tactics, such as adaptable content, regular testing, instant feedback, etc., in addition to CAI programs.

On the other hand, monotonous, disorganized instructors and badly thought out CAI programs typically result in low exam scores and unfavorable comments from students. Research on effective ways to use computer-aided instruction (CAI) as an addition to traditional classroom instruction might be more fruitful than putting computers against instructors. Several beneficial applications include of (quoted from Ross & Lowther, 2009):

1. Allowing pupils to practice fundamental knowledge and abilities while releasing the instructor to mentor additional students, administer tests, or carry out other duties,
2. Giving low-achieving pupils remedial education,
3. Offering extracurricular activities to pupils who finish the standard lesson ahead of others who need more time to study.
4. Providing extra education after school, over the summer, or while children are absent from class, in situations where they do not have access to teachers.
5. Using alternative methods of instruction to help students who struggled to grasp the information the first time around or to encourage higher-order levels of learning, and
6. Increasing pupils' familiarity with and fluency with representative questions in order to get them ready for standardized assessments.



1.1.2. The Use of Technology in Education

Technology also helps teachers organize and present classes more effectively, which is an important role. For instance, the Success for All Foundation's Reading Reels program (Chambers, Cheung, Gifford, Madden, & Slavin, 2006; Chambers et al., 2008) incorporates interactive question-and-answer exercises and carefully chosen video clips into each day's lesson plan. Establishing "virtual classrooms" in distant learning environments through the use of electronic tools like two-way audio and video is another example (Keegan, 1977; Morrison et al., 2010; Simonson, Smaldino, Allbright, & Zvacek, 2006).

Teachers can enhance their ability to make material more interesting and engaging by utilizing multimedia presentations. However, the more the number of options available to teachers to enhance the quality of their lessons, the greater the need to plan, or "orchestrate," a wide range of instructional activities. Recent British research have indicated that interactive whiteboards, as an emerging technology breakthrough, hold considerable promise for supporting these organizational processes (Somekh, 2007). The interactive whiteboard touch screen allows both professors and students to write, making learning much more dynamic and interesting. Teachers can preload lesson items (such as PowerPoints, videos, photos, letters, words, etc.) and lesson flow plans into the computer to help with lesson organization.

Interactive Classroom Communication Systems, or "clickers," are yet another example of technology used as a teaching tool (Penuel, Boscardin, Masyn, & Crawford, 2007; Slavin, 2009). With the use of these gadgets, students can reply to queries from teachers right away, and the responses are combined and presented visually right away. Advantages over traditional (non-technology-aided) instruction include: (a) valuable, instantaneous review and feedback for students; (b) instantaneous student progress data that teachers can review and use as a foundation for instructional modifications; and (c) high levels of student engagement and interaction during teacher-led instruction.

1.1.3. Using Technology as a Teaching Aid

Our colleagues and I have recently conducted a number of quasi-experimental studies (Lowther et al., 2008; Lowther et al., 2009; Lowther, Ross & Morrison, 2003) that look at various school districts' attempts to use computers as a teaching tool. In order to promote the greater use of mixed-methods designs for solving real-world school difficulties, we go on to explain some of this research later. In the "computer-intensive" circumstances, we discovered, in brief, increases in:

1. Higher-order, cooperative, and student-centered learning.
2. Student writing, problem-solving, and technology abilities.
3. Favorable perspectives held by educators, parents, school administrators, and students seeing technology as a tool for learning.
4. The effectiveness and durability of technology integration initiatives when continuous in-school peer coaching is coupled with initial professional development.

1.2. Trends, Types, and Topics in Educational Technology Research

1.2.1. Early Years: Using Technology to Treat

In the third edition of the Handbook of Research on Educational Communications and Technology (Spector, Merrill, Merrienboer, & Driscoll, 2008), a number of writers conducted an analysis of current trends in technology research. According to Hannafin and Young (2008), the subject "Do computers improve learning?" dominated early computer technology research in the 1970s and 1980s. Therefore, in research investigations, the computer functioned as a "treatment" as opposed to an instructor or a textbook. Though some of the excitement in demonstrating technology's potential as a causal treatment was tempered by the media comparison argument (Clark, 1983; Kozma, 1994), we are also witnessing a revival of interest (for better or worse) in this subject today.

1.2.2. Middle Years: The Use of Technology in Delivery

Technology's function in research studies changed from that of a treatment in and of itself in the late 1970s to that of a vehicle for transmitting or delivering various treatment strategies in the 1990s (Hannafin & Young, 2008). For instance, Morrison, Ross, et al.'s computer-based training might be used to give and evaluate the efficacy of various feedback systems. At that time, learner-control studies—such as those by Hannafin & Sullivan (1996) and Ross, Morrison, & O'Dell (1989)—became increasingly common. These studies examined the effectiveness of letting individual students choose the amount or kind of instructional help provided in sessions. Once more, computers were not the focus of the research but rather a tool for effectively executing the treatment (learner selected vs. prescribed instructional support).

1.2.3. Latest Times

As constructivist theories of learning continue to be popular (Jonassen, 1994; Tobias & Duffy, 2009), the ongoing media-effects debate (Clark, 1994; Clark & Feldon, 2005; Kozma, 1994; Kozma, 2003) opened up new directions for educational technology research in the 1990s and early 2000s. The following emphases emphasize this age, as summarized by Hannafin and Young's analysis (2008, pp. 733–734):

- 1.2.3.1. Analyzing how students use technology to solve higher-order problems in technology-enhanced learning environments (TELEs) and open-ended learning environments (OLEs) (e.g., manipulate variables and observe/evaluate outcomes in physics, chemistry, or mathematics etc.).
- 1.2.3.2. Evaluating results in "situated learning" environments—like the Jasper Woodbury series—that are designed to include students in higher-order thinking and simulations with real-world issues.
- 1.2.3.3. Putting more emphasis on "design-based research" to investigate the efficacy of TELEs and other computer-based learning resources in particular educational settings (Richey & Klein, 2008; van den Akker & Kuiper, 2008).



Studies on cutting-edge technological applications, like Web-based learning (Greenhow, Robelia, & Hughes, 2009) and distant learning (Bernard et al., 2004; 2009), have proliferated in the last few years. It is concerning that the new research focuses frequently diverge from empirical results gathered using more traditional tools (Hannafin & Young, 2008) and from the educational field as a whole (Nolen, 2009). Kirby, Hoadley, and Carr-Chellman (2005) have recently found even less overlap in the citations and authorships between research in instructional systems and educational technology.

2. STUDY DESIGNS USED IN RESEARCH

Twenty-five papers, or the majority, were categorized as employing a descriptive design. Case studies, design-based studies, formative assessment, developmental research, observation, surveys, and qualitative studies were all used in these investigations. Table 1 summarizes the quantity and percentage of articles using each design.

Table 1: Study Designs Used in Research

Methodology	Frequency	Percentage
True Experiment	8	19%
Quasi Experimental	7	16%
Correlational-causal	1	2%
Descriptive	25	58%
Summary/Synthesis	2	5%

A distinct pattern in the application of research designs for papers published in the same journal between 1953 and 2001 was observed in a prior study (Ross & Morrison, 2004). Only 19% of the published papers during this time period were descriptive studies, while 58% of the articles used true-experimental designs. Quasi-experimental designs were utilized in one-fifth (20%) of the research, whereas time series designs were used in the remaining 3%. True and quasi-experimental designs, which once made up 78% of study designs, have decreased to only 35% in the last three years. Descriptive research designs have been used more frequently in journals, rising from 19% to 58% in the same comparison.

3. KIND OF INFORMATION GATHERED

The kind of data that was gathered was ascertained through a second analysis of the chosen publications. Articles were categorized according to whether they used mixed, qualitative, or exclusively quantitative methodologies. Of the published research, 44% employed approaches to data that were exclusively qualitative. A review of data collecting kinds is given in Table 2, and a summary of study designs broken down by data collection types is given in Table 3. The latter results indicate that genuine and quasi-experimental designs are more likely to use a mixed method approach. Given the nature of qualitative research methods, it is assumed that descriptive studies will employ a qualitative-only approach (i.e., case studies and observational studies).

Table 2: Kind of Information Gathered

Data Type	Frequency	Percentage
Quantitative only	10	23%
Qualitative only	19	44%
Mixed data	14	33%

Table 3: Research Design x Data Collection

Research Design	Quantitative only		Qualitative Only		Mixed	
	Frequency (%)		Frequency (%)		Frequency (%)	
True experiment	1	13	0	0	7	88
Correlational-Causal	1	100	0	0	0	0
Descriptive	4	16	18	72	3	12
Summary/Synthesis	2	100	0	0	0	0
Quasi-experiment	2	29	1	14	4	57

Hsieh et al. (2005) and Ross and Morrison (2008) expressed concern about the dearth of intervention studies in the literature on instructional technology and educational psychology in their earlier reviews of the field. According to both research, there were fewer intervention studies conducted between 1995 and 2004 than there were between 1983, the baseline year. We can make a broad

conclusion based on the study designs used in the studies, even if the current analysis did not categorize the publications as intervention studies or non-intervention studies. A genuine or quasi-experiment is one type of experimental design that is needed for intervention investigations. These two types of designs were only used in 35% of the papers in the current evaluation,



indicating that less than one-third of the publications were intervention studies.

This result is in opposition to our previous discovery that intervention studies accounted for 75% of the studies published in 1983. Additionally, the predicted trend for intervention studies published between 1995 and 2004 is lower than 45%. Some questions concerning the validity of technology studies for determining successful practices in schools are raised by this trend of dwindling trials and intervention studies.

4. FUTURE COURSES OF ACTION

Characterizing, let alone evaluating, educational technology research during the previous few decades is a difficult endeavor, as the preceding sections have made clear. This massive corpus of work covers a wide range of themes and encompasses all design types, from randomized trials to qualitative-descriptive studies. Since this work is expected to provide ways to enhance the quality (rigor and credibility) and relevance (meaningfulness and utility) of research, we acknowledge the possibility of a wide range of opposing views, each with a strong case. We thus proceed with the disclaimer that our thoughts are biased because they are based on our own experiences conducting research and assisting practitioners in making better use of technology in the field.

Our recommendations are predicated, among other things, on the idea that high-quality, pertinent research addresses concerns and challenges that are significant in education today. In order to develop and improve technology products, this theory acknowledges the need for ongoing basic research on cognition and learning with technology (e.g., Azevedo & Cromley, 2004; Azevedo, Cuthrie, & Seibert, 2004). It also acknowledges the need for formative evaluation and design-based research (Morrison et al., 2010; Richey & Klein, 2008; van den Akker, & Kuiper, 2008). Nonetheless, they give top attention to well planned research projects that directly assist practitioners in enhancing instruction in real-world settings. A second tenet is that rigorous, pertinent research is necessary to ensure that the findings are accepted as legitimate and trustworthy. A third hypothesis is that good research needs to do more than just show how successful a technological application was. Knowing the general results is important, but so is understanding why they happened in light of the specific setting (rural vs. urban school, for example), the fidelity of the implementation (fully applied vs. applied weakly or partially), and participant reactions (highly motivated vs. uninterested in the task).

It is evident that research design is not very useful for guiding K–12 activities when there aren't any relevant areas of investigation. What subjects seem to be crucial for enhancing education using technology both now and maybe in the upcoming ten years? We believe that the following four should be taken into account:

- 4.1. Distance learning encompasses several methods such as web-based classes, teleconferencing, hybrid courses, and more.
- 4.2. Social networking with an international student body
- 4.3. Utilizing technology to enhance learning in the classroom
- 4.4. Preparing pupils to use technology with competence and assurance

In K–12 education, technology is only going to become more and more important. The next ten years will surely present previously unheard-of chances for research findings to guide practices that improve teaching and learning. In order to accomplish that, we urge researchers to focus less on demonstrating the "effectiveness" of technology and more on carrying out thorough and pertinent mixed-methods studies that explain which technological applications are most effective at facilitating learning—in what ways, for whom, in what contexts, and for what reasons.

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RELIGIOSITY AND ENTREPRENEURIAL ORIENTATION AS AN ANTECEDENT FACTOR OF MSME RESILIENCE

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ABSTRACT

This study aims to investigate how entrepreneurial orientation and religiosity influence the resilience of MSMEs. This study is both quantitative and descriptive. This research makes use of a survey methodology. Utilizing a questionnaire, data were collected. This study focuses on micro, small, and medium-sized enterprise (MSMEs) actors in the Banyumas and Purbalingga Regencies. This sample was determined using a non-probability sampling strategy, particularly the purposive sampling technique. The findings revealed that entrepreneurial orientation and religiosity have a positive effect on the resilience of MSMEs.

KEYWORDS: *entrepreneurial orientation, use of technology, government support, and religiosity, MSME resilience*

INTRODUCTION

We cannot avoid disruption at this time, when major inventions and changes are occurring that profoundly alter all systems, orders, and landscapes in new ways. Disruption leads to the rise of new business models that employ more imaginative and disruptive tactics. This revolution began in the corporate, banking, transportation, and social society sectors and has now reached the education sector. As a result, if we do not follow it, we will degrade and fall behind.

The Covid-19 pandemic, which happened in the previous two years, has accelerated this period of instability. The pandemic shifted the formerly traditional ecosystem into the digital era. Furthermore, the fourth industrial revolution has an impact on disruption. As technology advances, it becomes easier for all transactions to be at their fingertips. This is both a challenge and an opportunity for all industries, including micro, small, and medium-sized businesses (MSMEs).

MSME is a highly vulnerable sector to disruption attacks. The economic crisis that micro, small, and medium-sized firms (MSMEs) have been experiencing has also become a significant threat to the national economy, given that MSMEs have been the engine of the domestic economy and the largest employer during the last few decades. According to LIPI survey data from 2020, 94.69% of enterprises witnessed a decrease in sales during the outbreak (lipi.go.id). According to Bank Indonesia, the Covid-19 outbreak has affected 87.5% of MSMEs. On the sales side, approximately 93.2% of this sum was negatively impacted (www.bi.go.id).

Despite the fact that SMBs constitute the most important economic pillar in Indonesia. According to the Ministry of Cooperatives and SMEs, there are currently 64,2 million MSMEs, with a GDP contribution of 61.07 percent, or 8,573.89 trillion IDR. MSMEs help the Indonesian economy by

employing up to 97 percent of the workforce and attracting up to 60.4% of total investment. (www.kemerkopukm.go.id) Furthermore, Bappenas discusses the role of micro, small, and medium-sized enterprises (MSMEs), which play an important role in expanding employment opportunities and employment, contributing to GDP, and providing a safety net for low-income individuals to engage in economically productive activities.

Given their crucial role in ensuring the national economy's resilience, MSMEs must be resilient in the face of disruptions such as pandemics and the industrial revolution. Reivich and Shatté (2002) describe resilience as a person's ability to rise, survive, and adapt in the face of adversity. MSMEs with high resilience can recover quickly and avoid being traumatized by unexpected circumstances.

Previous research has found that entrepreneurial attitude can have an impact on the resilience of small and medium-sized businesses. According to Hidayat, the entrepreneurial approach has a positive effect on MSME crisis management (2020). Small and medium-sized enterprise (SME) actors that have a strong entrepreneurial spirit will persevere and be extremely resilient in the face of hardship.

Furthermore, the use of technology may have an impact on the resilience of MSMEs. MSMEs may implement the approach of employing internet-based technologies and communication to be resilient during the Covid-19 pandemic crisis. Currently, one of the strengths of MSMEs is the online system, which allows their products to be widely known. According to Nafiati's (2020) research, one approach by which MSMEs can enhance their resistance to the disruptions they are currently experiencing is through the adoption of technology.

Building the resilience of entrepreneurs necessitates major government assistance. According to Hidayat's (2020) research,



government assistance has a favorable impact on MSMEs' crisis management. Monetary policies such as loan relaxation, postponement of loan installments and interest, and social support are a breath of fresh air for MSMEs in the middle of the COVID-19 pandemic crisis.

The purpose of this research is to look into the elements that influence MSME resilience. In Indonesia, the country with the world's biggest Muslim population, religion undoubtedly plays an important role in daily life, particularly economic activities. It is intriguing to investigate the religiosity of MSME actors and its impact on MSME resilience in the face of upheaval. According to Asyari (2021) research, the religiosity of MSME actors can help to increase MSMEs' resilience. Religion can boost organizational creativity and increase employee commitment to achieving the company's vision, resulting in a more creative workforce (Neck & Miliman, 2006). Furthermore, MSME actors with strong religiosity would believe that this disruption is something we must face, accept graciously, and live with sincerity. As a result, SMEs with strong religiosity will act slowly and calmly.

Based on the foregoing background and study phenomena, it is required to perform in-depth empirical research in Indonesia on the impact of entrepreneurial orientation, usage of technology, government support, and MSME actor religiosity on MSME resilience. The goal of this research is to examine the impact of entrepreneurial orientation, technology use, government support, and religion on the resilience of MSMEs in Banyumas Regency.

MSME Resilience

The number of a person's personal strengths is indicated by resilience. Personal strengths/individual competences, according to Benard (2004), are the abilities a person possesses to grow and achieve success in his life. Furthermore, Benard (2004) defines resilience as a process of self-awakening in the form of social competence, problem-solving abilities, autonomy, and a sense of purpose in response to many problems and stresses. According to Bonanno (2004), resilience is a person's ability to get out of trouble, stabilize his bodily and psychological health, properly deal with his experiences and emotions, and increase his self-adjustment over the course of his life.

Another definition was proposed by Papalia, Olds, and Feldman (2001). They defined resilience as a person's proclivity for perseverance, toughness, and refusal to give up readily in the face of adversity. According to Reivich and Shatté (2002), resilience is an individual's ability to endure hardship and adapt to new circumstances.

A person is said to have excellent resilience if he is able to bounce back and not be traumatized by circumstances that are not as expected. Resilience can be found in every human being, but most are unaware of it or are unwilling to develop it. This suggests that resilience can be reached if every human being is eager to learn, especially when confronted with obstacles and

disappointments, rather than overjoying when experiencing joy or success.

Entrepreneurial Orientation

Entrepreneurship takes more than just a creative mind. A true entrepreneur's unique talents, abilities, and characteristics enable them to overcome obstacles and follow their goals at full speed. The entrepreneurial attitude has a significant impact on company success, according to Wiklund and Sherperd (2005). According to Keh et al. (2007), entrepreneurial orientation has both direct and indirect consequences on company success. Several studies have also shown that entrepreneurial orientation has a strong relationship with and a significant impact on firm performance (Rauch et al., 2009).

Entrepreneurial orientation values traits such as tenacity, risk-taking, quickness, and adaptability (Debbie Liao and Philip Sohmen, 2001). According to Lumpkin and Dess (1996), entrepreneurial orientation is the willingness of an entrepreneur to be first in market product innovation, to engage in aggressive and independent company activities, and to embrace risks. The three dimensions of entrepreneurial orientation are invention, initiative, and risk-taking (Matsuno et al., 2002).

Religiosity

According to the literature on religion and entrepreneurship, religion has an impact on entrepreneurship. The impact of religion on entrepreneurs includes motivation and duty (Umm Kolsome Farouk, 2011). (Day & Hudson, 2011). Previous research has shown that religiosity can boost innovation in business organizations by increasing workers' commitment to achieving the company's vision, and that the workforce in enterprises will be more imaginative (Neck & Miliman, 2006).

According to Jalaluddin (2001: 89), religiosity is a state that exists within a person and motivates him to behave in accordance with the level of religious obedience. Those with religious awareness or religious convictions will be able to manage barriers or perils of any degree (Burhanuddin, 1999). This is due to the absorption of religious values into his life, such as patience, a lack of anxiety, and the conviction that life's hardships are part of God's tests for His devoted followers.

Glock and Stark (in Ancok and Suroso, 2005) argue that the criterion for assessing whether a person is religious or not is based on the five qualities of religiosity listed below: (1) Dimensions of belief (ideological); this dimension relates to a person's belief in the fundamental teachings of his religion and dogmatism; (2) The ritualistic dimension (worship); this dimension includes worship, obedience, and things that people do to demonstrate their commitment to the religion they adhere to; (3) The experience dimension; this dimension includes experiences related to how strongly a person feels and experiences religious feelings. (4) The component of religious knowledge, which relates to the expectation that religious individuals have a basic understanding of essential beliefs, practices, holy books, and traditions; (5) The dimension of experience and consequences, which relates to the amount to which a person's behavior is driven by religious teachings, such



as honesty, maintaining the commandment, forgiving, and so on.

Hypothesis Development

Entrepreneurial Orientation towards MSME Resilience

Entrepreneurial orientation can have an impact on the resilience of SMEs. According to Hidayat (2020), an entrepreneurial mindset is beneficial to MSME crisis management. MSME actors with a strong entrepreneurial spirit will continue to function and demonstrate exceptional resilience during crises. Entrepreneurial orientation has a substantial impact on organizational performance. Buli's (2017) study confirms this influence on Ethiopia's small and medium-sized business sectors. This is supported by the findings of Faloye and Owoeye (2021) in Nigeria, Santos and Marinho (2017) in the Brazilian retail sector, and Silviasih, Slamet, and Iskandar (2017) in the Indonesian garment business. This contract is multifaceted, requiring creativity, initiative, and a willingness to take chances. (Koe, 2016). Rezaei and Ortt's (2018) study found a positive relationship between proactive and innovative marketing techniques and sales performance, but a negative relationship between risk-taking and production performance. The orientation denotes a specific approach and style to strategic decision-making, staff direction, and MSME management implementation.

MSME resilience can be aided by recognizing these three dominants as a form of ready for any situation that may arise. The art of controlling and realizing the three parts of an entrepreneurial approach will develop a solid foundation indefinitely. This architecture is adaptable to the ever-changing and competitive corporate environment. As a result, MSME players must be able to adapt their entrepreneurial orientation in response to changing conditions. This contract's entrepreneurial emphasis is predicted to have a clear impact on MSME resilience, hence the first hypothesis might be stated as follows:

H1: Entrepreneurial orientation has a positive influence on MSME resilience.

Religiosity with MSME Resilience

Spiritual education from childhood is the foundation for the development and production of a perfect human being. These people will believe that the natural rules are God's laws (Kamarudin, 2011). According to Asyari (2021), the religiosity of MSME players can boost MSMEs' resilience. Religiosity has been shown to increase organizational creativity and employee commitment to accomplishing the company's vision, resulting in a more creative workforce (Neck & Miliman, 2006). Furthermore, MSME actors with high religiosity would believe that this disruption is something they must face; they must accept it broadly and live it with sincerity so that MSME actors with high religiosity can act patiently and without feeling uncomfortable.

Religion becomes an intake in a person as a kind of spiritual fulfillment or self-care. MSMEs who are religious will believe that everything that occurs has great significance. The

suggested meaning will be established through faith in God; faith in this faith is supposed to encourage MSMEs to keep striving and solving problems. Beneficial thoughts offered by MSME actors will have a positive affect on them; positive thoughts are produced via faith in God, who has governed all laws that occur because ease will invariably accompany every problem in it. Based on this explanation, the hypothesis can be phrased as follows:

H2: Religiosity has a positive influence on the resilience of MSMEs

RESEARCH METHODS

This descriptive and quantitative research aims to analyze entrepreneurial orientation, use of technology, government support, and religiosity on the resilience of MSME actors on MSME resilience. Several approaches were used to collect data, including surveys, interviews, and observations. This study relied on both primary and secondary data sources. This research was conducted in Banyumas and Purbalingga regencies. The target population in this study is MSME actors in Banyumas Regency. The sample in this study was chosen using a non-probability sampling technique known as purposive sampling. This study uses the Slovin formula developed by Yamane (1967), where:

$$n = \frac{N}{1 + Nd^2}$$

Where :

- n = Minimum sample size
- N = Population size
- d = fault tolerance (sampling error)

The confidence level is 95 percent ($\alpha = 0.05$), then $Z = 1.96$, while the error tolerance level is 10 percent ($d = 0.01$) (Suliyanto, 2018). Based on the above formula, with a population of 296 people, several 74.74 is rounded to 75 or more. To anticipate the response rate, which is not expected to reach 100%, and the possibility of respondents' answers being incomplete, the sample was set at 105 respondents.

The variables in this study are entrepreneurial orientation, use of technology, government support, and the religiosity and resilience of MSMEs. SPSS 17.0 software was used to run multiple linear regression analysis techniques.

RESULTS AND DISCUSSION

Researchers distributed 110 questionnaires, but only 105 respondents were willing to provide responses; thus, only 105 questionnaires could be processed in the study. Respondents in this study were UKMM actors in Banyumas and Purbalingga Regencies.

Validity and reliability tests were carried out to see the feasibility of the questionnaire to be distributed to respondents. Testing the validity and reliability of the data was carried out on the results of the questionnaire on optimizing MSME resilience for as many as 30 respondents.



A validity test can be done using Pearson's product-moment correlation when calculating the regression equation simultaneously. The calculation results were consulted with the

r_{XY} table with a significance level of 95% and 5% alpha. If $r_{arithmetic} > r_{table}$ of items is "valid." Conversely, if $r_{count} \leq r_{table}$, the items are said to be "invalid."

Table 1. Validity Test Results of Entrepreneurial Orientation Variables (X1)

Instrument	R Count	R Table	Ket
X1.1	,617	0.3739	Valid
X1.2	,728	0.3739	Valid
X1.3	,494	0.3739	Valid

Table 2. Validity Test Results for Religiosity Variables (X4)

Instrument	R Count	R Table	Information
X4.1	,384	0.3739	Valid
X4.2	,790	0.3739	Valid

In the table above, there are four items of religiosity questionnaire questions which are stated to be all valid because they meet the validity requirements with the results of the R

$count > R_{table}$; with df_{n-4} it is known that the R table value is 0.3739.

Table 3. Validity Test Results for MSME Resilience Variables (Y)

Instrument	R Count	R Table	Information
Y1.1	.542	0.3739	Valid
Y1.2	.802	0.3739	Valid
Y1.3	.669	0.3739	Valid

In the table above, there are five items of religiosity questionnaire questions which stated that all questions are valid because they meet the validity requirements with the results of the R $count > R_{table}$, with df_{n-4} it is known that the R table value is 0.3739.

According to Bawono (2006), in principle, the reliability test is to test the data we obtain, for example, the results of the answers to the questionnaires we distribute. A questionnaire is reliable if the responses to statements are consistent or stable throughout time. A variable is considered dependable if it has a Cronbach Alpha value greater than 0.60. The dependability test findings are as follows:

Table 4. Reliability Test Results

Reliability Statistics		
Variable	Cronbach's Alpha	Ket
Entrepreneurial Orientation	0.772	Reliable
Religiosity	0.833	Reliable
MSME resilience	0.837	Reliable

According to the table above, the dependability value was calculated using the Cronbach's Alpha test, with five variables giving a value greater than 0.6. Thus the statements, which total 18 variable questions, fulfill the reliability requirements and can be used in research.

Classic assumption test

Normality test

According to Bawono (2006), this test is used to determine whether the data of the dependent and independent variables utilized in our regression model are regularly distributed or not. A good model has a normal or close to normal data distribution. In this test, the researcher does statistical analysis, specifically the Kolmogorov-Smirnov (KS) test, to determine normalcy. If $Sig. = 0.05$, the data is said to be normal. The results of the normalcy test are as follows:



Table 5. Results of the One-Sample Kolmogorov-Smirnov Test Normality

Model	Collinearity Statistics VIF
Entrepreneurial Orientation	1.056
Technology Utilization	1.032
Government Support	1,111
Religiosity	1.174

Table table above reveals that the significance value is 0.200 based on the results of the normality test. A significance value of 0.200 is greater than 0.05. Thus it can be concluded that the

data is distributed normally and the regression model is feasible for use in further analysis.

Heteroscedasticity Test

Table 6. Coefficients

Coefficients		
Model	t	Sig.
(Constant)	1.039	0.301
Entrepreneurial Orientation	-1.665	0.099
Technology Utilization	1.155	0.251
Government Support	,626	0.533
Religiosity	-,129	0.898

Dependent Variables; ABS_RES

The heteroscedasticity test determines whether there is a variance inequality in the regression model from one residual observation to the next. If the variance of the residual from one observation to the next remains constant, this is referred to as homoscedasticity; if it changes, this is referred to as heteroscedasticity. A good regression model is one that lacks heteroscedasticity (Ghozali, 2013). The Glejser test can be used to determine heteroscedasticity.

versa. If the significance level is 0.05, it is possible to conclude that there is a heteroscedasticity issue. According to the results in table 8, the regression model does not exhibit heteroscedasticity because the sig variable of entrepreneurial orientation is 0.099 > 0.05, the sig variable of Technology Utilization is 0.251 > 0.05, the sig variable Government Support is 0.533 > 0.05, and the sig variable Religiosity is 0.898 > 0.05.

In this test, if the significance value is less than 0.05, it can be concluded that there is no heteroscedasticity problem, but vice

Multicollinearity Test

Table 7. Multicollinearity Test Results

	Std. Residual
N	105
Normal / Mean	0.00000
Parameters / Std. deviation	1, 59783297
–	
Most / Absolutes	0.046
Extreme / Positive	0.040
Differences / Negatives	-0.046
Test Statistics	0.046
asypm. Sig. (2-tailed)	0.200c,d

This test determines if two or more independent variables are linearly connected. If this occurs, it will be impossible to differentiate the effect of each independent variable on the dependent variable. The tolerance value or the Variance Inflation Factor (VIF) value can be used to determine the presence of multicollinearity symptoms in a research model.

Because the tolerance limit is greater than 0.10 and the VIF limit is greater than 10.00, it is inferred that there is no multicollinearity between the independent variables.

Looking at the VIF (Variance Inflation Factor) number in table 9 above, all variables have a VIF value of less than 10,



indicating that the regression model developed did not exhibit multicollinear symptoms.

Hypothesis testing

F test

The F statistic test determines how well the influence of the independent factors explains the dependent variable at the same time. On the anova table, the value of (alpha) was compared

Table 8. ANOVA

Model 1	B	Sig.
Constanta	8.002	0.002
Entrepreneurial Orientation	,623	0.000
Technology Utilization	,077	0.550
Government Support	,136	0.202
Religiosity	, 184	0.023

Dependent Variable: MSME resilience

Based on the results in table, the independent variable has a sig value of 0.000, where the sig value is less than 0.05. Thus, if the probability value is 0.05, it can be concluded that the variables of entrepreneurial orientation, technology utilization, government support, and religiosity jointly affect MSME resilience.

T test

The t statistical test is used to determine how much the independent variable influences the dependent variable. This partial test is performed by comparing the value of (alpha) to

with sig. to perform this simultaneous test. If the sign. (0.05), H0 is rejected. As a result, the independent variables and the dependent variable have a simultaneous influence, and vice versa. If the sig. > (0.05), then H0 is accepted, indicating that there is no simultaneous influence of the independent variables on the dependent variable. The following are the outcomes of testing the f test statistics, as shown in the table below:

the value of sig. If the sig value is less than (0.05), H0 is rejected. As a result, there is some influence between the independent variable and the dependent variable, and vice versa. The t statistical test yielded the following findings.

Based on the results of SPSS 25, the following explanation is given for the acceptance and rejection of the hypothesis related to the relationship between the entrepreneurial orientation variable and MSME resilience, the use of technology on MSME resilience, government support for MSME resilience, and religiosity on MSME resilience in this study:

Table 9. Coefficients

	Sum of Square	df	MeanSquare	F	Sig.
Regression	106,481	4	26,620	10.026	,000
residual	265,519	100	2,655		
Total	372,000	105			

Hypothesis 1: Entrepreneurial orientation influences MSME resilience

Table shows that the value of the multiple regression test (sig) of the entrepreneurial orientation variable is 0.000 0.05. This suggests that entrepreneurial orientation has a substantial impact on the resilience of MSMEs. The B value of 0.623 is positive, indicating that entrepreneurial orientation has a positive influence on the resilience of MSMEs. The first hypothesis given is then proclaimed approved.

Hypothesis 2: Religion influences MSME resiliency

The multiple regression test results in table 11 show that the value of the multiple regression test (sig) for the religiosity variable is 0.023 0.05. This suggests that religiosity has a substantial impact on the resilience of SMEs. Whereas the B value of 0.184 is positive, indicating that religiosity has a favorable influence on the resilience of MSMEs. The fourth hypothesis proposed is then pronounced approved.

Entrepreneurship Orientation with MSME Resilience

Based on the findings of the tests, it is known that Entrepreneurial Orientation has a favorable effect on the resilience of MSMEs. This demonstrates that the higher the value of entrepreneurial orientation, the greater MSMEs' resilience.

These findings are consistent with those of (Hidayat et al., 2020; Widodo, 2021), which suggest that entrepreneurial orientation has a beneficial impact on MSME resilience. Furthermore, the findings of this study are consistent with research conducted by (Buli, 2017) on the impact of entrepreneurial approach on corporate performance.

Entrepreneurial orientation shows fighting power, creativity and innovation, as well as the orientation of MSME actors towards their customers. So that MSMEs that have a good entrepreneurial orientation indicates that these MSMEs can face various difficult situations that will occur in the future.



Taking risks, being proactive, and being innovative give real benefits to business continuity. This attitude is carried out by MSMEs as a form of business so that they can survive during the Covid-19 pandemic, risk taking is reflected in the attitude of MSMEs in utilizing low interest lending to support business capital. Sikao's proactiveness is reflected in mutual cooperation through the MSME community with the aim of helping other MSMEs both in terms of promotion and buying products that are sold.

Religiosity on MSME Resilience

Based on the findings of the tests, it is clear that religiosity has a considerable positive effect on the resilience of SMEs. This demonstrates that the greater the religiosity, the greater the resilience of SMEs.

This finding is consistent with Neck and Miliman's (2006) research on the relationship of religiosity to innovation in business organizations, as it strengthens employee commitment to accomplishing the company's vision and leads to a more creative workforce. Religiosity is a person's hold or belief that everything must have a way out through their beliefs. Confidence and trust gained by a spiritual link with God can enable MSME players to persevere in the face of adversity; they are encouraged to keep trying and surviving with the notion that everything in the universe has been planned and it is a human's obligation to try. When religion is lost, the business basis of MSME actors suffers as a result of a loss of drive and trust in the firm they are running.

CONCLUSION

This study has the main objective of knowing the relationship between entrepreneurial orientation, technology utilization, government support, and religiosity on the resilience of MSMEs. As a result of the hypothesis, the following conclusions can be drawn.

Because the entrepreneurial orientation variable has been shown to positively influence MSME resilience, it can be concluded that the greater the entrepreneurial orientation in MSME players, the greater the MSME resilience.

The religiosity variable is proven to have a positive influence on MSME resilience. So the higher the level of religiosity of SMEs, the more resilience of SMEs will increase.

Entrepreneurial orientation and religiosity positively impact the resilience of MSMEs; these two variables are values or a belief and priorities within MSME actors. Confidence and goal setting can build self-worth in the form of the belief that MSME actors have more value and can solve all existing problems. Setting goals clarifies the path that must be followed to maintain business continuity under any circumstances so that it can encourage MSME actors.

Limitations of research on the variables of technology utilization and government support can be carried out further research on external factors that exist on MSME resilience. The subjects used in this study have unique characteristics

because MSME actors are still transitioning from traditional to digital. Government support can also be reused by adding consumer behavior variables in the research model to determine how government support influences the resilience of MSMEs.

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PANORAMIC REVIEW OF OPEN FRACTURES, DESCRIPTION, EPIDEMIOLOGY, ASSESSMENT, CLASSIFICATION, TREATMENT AND COMPLICATIONS

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SUMMARY

Introduction: An open or exposed fracture is a fracture that has communication with the external environment through a skin wound. Usually these types of severe fractures require treatment by the orthopedic and plastic surgery team to address both bone and soft tissue injuries.

Objective: to detail current information related to open fractures, description, epidemiology, evaluation, classification, treatment and complications.

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: exposed fractures, open fractures, acute trauma, compartment syndrome, vascular injury, debridement.

Results: the general average age of onset is 45.5 years, the incidence decreases in men and increases in women with age. Automobile accidents are the most common cause of open fractures of the lower limbs, accounting for approximately 34.1% of these injuries. The highest incidence of open fractures in males is between 15 and 19 years, the highest incidence in females is between 80 and 89 years.

Conclusions: Knowledge of the management of open fractures is of vital importance, due to the fact that this type of fracture presents a high risk of infections, as well as other types of complications. The initial approach to the injured individual with an open fracture should be based on the principles of Advanced Trauma Life Support (ATLS). Clinical and imaging evaluation is important in this type of fracture, as well as recognizing the value of the classification systems that play a critical role when treating surgically. Irrigation and debridement remain the gold standards for proper wound management. The most important point in the treatment of an open fracture is proper lavage and debridement.

KEY WORDS: trauma, open fractures, bone exposure, treatment.

INTRODUCTION

An open or exposed fracture is a fracture that has communication with the external environment through a skin wound. Usually these types of severe fractures require treatment by the orthopedic and plastic surgery team to address both bone and soft tissue injuries. Open fractures are usually high-energy traumatic injuries that commonly occur in traffic accidents, blast injuries in conflict zones and sports. These types of fractures present a high risk of infection, as well as delayed healing, pseudarthrosis and delayed return to function when compared to closed fractures, primarily when not treated correctly. In the management of these fractures, contaminants and non-viable tissue must be removed and the wound closed, becoming closed fractures when the fracture is stabilized. Among some distinctive aspects of severe open fractures are: bone loss, significant bone fragmentation either comminution or segmentation, loss of skin in a way that does not allow a tension-free closure after wound excision and injury to any of the important arteries of the leg(1-3).

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: exposed fractures, open fractures, acute trauma, compartment syndrome, vascular injury, debridement.

The choice of bibliography exposes elements related to open fractures; in addition to this factor, description, epidemiology, evaluation, classification, treatment and complications are presented.

DEVELOPMENT

DESCRIPTION

An open fracture is one in which a break in the skin and underlying soft tissues communicates directly with the fracture and its hematoma. One third of individuals with open fractures are polytraumatized. Any wound located in the same segment of the fractured extremity should be considered an open fracture until proven otherwise. Soft tissue injuries in an open fracture usually carry some consequences such as:

Contamination from exposure to the external environment.

Crushing, denudation, lack of vascularization and increased susceptibility to infection.

Loss or destruction of soft tissue coverage, altering immobilization, the contribution of soft tissue to healing and generating functional loss(2,4).

EPIDEMIOLOGY

There are studies showing an incidence of open fractures in adults close to 30.7 per 100,000 people per year. The general average age of onset is 45.5 years, the incidence decreases in men and increases in women with age. Motor vehicle accidents are the most common cause of open fractures of the lower limbs, accounting for approximately 34.1% of these injuries. Crush injuries account for 39.5% of open fractures of the lower extremities. The highest incidence of open fractures in males is between the ages of 15 and 19 years, with approximately 54.5 per 100,000 persons per year, while the highest incidence in females is approximately 53.0 per 100,000 persons per year between the ages of 80 and 89 years. Open phalangeal fractures are the most frequent open fractures, accounting for more than 45% of all open injuries. The most frequent long bone fracture is that of the tibia and fibula in about 11.2%(3,5-7).



Figure 1. Open fracture involving the carpal bones of the left hand.



Source: The Authors.

MECHANISM OF INJURY

They are usually caused by exerting violent force. Individuals with open fractures have a history of high velocity related trauma. The applied kinetic energy (0.5 mv^2) is dissipated in soft tissue and bone structures. The displacement of bone fragments and comminution guide the level of soft tissue injury, being equivalent to the applied force(2,3).

CLINICAL ASSESSMENT

The initial approach to the injured individual with an open fracture should follow the principles of Advanced Trauma Life Support (ATLS), where life-threatening issues are made known and managed in a logical, hierarchical progression, with the most life-threatening issue being addressed first(1).

1. ABCDE: airway, breathing, circulation, disability and exposure.
2. Resuscitation and treatment of life-threatening injuries.
3. Cranial, thoracic, abdominal, pelvic and spinal injuries must be evaluated.
4. Recognize all injuries present in the extremities.
5. The neurovascular condition of the injured extremities is analyzed.

6. Skin and soft tissue lesions are evaluated: wound examination is not indicated in the emergency room if a surgical intervention is to be performed, due to the increased risk of contamination, also because it can lead to further bleeding and because of its limited ability to provide useful information. Easily accessible foreign bodies should be removed under sterile conditions in the emergency room. Wounds can be washed with sterile physiological saline if it is known to delay pre-intervention time. Intra-articular injection of physiological saline solution using sterile technique may be considered to determine if there is fluid leakage, in addition to assessing for continuity of the lesion.
7. Skeletal lesions are recognized and the necessary radiographs are taken(2,4).

Compartment Syndrome

The presentation of an exposed fracture does not prevent the formation of a compartment syndrome, mostly in crush injuries and major blunt trauma. The main points to be considered for diagnosis are severe pain, reduced sensibility, tension in the limb and pain on passive extension of the fingers. When suspicion



exists, or in an unconscious individual in appropriate clinical condition, compartment pressures should be monitored. Compartment pressures greater than 30 mm Hg are highly suggestive of compartment syndrome; a difference of less than 30 mm Hg from diastolic blood pressure also indicates the presence of compartment syndrome and urgent fasciotomies should be performed. Distal pulses may be appreciated long after ischemia, nerve injury and muscle injury are not reversible(2-4).

Vascular Injury

The ankle-brachial index (ABI) should be obtained when there are signs of vascular involvement; this is achieved by measuring the diastolic pressure in the ankle and arm; the normal index is greater than 0.9. When a vascular lesion is suspected, angiography is required. Indications for angiography include:

- Cold, pale foot with poor distal capillary filling.
- Knee dislocation with an ITB 0.9.
- High energy injury in a compromised area.
- Documented ITB 0.9 related to a lower limb injury(2,8,9).

IMAGING ASSESSMENT

Radiographic projections of the limbs should be requested depending on the clinical presentation, the pattern of the lesion and the symptoms of the affected individual. At least two orthogonal projections of the limb are recommended. The upper and lower joints of the apparent lesion should be included. When there is intra-articular involvement, it is indicated to complement with a CT scan(2,10,11).

Gustilo and Anderson classification of open fractures

Classically designed to categorize soft tissue injuries related to open diaphyseal fractures of the tibia, however it was later used for all open fractures. Although the description addresses the size of the skin wound, the subcutaneous soft tissue injury is more important because it is directly related to the energy applied to the extremity, which is why definitive classification of the wound should be deferred until after surgical debridement.

Type I: clean skin wound 1 cm, usually from the inside out; minimal muscle contusion; simple transverse or short oblique fracture.

Type II: wound greater than 1 cm in length, with extensive soft tissue injury; minimal to moderate crushing component; simple transverse or short oblique fracture with minimal comminution.

Type III: extensive soft tissue injury, involving musculature, skin and neurovascular structures; usually from high-energy trauma with a significant crushing component.

A: extensive soft tissue injury with adequate bone coverage; segmental fractures, gunshot injuries and minimal periosteal denudation.

B: extensive soft tissue injury with periosteal denudation and bony exposure requiring a soft tissue flap for closure; frequently related to massive contamination.

III C: vascular lesion requiring surgical repair(1,2).

Tscherne's Classification of Open Fractures

It takes into account the size of the wound, as well as the degree of contamination and the mechanism of the fracture. It is divided into the following grades:

I: small puncture wound without associated contusion, insignificant bacterial contamination, low-energy fracture mechanism.

II: small wound, skin and soft tissue contusion, moderate bacterial contamination, variable mechanism of injury.

III: large wound with notable bacterial contamination, extensive soft tissue injury, often related to arterial or nerve injury.

IV: incomplete or complete amputation with variable prognosis depending on the location and nature of the injury.

Tscherne's Classification of Closed Fractures.

Classifies soft tissue injuries in closed fractures and takes into account the type of mechanism, direct versus indirect. It is divided into the following grades:

0: generated by indirect force, with negligible soft tissue injury.

I: closed fracture generated by a low to moderate energy mechanism, with superficial abrasions or soft tissue contusion over the fracture.

II: closed fracture with marked muscle contusion, with deep and possibly contaminated skin abrasions, related to a moderate to high energy mechanism and skeletal injury; high risk of compartment syndrome.

III: extensive soft tissue crushing, with degloving or subcutaneous avulsion and arterial injury or established compartment syndrome(2).

In addition there are other scoring systems created to support the surgeon in deciding whether to cut or maintain a heavily injured lower limb, an example of this would be the Mangled Extremity Severity Score (MESS) described in Table 1(1).



Table 1. The MESS system.

	Score	Description
Skeletal soft tissue injury	1	Low energy
	2	Moderate energy
	3	High energy
	4	Very high energy
Limb ischaemia, double the score if ischaemia is greater than 6h	1	Pulse reduced or absent but normal perfusion
	2	Pulseless, paresthesia, slow capillary refill
	3	Cold, paralysed, numb
Shock	1	Systolic blood pressure always > 90mmHg
	2	Transient hypotension
	3	Consistent hypotension
Age	1	<30 years old
	2	30 to 50 years old
	3	>50 years old

Source:Johansen K, Daines M, Howey T, Helfet D, Hansen ST. Objective Criteria Predict Accurately Amputation following Lower Extremity Trauma: J Trauma Inj Infect Crit Care (12).

TREATMENT

Treatment in the emergency department.

After the general evaluation of the trauma and the creation of resuscitation measures in case of life-threatening injuries:

1. Clinical and radiological evaluation.
2. Control of hemorrhage by direct compression.
3. Parenteral antibiotic treatment. Prophylactic intravenous antibiotics should be administered within 3 hours of injury or as soon as possible.
4. Assess skin and soft tissue injury.
5. Provisional fracture reduction.
6. Surgical treatment: open fractures are an orthopedic emergency. Early administration of intravenous antibiotics has been shown to reduce the incidence of infection. There is evidence in favor of delaying open fractures for up to 24 hours in the absence of a compromising limb injury. Systematic wound exploration, with lavage and debridement, is necessary prior to definitive fracture fixation. Only easily accessible superficial foreign bodies should be removed. It is important not to wash, debride or explore the wound in the emergency department if early surgery is to be performed, as this may further contaminate the tissues and place detritus deep within the wound. If a delay of more than 24 hours is predicted, a gentle washing with physiological saline is suggested(1,2,4,13-15).

Antibiotic coverage for open fractures

Type I and II fractures: first generation cephalosporins.

Type III fractures: anterior plus an aminoglycoside.

Farm injuries: anterior plus penicillin.

Anti-tetanus prophylaxis should be administered in the emergency area, with a dose of toxoid of 0.5 ml regardless of age; for immunoglobulin, the dose is 75 U in patients 5 years of age, 125 U between 5-10 years of age and 250 U in patients older than 10 years. Both are administered intramuscularly, with different syringes and in different locations(2).

Surgical Treatment

Washing and Debridement

Debridement is the removal of contaminants and non-viable tissue from a wound, which can later become a source of infection. Irrigation and debridement remain the gold standard for proper wound management. The most important point in the treatment of an open fracture is proper lavage and debridement. It is suggested to extend the wound proximally and distally, having the axis of the extremity as the base. Intraoperative cultures are debated and controversial. Debridement should only be done immediately following preoperative treatment if the wound is expected to be contaminated with a high bacterial load, such as sewage or dirt, if there is compartment syndrome, if the arterial supply to the limb is compromised, or if the individual has multiple injuries. For isolated high-energy open fractures, debridement should be performed within 12 h and for low-energy open fractures, within 24 h. Debridement should be performed within 24 h. Debridement should preferably be performed methodically, layer by layer, from superficial to deep and from compartment to compartment(1,2,16).

Large skin flaps should not be implanted because this further devitalizes the tissues supplied by the vertical vessels originating from the fascia. Tendons should be preserved unless they are significantly damaged or contaminated. Bone fragments devoid



of soft tissue insertions can be removed. Some authors suggest pulsatile lavage, however there is now evidence to support that low pressure, high volume lavage achieves less injury to adjacent tissues with the same effect. Administering antibiotics to the lavage solution has not been shown to be effective. Hemostasis should be performed with care because blood loss can be marked, and clots can form a dead space. In suspicion of compartment syndrome, fasciotomy should be performed(1,2,4,12).

In the past it was recommended that traumatic wounds should not be closed, only the enlargement of the surgical wound was closed. Nowadays, most centers recommend closing the wound after debridement and vacuumassisted closure (VAC), carefully watching for signs or symptoms of sepsis. If the wound is left open, it should be dressed with sterile saline-soaked gauze, a synthetic dressing, a VAC system or an antibiotic dressing. Serial debridement(s) may be performed every 24 h to 48 h, depending on the case, until there is no necrotic soft tissue or bone, and then primary or secondary deferred closure should be performed(2,16).

Foreign Bodies

Possible foreign bodies, both organic and inorganic, must be searched for and removed because they can result in significant

morbidity if they remain in the wound, sometimes not applicable to gunshot wounds. Pieces of wood may be within clots and complex to differentiate from muscle. Leather and cloth are often found between wound planes and sometimes away from the site of injury. Emulsifiers such as bisacodyl are sometimes used to remove tar and grease. Foreign bodies induce an inflammatory response, as well as recesses may have pathogenic organisms or spores(2,4).

Fracture Stabilization

Skeletal fixation is necessary to ensure the fracture ends in close apposition and stable to allow osteogenesis. This stability may be absolute or relative to result in primary and secondary bone healing, respectively(17).

Another important factor in fracture healing is the blood supply, which is given through the surrounding soft tissue to the bone, so that soft tissue damage can delay fracture healing. Therefore, when restoring the fracture, it is prudent to minimize damage to the soft tissue and periosteum. In open fractures with extensive soft tissue injury, external fixation is usually preferred over internal fixation. The use of external fixation is usually temporary, to later perform internal fixation, however sometimes it can become definitive treatment(8,18-20).

Figure 2. Fracture Stabilization, with External Fixator



Source: The Authors.



Definitive internal fixation should only be done when it can be followed immediately by definitive soft tissue coverage to decrease the risk of infection(1).

In open fractures with extensive soft tissue injury, fracture stabilization protects against extra soft tissue injury.

Soft Tissue Coverage and Bone Grafting.

After seeing that there are no areas of necrosis, wound coverage can be performed. The type of coverage depends on the extent and location of the soft tissue injuries. Bone grafting should be done when the wound is clean, closed and dry, the timing for bone grafting after implanting a free flap is controversial.

Figure 3. Subsequent Surgery After Debridement of Open Fracture Using Flap.



Source: The Authors.

Limb Salvage Surgery.

The choice between amputation in Gustilo grade III injuries and limb salvage surgery is controversial. Immediate or early amputation may be indicated when:

- Non-viable limb: irreparable vascular injury, warm ischemia of more than 8 hours, or major crushing with minimal viable tissue.
- When the affected limb puts the life of the affected individual at risk.
- After revascularization, the limb presents a less satisfactory function than that which could be obtained with a prosthesis.
- When the severity of the wound requires multiple surgical interventions and a prolonged reconstruction time incompatible with the personal, sociological and economic consequences bearable for the patient.
- When the affected individual shows an Injury Severity Score (ISS) greater than 20 and saving the limb

generates a high metabolic cost or a high necrotic/inflammatory burden that could trigger pulmonary or multi-organ failure(2,4).

COMPLICATIONS

Infection: open fractures can cause cellulitis or osteomyelitis even after several debridements, abundant lavage, adequate antibiotic treatment and conscientious wound care. Some anatomical areas are more prone to infection. Some of the risk factors for infection include extensive contamination at the time of injury, the amount of soft tissue involved, nutritional status, foreign body retention and multisystem injuries.

Undiagnosed compartment syndrome: generates severe functional loss, being more noticeable in the forearm, foot and leg. It can be avoided with good control, performing repeated neurovascular explorations, with the measurement of intracompartmental pressure and through the opening of the fascia(1,2,4,9).



CONCLUSIONS

Knowledge of the management of open fractures is of vital importance, since this type of fracture presents a high risk of infection, as well as other types of complications. The initial approach to the injured individual with an open fracture should be based on the principles of Advanced Trauma Life Support (ATLS). Clinical and imaging evaluation is important in this type of fracture, as well as recognizing the value of the classification systems that play a critical role when treating surgically. Irrigation and debridement remain the gold standards for proper wound management. The most important point in the treatment of an open fracture is proper lavage and debridement.

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THE DIFFERENCE BETWEEN MANUAL BREWING AND MECHANICAL BREWING IN POUR OVER V60

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ABSTRACT

This research aims to provide a comprehensive analysis of the disparities between manual and mechanical brewing techniques in the context of pour-over V60 coffee preparation. The pour-over method, particularly with the V60 cone, has gained popularity for its ability to highlight the unique flavors of coffee beans. Understanding the nuances between manual and mechanical brewing processes can significantly contribute to refining the coffee brewing experience.

The first objective of this study is to thoroughly investigate the differences between manual and mechanical brewing in the pour-over V60 method. Manual brewing typically involves a hands-on approach, where the barista controls various parameters such as water flow, pouring technique, and timing. On the other hand, mechanical brewing employs automated devices to handle these variables. By comparing the two methods, we aim to identify how factors like precision, consistency, and control impact the final cup of coffee. The second objective focuses on exploring the outcomes of V60 coffee by manipulating grind size, temperature, and brew time. Grind size plays a pivotal role in extraction, influencing the rate at which flavors are released. Temperature affects the solubility of compounds, and brew time determines the duration of extraction. By systematically varying these parameters, we aim to uncover the intricate relationships between grind size, temperature, brew time, and the resulting flavor profile in V60 coffee.

The study employs a rigorous experimental design, using identical coffee beans to isolate the effects of brewing methods and parameters. Through sensory evaluations and analytical measurements, we aim to quantify the impact of each variable on taste, aroma, acidity, and body in the final coffee cup. Additionally, we will explore any potential interactions between the brewing method and the manipulated parameters.

This research contributes to the broader understanding of coffee brewing science and provides practical insights for both coffee enthusiasts and industry professionals. The findings have the potential to guide coffee brewing practices, leading to improved techniques and heightened appreciation of the subtleties involved in crafting the perfect pour-over V60 coffee.

KEYWORDS: *Pour-over V60, Manual brewing, Mechanical brewing, Grind size, Temperature, Brew time, Coffee flavor profile, Brewing methods, Sensory evaluation, Coffee extraction.*

1. INTRODUCTION

Coffee, a beloved beverage around the globe, has evolved into an art form, with enthusiasts continuously seeking the perfect brew. Among the myriad of brewing methods, pour-over coffee has gained popularity for its simplicity and the ability to accentuate the unique flavors of each coffee bean. Within the realm of pour-over, the V60 dripper stands as an iconic vessel for crafting the ideal cup. This research paper delves into the age-old debate: manual brewing versus mechanical brewing in the context of the pour-over V60 method, examining the intricacies, advantages, and outcomes of each approach.

Pour-over brewing, as a manual method, embodies the hands-on craftsmanship of the coffee-making process. It involves the meticulous pouring of hot water over coffee grounds, typically arranged in a conical filter, allowing the water to extract the coffee's flavors as it passes through. Manual brewing enthusiasts appreciate the tactile experience of pouring, fine-tuning the water flow, and maintaining full control over the variables that influence the final cup. On the other hand, mechanical brewing methods, which use automated machines,

seek to replicate the manual process with precision and consistency. While some may argue that it lacks the charm of traditional craftsmanship, mechanical brewing offers repeatability and accuracy that are often elusive in manual brewing.

The pour-over V60, designed by Hario, a Japanese glassware company, has become a cult classic in the coffee world. Its conical shape and spiral ridges inside the dripper facilitate even extraction, making it an ideal canvas for exploring the nuances of coffee. Manual brewing with the V60 requires keen attention to detail. Factors such as grind size, water temperature, pouring technique, and brew time are all carefully controlled to produce a cup that highlights the coffee's unique attributes. It is an intimate and engaging process that can be deeply satisfying for coffee connoisseurs.

Mechanical brewing machines, on the other hand, aim to standardize this process, potentially sacrificing some of the nuances that manual brewers hold dear. Automated V60 brewers promise consistency and precision, with programmable



settings that ensure each cup is identical to the last. While this appeals to busy cafes and those who prefer convenience, it sparks the debate over whether these machines can truly replicate the artistry of manual brewing and preserve the subtleties of each coffee.

2. LITERATURE SURVEY

2.1 Study 1

The impact of coffee on health by A Cano-Marquina, JJ Tarín, A Cano Maturitas 75 (1), 7-21, 2013

The information gathered in recent years has generated a new concept of coffee, one which does not match the common belief that coffee is mostly harmful. This view is further supported by the discovery of a series of phyto-components with a beneficial profile. Reasonable optimism needs to be tempered, however, by the insufficiency of the clinical data, which in most cases stem from observational studies.[1]

2.2 Study 2

Functional properties of coffee and coffee by-products Patricia Esquivel, Victor M Jimenez Food research international 46 (2), 488-495, 2012 Coffee is widely regarded as a functional food due to its numerous health benefits. Its global consumption is extensive, impacting a broad demographic. Ongoing research continues to uncover new advantageous properties, particularly in coffee by-products. Advances in biochemical analysis promise to reveal valuable compounds, addressing environmental concerns about their disposal.[2]

2.3 Study 3

Metabolism of Caffeine and Other Components of Coffee Maurice J. Arnaud Nestec Ltd., Nestlé Research Centre, CH-1000 Lausanne 26, Switzerland Coffee is widely regarded as a functional food due to its numerous health benefits. Its global consumption is extensive, impacting a broad demographic. Ongoing research continues to uncover new advantageous properties, particularly in coffee by-products. Advances in biochemical analysis promise to reveal valuable compounds, addressing environmental concerns about their disposal.[3]

2.4 Study 4

Extraction of caffeine from Robusta coffee (*Coffea canephora* var. Robusta) husks using supercritical carbon dioxide J. Tello, M. Viguera, L. Calvo Department of Chemical Engineering, Universidad Complutense de Madrid, 28040 Madrid, Spain A study explored using supercritical CO₂ to extract caffeine from Robusta coffee husks, finding that pretreatment with moisture and specific operational conditions led to high extraction yields. This method offers an economically viable way to utilize coffee industry waste for high-purity caffeine production.[4]

3. RESEARCH GAP

Based on the literature survey, it is evident that there is no sufficient studies regarding, The difference between manual brewing and mechanical brewing in pour over v60

4. OBJECTIVES

To comprehensively investigate the difference between manual brewing and mechanical brewing in pour over V60 coffee. The outcomes in a V60 coffee by using different grind size, temperature and brew time

5. METHODOLOGY

5.1 Coffee Brewing

Coffee brewing is the process of extracting flavors and aromas from coffee grounds by combining them with water. This can be done through various methods, each influencing the taste and characteristics of the final cup. Common brewing methods includes manual and mechanical brewing. The choice of method, along with factors like grind size, water temperature, and brew time, significantly impacts the flavor profile of the coffee. It's essentially the art and science of transforming coffee grounds into a satisfying and enjoyable beverage.

5.1.1 Types of Coffee Brewing

- Manual Brewing
- Mechanical Brewing

Manual coffee brewing refers to the process of making coffee without the use of automated machines. It often involves hands-on methods where the coffee maker has control over various factors like water temperature, pour rate, and brewing time. Popular manual brewing methods include pour-over (e.g., Hario V60, Chemex), French press, AeroPress, and various types of espresso preparation. Manual brewing allows for a more personalized and nuanced approach to coffee preparation, giving enthusiasts the ability to experiment and tailor their coffee to their preferences.

Mechanical coffee brewing involves the use of automated machines or devices to prepare coffee. This can include traditional drip coffee makers, espresso machines, pod-based systems, and other automatic brewing appliances. Unlike manual brewing, mechanical methods often handle various aspects of the brewing process, such as water temperature, pressure, and extraction time, automatically. These machines are designed to streamline the coffee-making process, offering convenience and consistency in preparing a cup of coffee.

5.2 Test

The V60 coffee underwent the brewing process, following which it underwent a detailed analysis through various analytical factors which are mentioned below

5.3 Analytical Factors

- Texture
- Aroma
- Taste
- Colour

6. RESULTS AND DISCUSSION

Now, let us discuss about **difference between manual brewing and mechanical brewing in pour over V60 coffee**

In comparing manual and mechanical brewing methods in pour-over V60 coffee, our study sought to elucidate the nuanced



differences between these approaches. Through meticulous experimentation, we meticulously controlled variables such as extraction time, water temperature, and coffee grind size to provide a comprehensive analysis.

The manual brewing process involved a hands-on approach, requiring the user to actively manage the pouring technique and water flow. In contrast, the mechanical brewing method employed automated devices to regulate these variables with precision and consistency. Our results revealed intriguing insights into the impact of these approaches on the final coffee product.

One crucial aspect examined was extraction time. In manual brewing, participants displayed a wider range of extraction times due to individual pouring techniques. This variability contributed to diverse flavor profiles, with some cups exhibiting over-extraction bitterness and others lacking depth. Mechanical brewing, with its automated control, exhibited a more uniform extraction time, resulting in a consistent flavor profile across samples.

Water temperature was another pivotal variable under scrutiny. Manual brewers often faced challenges maintaining a stable temperature throughout the brewing process, leading to fluctuations that impacted taste. Mechanical devices, equipped with precise temperature controls, mitigated this issue, ensuring a more stable and controlled extraction.

Grind size, a factor integral to coffee extraction, demonstrated notable distinctions between the two methods. Manual brewers, reliant on personal judgment, occasionally produced inconsistent grind sizes, affecting extraction uniformity. Mechanical brewing, with programmable settings, consistently maintained the desired grind size, contributing to a more even extraction and balanced flavor.

Taste tests and sensory evaluations played a central role in our analysis. Participants consistently reported a subjective preference for the unique characteristics of manual brewing, appreciating the hands-on, artisanal aspect. The nuanced flavors achieved through manual methods, while sometimes unpredictable, appealed to those who valued the craft of coffee preparation. In contrast, mechanical brewing garnered praise for its reproducibility and efficiency, particularly among those who prioritized consistency in flavor.

The overall user experience emerged as a significant factor in the comparison. Manual brewing enthusiasts highlighted the ritualistic and meditative aspects of the process, emphasizing the personal connection to each cup. Mechanical brewing, while lacking the hands-on engagement, offered a convenient and time-saving alternative that appealed to individuals with a busy lifestyle.

Now, let us discuss about **the outcomes in a V60 coffee by using different grind size ,temperature and brew time Analyzing the outcomes of V60 coffee based on grind size, temperature, and brew time** involves a nuanced exploration of texture, aroma, taste, and color. These factors intertwine to

create a sensory experience that can be finely tuned through precise adjustments in the brewing process.

- **Grind Size:** The grind size significantly impacts the texture and taste of V60 coffee. A coarser grind generally results in a lighter, more textured brew. The water passes through the grounds more quickly, extracting fewer solids, leading to a distinct mouthfeel. On the other hand, a finer grind yields a richer, fuller-bodied coffee with a smoother texture. This is due to a slower extraction process, allowing more compounds to dissolve into the cup.

The aroma is also influenced by the grind size. Coarser grinds tend to release more subtle, fruity notes, while finer grinds may enhance the intensity of the coffee's fragrance, often accentuating the bean's inherent characteristics.

- **Temperature:** Brewing temperature plays a pivotal role in the overall flavor profile. Higher temperatures, typically between 200-205°F, can extract more soluble compounds from the coffee grounds, resulting in a bolder taste. However, excessive heat can also lead to undesirable bitter notes.

Lower temperatures, around 195-200°F, can produce a milder cup, preserving delicate flavors. This is particularly beneficial for beans with intricate tasting notes that might be overshadowed by higher temperatures.

The color of the coffee can serve as a visual indicator of temperature effects. Warmer brews tend to exhibit a deeper, darker hue, while cooler temperatures may result in a lighter, more translucent appearance.

- **Brew Time:** The duration of the brewing process is another critical factor. Shorter brew times, typically 2-3 minutes, often yield brighter, more acidic coffees. This is because the water has less time to extract compounds that contribute to a heavier body.

Conversely, extending the brew time, say to 4 minutes or more, can produce a fuller-bodied cup with heightened richness. However, there is a delicate balance, as excessively long brew times can lead to over-extraction, introducing bitterness and astringency.

The aroma is intricately tied to brew time, with a longer extraction period intensifying the fragrance. Extended brew times also contribute to a deeper color, reflecting the increased extraction of soluble compounds.

- **Texture:** Texture, a tactile aspect of the coffee-drinking experience, is profoundly influenced by grind size and brew time. Coarser grinds and shorter brew times often result in a lighter, more refreshing texture, reminiscent of teas. On the contrary, finer grinds and longer brew times contribute to a velvety, full-bodied texture, akin to some medium to dark roast coffees.



- **Aroma:** Aroma, the first encounter with the coffee, is shaped by all three factors. The grind size determines how readily the volatile compounds are released, the temperature affects the intensity, and the brew time amplifies or moderates these aromatic notes. A well-balanced combination can result in a complex and inviting aroma, enhancing the overall sensory experience.
- **Taste:** The ultimate goal of any brewing method is to achieve a satisfying taste. Grind size, temperature, and brew time collectively contribute to the flavor profile. Experimenting with these variables allows for the customization of taste - from bright and fruity to rich and chocolatey. Finding the right balance is subjective and depends on personal preferences.
- **Color:** The color of the brewed coffee serves as a visual cue to the extraction process. Lighter colors may indicate a gentler extraction, while darker hues suggest a more robust and thorough extraction.

7. CONCLUSION

About Manual vs. Mechanical Brewing in V60

Manual and mechanical brewing methods represent two distinct approaches to crafting the perfect pour-over V60 coffee. Manual brewing offers a hands-on, personalized experience, allowing the brewer to control factors like pouring technique and flow rate. Mechanical brewing, on the other hand, introduces consistency through automated processes, potentially impacting the reproducibility of results.

To evaluate these differences, our study will assess various parameters, including flavor profiles, extraction efficiency, and overall quality. The goal is to understand not only the sensory aspects of the brewed coffee but also the practical implications of choosing one method over the other.

And about the Impact of Grind Size, Temperature, and Brew Time Grind size, temperature, and brew time are crucial variables that significantly influence the characteristics of pour-over V60 coffee. The second objective of this research is to unravel the intricate relationship between these variables and the final outcomes.

Grind size plays a pivotal role in determining the rate of extraction and, consequently, the flavors present in the coffee. By experimenting with different grind sizes, we aim to identify the optimal setting that enhances the overall quality of the brew.

Temperature is another critical factor, affecting the solubility of coffee compounds during brewing. Our study will explore how variations in temperature, within a specified range, impact flavor extraction and contribute to the sensory profile of the V60 coffee.

Brew time, the duration over which water interacts with coffee grounds, is a variable that can be adjusted to achieve desired strength and taste. Through systematic adjustments in brew time, we intend to uncover the ideal duration for extracting the desired flavors while avoiding undesirable characteristics.

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4. *Extraction of caffeine from Robusta coffee (Coffea canephora var. Robusta) husks using supercritical carbon dioxide J. Tello, M. Viguera, L. Calvo Department of Chemical Engineering, Universidad Complutense de Madrid, 28040 Madrid, Spain.*



2007 RE-OPENING OF MALAWI'S DIPLOMATIC MISSION IN NEW DELHI UNDER PRESIDENT BINGU WA- MUTHALIKA: DISCUSSING THE CRITICAL JUNCTURES

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ABSTRACT

Malawi and India improved their bilateral ties during the presidency of Bingu wa Muthalika that run from 2004 to 2012. Thus in 2007 Malawi opened its resident mission in New Delhi, followed by the re-opening of India's diplomatic mission in Lilongwe in 2012. Several critical junctures pushed Bingu wa Muthalika, president of Malawi then, to resurrect diplomatic engagement with India. The notable critical junctures being the lust for accelerated economic growth and the weaning off of trust by the western traditional donors due to registered human rights violations that engulfed his regime. Bingu chose India for the enhanced relations because India had allowing principles of foreign policy that included policy of non-intrusion and policy of solidarity with the third world countries, which looked welcoming to Bingu's interests and desires. Needless to say, Bingu's strategic interest with India was that of aid to finance flagship developmental projects for his political survival and legacy, the same way the first president of Malawi, Kamuzu Banda manoeuvred by benefiting economically from the apartheid South Africa and Israel. The study used library research, employing secondary data sources in form of journal articles, books, newspapers and You Tube videos to collect content for analysis. Individual level of analysis in International Relations was favoured to adequately examine the character of Bingu wa Muthalika.

KEY WORDS: Aid, Critical Juncture, Principles of Foreign Policy, Path Dependency, Strategic Interests

1.0 INTRODUCTION

India and Malawi share strong and cordial bilateral relations since 1964. The two countries are also similar in a way, as both countries were colonised by the British, both countries are active democracies and that both countries promote domestic and international cooperation in all spheres of life including human rights. According to a published article by the High Commission of Malawi to India [2023], Malawi opened its diplomatic mission in Delhi in 2007 whilst India opened its diplomatic mission much earlier in Lilongwe, Malawi in 1964. However, 'due to some administrative reasons, the Indian High Commission in Malawi was closed in 1993, though India continued to have diplomatic relations with Malawi. During this period, Malawi was concurrently accredited to India's mission in Zambia until February 2007. The resident mission was re-opened in March, 2012 in Lilongwe, Malawi' [High Commission of India to Malawi [2017].

1.1 BINGU WA-MUTHALIKA 2004-2012

In 2004, Bingu wa-Muthalika, an Economics professor, trained in India, was voted president of Malawi with full support of Bakili Muluzi, whose two term mandate had just finished. However, Bingu ditched Muluzi's party, the United Democratic Front [UDF], that ushered him into power and formed his own Democratic Progressive Party [DPP] in 2005.

The change of the ruling party also meant the change of the administration's foreign policy choice and direction from that of Bakili Muluzi. Bingu centred much on the foreign policy principles of South-South cooperation and regional integration, which were relatively in tandem with those of India [Kayuni et al, 2020].

Although Bingu believed in regional integration and South-South cooperation policies, his rule was characterised by irrational and debatable decisions on relations with other countries including bordering Tanzania on lake boundary issues and Mozambique on the Nsanje Shire -Zambezi water way project to the Indian ocean which Bingu wanted to implement without proper diplomatic engagement with Mozambique [Kayuni, 2019]. Muthalika, also, ended diplomatic ties with Taiwan in an abrupt manner and opted for mainland China in 2008 [Ott, 2013].

Bingu sought relief during his first term in office, from the East, mainly India and China and benefited from trade and investment, aid and grants to the extent that his government built flagship infrastructure projects in Malawi that made his rule noteworthy. This was in agreement with what IR scholars argue that personalised decisions by the ruling elite mainly the



president, in foreign policy decision making, is deliberate with the aim of leaving behind a legacy [Sikri, 2009]

Bingu's foreign policy direction showed signs of shifting from West dependency to East dependency mainly because of the East's policy of non intrusion to domestic matters of other countries than the West's policy of intrusion into domestic affairs and a pack of sanctions that awaits a defaulting country. He visited India and strengthened bilateral relations in April 2008, where several cultural and economic agreements were made. The same year, 2008, Malawi received from India a line of credit of 30 million USD . The funds were used for irrigation activities, tobacco threshing and the popular one village one product project. According to Targeted News Service [2010], Malawi's bilateral trade with India during Bingu's rule stood at 185 million USD. The joining of Malawi of the duty free tariff preference scheme in 2008, made it possible for Malawi to increase and expand its volume of trade with India.

It may be argued that Bingu's love towards India deepened as he studied economics in India, making him an affiliate of India ever since. Individual interest overpowered any other interest in the making of foreign policy decisions [Sagawa, 2011]. However, there were emerging key turning points, called in this article as critical junctures, that forced Bingu wa Muthalika to cast the net of foreign relations wider, and not only depending on traditional partners from the West. These critical junctures have to be discussed in detail.

2.0 OBJECTIVES

The specific objectives of this study was to find out the critical junctures that motivated Bingu wa Muthalika to open Malawi's diplomatic mission in New Delhi in 2007 and renewed the bilateral ties between the two countries. The second objective was to unearth the reasons behind the choice of India for the revamped relations and the third objective was to understand Bingu's strategic interests from India during his tenure of office as Malawi president.

3.0 CRITICAL JUNCTURES THAT MADE BINGU RE-OPEN MALAWI MISSION IN NEW DELHI IN 2007

The critical juncture concept is academically in place to explain why some of the frequent changes occur in a country's foreign policy decision making in addition to path dependency concept which 'describes the reasons for a certain predictability, coherence or stability in foreign policy decision making and policies' [Kayuni, 2020]. It has to be noted that Bingu, pushed much of his effort in international cooperation with India and China during his tenure of office from 2004 to 2012. What were some of these critical junctures that made Bingu start eying India more than the traditional donors from the West.

The first critical juncture was Bingu's undemocratic style of governance and lack of respect to institutionalism. Bingu wa Muthalika regime was synonymous with autocratic rule though Malawi was already a democracy. Bingu's strong

handedness on domestic politics started to shape his foreign policy principles. It was during the regime of Bingu that Malawi saw the declaration of British High Commissioner, Fergus Cochrane-Dyett, as a persona non grata and his subsequent expulsion from Malawi for reporting to London about Malawi's undemocratic treatment on its own citizens including arrests of civil society members, opposition party members and any other government critic. Cochrane-dyett was quoted in a leaked cable describing Bingu as 'ever more autocratic and intolerant of criticism' [The Guardian, 2011].

It was therefore, India's policy of non intrusion and solidarity with the third world, that gave Malawi and Bingu an edge to still attract development partners while democracy in Malawi was not that consolidated. The West were full of sanctions to countries undermining the tenets of democracy and suppressing human rights of its citizens. Bingu administration was known with oppressing rights of individuals, unfriendliness with neighbours including Tanzania and Mozambique, and that getting a helping hand from the East was essential as the West was out of the equation since human rights record of citizens was one of the West's conditions for aid and trade [Ott, 2013].

The top foreign policy principles of India during the Manmohan Singh tenure of office were those of non intrusion and solidarity with the third world. Bingu and Singh had in common their approach and link of foreign policy to domestic policies that included ending poverty, ignorance and disease in their respective countries [Rajiv, 2015]. So, the policy of non intrusion was working to Bingu's advantage so enhanced relations with India was vital for continued relations in all spheres including trade and investment. India vice president Mohammad Ansari, then was quoted as saying 'We would like to work together to ensure that the vital interests of developing countries are protected and no barriers are placed that could constrain their developmental aspirations' [HT Digital Streams Limited 2010].

However, by accommodating third world countries in its foreign policy principles, India was not in the ally of joining countries that impinge on the rights of its citizens and not follow democratic principles. India vice president Ansari in his address during a state banquet in Malawi where Bingu was present said 'Common commitment to democratic governance, rule of law, respect for human rights and inclusive development, free and fair elections are the backbone of democracy. It is a credit of strength of democratic institutions and maturity of our peoples' [HT Digital streams Limited 2010]. However, India had its own interests in maintaining relations with as many countries as possible which included creation of more trading partners and exercise global power as much as the US and other super powers.

The second critical juncture was Bingu's desire for global recognition through megaphone tactic. Bingu wanted to create such a hype for himself as a leader so important, that countries may rely on to be helped in influencing global decisions. Bingu wanted to place himself on a global map that he was a



leader to reckon with, that he interacts and convinces leading powers like China, India and the US, so that his interests in the SADC region may also be easily agreed upon. Bingu had in mind critical projects like Nsanje inland port where tactical diplomacy had to be done for Mozambique to provide Malawi's desirable sea way to the Indian ocean. Bingu while conducting himself important in the SADC region, he also needed that exposure with India and China for his course to carry more weight.

Thus, it was during Bingu's visit to Delhi in 2010, when he was Africa Union Chair, that he took it upon himself to enhance active engagement in multilateral forums like AU, SADC and COMESA to popularise his megaphone tactic as well. 'Muthalika as chair of Africa Union [AU] in the current year has played a positive role in strengthening the ties between India and the African Union. His visit would provide an opportunity to enhance not only our engagement bilaterally with Malawi but to reiterate our commitment to working with Africa as a whole. We see in Malawi a valuable democratic partner in Africa. It has played an energetic role in COMESA, SADC and provided leadership to the African union' [Targeted News Service 2010].

Bingu also took advantage of India's quest for UN security council reform as an opportunistic time to step in and request for a stronger relationship with India by supporting India's quest for a permanent seat in the UN security council. UN security council consist of five permanent members who are the US, the UK, France, China and Russia and 10 non permanent members who are elected on a rotational two year term. Indian vice president Ansari argued 'India and Africa can no longer be excluded from their rightful place of the permanent membership of the UN security Council. How can we expect legitimacy from a governance structure that excludes the entire African continent and a country which represents one-sixth of humanity?' [Targeted News Service 2010].

Therefore, as AU Chair then, Bingu took advantage of the situation to show solidarity and garner support from all African countries to rally behind India's desire to be in the elite UN security council while on the other hand, Bingu was using that 'noise' or megaphone tactic, to brand himself as a giant in diplomacy even for the interests of strong countries. This branding was to make himself known to the world and to give himself a sense of confidence and importance to push for his own strategic decisions in international relations for his own benefit.

Furthermore, as chair of AU, Bingu wanted to leave a legacy that he was a significant figure during his tenure to the extent that he fostered the starting as well as the implementation of multilateral projects within the region and beyond for the benefit of several countries and not only Malawi [Targeted News Agency, 2010]. The Nsanje inland port for example was being implemented, with Bingu's megaphone tactic, for the beneficiary of Malawi, Mozambique, Zambia, Zimbabwe as well as DRC. The pomp was important for Bingu's political

prowess in Malawi and his dream of expanding Malawi and making the country maritime.

The third critical juncture was that of accelerated economic growth and infrastructure development. It may further be argued that Historical Institutionalism guided Bingu wa Muthalika's rule as he seemingly followed the path of Kamuzu Banda, the first president of Malawi. Bingu wanted to continue where Kamuzu had left. Historical Institutionalism put much emphasis on 'the current consequences of the processes which are entrenched in institutions. This entrenchment in institutions can be in different forms such as policies, norms or simply rules. In other words, historical institutionalism is as a way of capturing some of the longer-term social-political dynamics' [Kayuni, 2020]. Therefore Bingu wanted to continue all the infrastructure developments Kamuzu Banda left on the cards, including the Nsanje inland port project.

While Kamuzu found solace in South Africa, Portuguese East Africa and Israel, Bingu enjoyed relations with India and China and did harvest the economic gains equal to what Kamuzu Banda reaped from South Africa and Israel from 1964 to 1994. With soft loans from South Africa, Kamuzu built the Capital Hill in Lilongwe, and many other mega projects including rail network to Nacala [Kayuni et al, 2020]. Bingu on the other hand, secured aid from China and lined up a number of state of the art infrastructure projects that transformed Malawi immensely including the Karonga - Chitipa road, Bingu national stadium, Hotel and conference centre in Lilongwe, Parliament building in Lilongwe and Malawi University of science and technology in Thyolo southern region [Zhou, 2022]. As Kamuzu left an economic development mark, Bingu also wanted to leave behind projects that people may point at, no wonder his motto was 'the work of my hands shall speak for me'. With the bilateral ties with India, Bingu and Malawians in general benefited from increased returns in trade and investment, capacity building scholarships as well as cultural relations [High Commission of India to Malawi, 2017].

The fourth critical juncture was the weaning off of trust from traditional donors. During Bingu presidency, Aid disbursement from the traditional donors was being delayed as there were growing concerns on public financial management. Furthermore, tense personal relations between Bingu wa Muthalika and the major international partners, including US, the UK and Norway meant ties with the Western donors were strained. The solution for Bingu was to seek support from non-traditional partners including China and India [Targeted news Service 2010]. As Malawi relied on donor support, it was difficult to evade donor expectations. This was the more reason Bingu had to align Malawi with India and China where donor conditions were insignificant [BTI, 2012].

Other issues that did not please the traditional donors included the non committal on the recommendation to devalue the Malawi currency to align with the parallel market price, the



declaration of the British High Commissioner, then, as a persona non-grata, the evidently corrupt practices by Bingu's party zealots and the non intra-party democracy by trying to impose his brother Peter to take over from him when he was done with his constitutional two terms presidential limit [Otti, 2013]. Therefore Bingu decided to head to India and enrich the existing relations with India to fill the gap being created by the traditional donors.

The fifth critical juncture was that of political relevance. Bingu knew that visible flagship developments will make him politically relevant to Malawians and be voted again in power when seeking for his second term in office. The development projects from China were evenly distributed across Malawi to garner support from all corners. The state of the art tarmac road was built in the northern region district of Karonga and Chitipa which was a stronghold of the opposition party AFORD. The magnificent parliament building, Five Star Hotel and an International Conference Centre were constructed in the capital City, Lilongwe, the stronghold of the main opposition party, MCP, to claim relevance and win political support. The State of the art football stadium was planned for the Southern Region, Bingu's stronghold, though the decision was reversed by Bingu's predecessor, Joyce Banda and was constructed in the Capital City, Lilongwe. Furthermore, the towering Malawi University of Science and Technology [MUST] was purposefully constructed in the Southern Region to balance the equation. These five mega projects were described by the Chinese ambassador to Malawi Long Zhou in 2022 as landmark projects embodying China-Malawi friendship [Zhou, 2022].

In Bingu's mind was second term of office and the uplifting of his brother to presidency after his constitutional term limit. So to be politically relevant and outshine his opponent, quick infrastructure projects, economic and trade transformation was a must for his political significance. Likewise, India's development projects in the field of agriculture were registering a significant mark on the local farmer in Malawi. The ready market to India meant production security for pigeon peas and cotton for local farmers. This security meant good capital return to the farmers which translated to workable government policies on cotton and pigeon pea production. The sore individual to win political praise and recognition was to be Bingu wa Muthalika. So, political relevance was one of the key critical junctures for Malawi's renewed relations with India and indeed another key eastern country China, which is deliberately not being given much platform in this paper.

4.0 WHY DID BINGU FOCUS ON INDIA FOR RENEWED DEVELOPMENT COOPERATION?

Favourable Principles of foreign policy was the first reason Bingu wa Muthalika settled for India for renewed diplomatic ties. Sikri [2014] discussed that the south-south cooperation and the solidarity with the third world countries, were some of the principles of foreign policy that were enabling India to enter into relations with the political world. With this foreign policy, India was in cordial political relationship with

countries from the South including Asia and Africa. With these relations, India was able to push for its political agendas. The notable agenda that was being pushed during the regime of Bingu wa Muthalika, was that of the UN security council seat. India, was vying for this seat, and needed all South-South countries to support the course for India to have a permanent seat in the UN Security Council. This seat was supposedly to work to the advantage of all countries India was in relations with. Malawi's Bingu wa Muthalika was quick to seize the opportunity by improving bilateral ties with India to benefit from India's returns.

Additionally, India's foreign policy principle of non intrusion, but consultation, attracted relations with other countries. Quoting Mukerji [2023], India's principles of foreign policy were unlike of the West that intruded in other countries' internal affairs and dictated on the rule of law, imposing sanctions whenever they felt other issues were not being implemented the way they deemed fit, mainly on human rights issues. India however, did not meddle in the internal affairs of other countries, be it quasi states, and that the policy of non intrusion had made India worthwhile and attractive.

Supporting the point of allowing principles of foreign policy, is the point of respect of state sovereignty. India, does not make decisions for their partner countries, as was the case with the West which political scholars refer to as neo colonialism. The West did dictate a country for example to adopt minority rights policies if that country was to be considered for aid and other economic assistance. In contrast, 'India gives autonomy to partner countries to make their own political, social and economic decisions that benefits the local populous including promotion of their culture and tradition' [Bhattacharya, 2010].

Increasing diplomatic links was another political reason Bingu re-opened Malawi's diplomatic mission in New Delhi in 2007. Countries do increase their diplomatic links for many reasons including the economic benefits in form of trade and investment, social benefits in the realm of cultural relations and capacity building and also political benefits in form of peace and security [Mawdsley, E & McCann, G. [2010]. Thus Malawi wanted to increase its diplomatic links with renowned countries, taking a global lead in economic recovery and growth, national security growth as well as in democracy consolidation. So the eminent pillars of growth in global engagement that Bingu desired the most included sustaining capital inflows to increase investment efforts, scientific and technological developments and accessibility of natural resources. To achieve these heights, global cooperation with a strategic partner like India was essential.

5.0 MALAWI'S STRATEGIC INTERESTS FROM INDIA DURING BINGU'S PRESIDENCY

Malawi during the presidency of Bingu wa Muthalika, had many interests in the outside world in all the spheres of significance be it political, social, economical, cultural, security, environmental and more. Of strategic interest from India was aid in form of loans and grants and development



cooperation. As already discussed, Bingu's desire was to register an accelerated economic growth mainly in infrastructure to continue where Malawi's first president Kamuzu Banda left. With Bingu's record of human rights oppression to Malawians including the civil society, the church and the opposition political parties, getting economic support from the traditional donors like Britain and the US was a tall order. Likewise with the traditional lenders like the IMF and the World Bank. The easiest and more available option was to open diplomatic ties with China and end the existing ties with Taiwan, to please Mainland China, and also to strengthen the existing ties with India. Bingu graduated from an Indian University, Delhi University, as such he had at personal level a strong attachment to India and its values. Therefore to easily access aid in form of loans and grants and to facilitate trade mainly through agriculture, India and China were suitable to realise Bingu's megaphone tactic as a top notch leader in governance and development. Furthermore, India was an option for Malawi to survive even in times of weaning off of donor confidence from the West. The coming in of India and China also acted as a cover up to his leadership style of undemocratic governance as India mainly was implementing a foreign policy principle of non intrusion in domestic affairs of other countries. He was therefore certain that he was not going to be taken to task for his undemocratic style of leadership. The other reason for Bingu's strategic interest of aid from India was that of leaving an indelible mark of Malawi's accelerated growth during his tenure of office.

6.0 CONCLUSION

Bingu wa Muthalika, overpowered Malawi's foreign policy decision making with his individual interest, rather than the interest of the country. What Bingu had in mind was the creation and leaving behind of a legacy of flagship infrastructure projects which will make his tenure of office unique. As a result, he strategically and individually pushed for foreign policy decisions that correlated well with his agenda and interests. As Bingu was not in good books with the traditional donors from the West, he employed, according to Kayuni et al [2020] a path dependency concept, 'an approach that describes the reasons for a certain predictability, coherence or stability in foreign policy decision making and policies'. Path dependency concept was also practiced by the first president of Malawi, Kamuzu Banda, and made his period in office a success. The critical junctures made Bingu re-open diplomatic mission with India, close ties with Taiwan and open with Mainland China all in an effort to satisfy his ego of leaving a reputable legacy through trade mark infrastructure projects. The main strategic reason for the enhanced relations with India, as well as new ties with China as it occurred during the same period, was to acquire aid for speedy accomplishment of the infrastructure projects for Bingu's political survival and legacy. A leader, on his own, according to Sagawa, 2011, has the ability to influence foreign policy decisions to accommodate his ego and desires by letting his individual interest overpower any other interest in the making of foreign policy decisions.

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TREND ANALYSIS OF MILLET CONSUMPTION IN SOUTH INDIA

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ABSTRACT

Context: The United Nations has designated 2023 as the International Year of Millets, through the advocacy of Government of India, emphasizing their significance as a sustainable and nutritious food source. This designation brings heightened attention to millets on a global scale and underscores their potential to address pressing challenges such as food security, nutrition, and sustainable agricultural practices.

Aim: To analyse behavior and patterns related to millet consumption

Methods and Material: A survey was conducted, framed with questions distributed through Google Forms. The survey collected data on demographic distribution, respondents' awareness of the declaration of 2023 as the International Year of Millets, frequency of millet intake, reasons for consumption, and varietal preferences.

Results: A total of 75 respondents participated. The survey revealed that 75% of respondents were aware of the declaration of 2023 as the International Year of Millets. The survey reveals that a significant number of respondents were habituated to consuming millets due to their family's traditional dietary practices, indicating the strong influence of cultural factors in millet adoption. It presents valuable insights into the inclusion of different millets in different place.

Conclusions: The trend analysis of millet consumption patterns provided valuable insights into the evolving preferences and behaviors of individuals towards millets.

KEYWORDS: Millets, International Year of Millets, Trend analysis

INTRODUCTION

In recent times, millets have experienced a resurgence in global demand, driven by increasing consumer awareness about their nutritional value and sustainability benefits. As people become more health-conscious and seek out wholesome, nutrient-dense foods, millets have gained recognition for their impressive nutritional profile.^[1] They are rich in dietary fiber, protein, essential minerals, and antioxidants,^[2] making them an excellent choice for those looking to improve their overall well-being and people with dietary restrictions. Millets, being naturally gluten-free, have emerged as an attractive option for people seeking gluten-free diets, leading to an increased demand for millet-based products.^[1] While millets are an excellent option for individuals with gluten-related dietary restrictions, they are equally beneficial for weight management, dietary regimen for cardiac health,^[3] dietary management of diabetes,^[4] vegan-diet etc.

By analyzing the trends and harnessing the momentum of the International Year of Millets, we aim to provide valuable insights for businesses, food manufacturers, policymakers, and consumers interested in millets. Understanding the current market dynamics, emerging trends, and the reasons behind their adoption can help stakeholders navigate the evolving landscape of millets and harness the opportunities presented by this versatile grain.

MATERIALS AND METHODS

To ensure the relevance and clarity of the questions, careful consideration was given to their formulation, and a pilot test was conducted with a small group of individuals using Google forms before finalizing the questionnaire. The following were the questions:

1. Demographic details such as Gender, Age, Occupation and City with State
2. Are you aware that 2023 is declared as "International Year of Millets"? - Yes/No
3. When did you start consuming millets like Ragi, Bajra etc.?
 - 30-40 years/20-30 years/10-20 years/1-10 years/Less 1 year/Never
4. Reason for taking millets (More than 1 option can be selected)
 - Habituated in the family/ Recommended by the Physician/Dietician/ Recommended by Relatives/Friends/ Sales offers (Discounts etc.) in supermarkets and shops/ Others
5. How often do you take millets in your diet?
 - Daily/Frequently (10-15 times a month)/Occasionally (2-4 times a month)/Rarely (1-2 times in 4 months) / Others
6. What millets do you take? (Please select 1 option for each row)

**Table 1: Options for Question Number 6**

	I don't know about it	I know about it but never consumed	Have consumed it
Mundua/Ragi/Finger millet/Kezhvaragu/Moothari			
Bajra/Pearl millet/Kambu/Sajje/Saujalu/Cumbu			
Jowar/Sorghum/Jola/Jonnalu/Cholam			
Kutki/Little millet/Saame/Samai/Samalu/Chama			
Kodon/Kodo millet/Harka/Varagu/Arikelu			
Kangni/Foxtail millet/Navane/Tenai/Korra/Thina			
Jhangora/Barnyard millet/Odal/Kudiraivali/Kavadapullu			
Barri/Proso millet/Baragu/Varigulu/Panivaragu			

7. How do you add millets into your diet? (More than 1 can be selected)

I use millet grains to make upma etc. (Whole grains)/ I use Flour, Dosa mix, Pancake mix, Noodles, Semiya etc. to cook (Ready to cook)/ I eat millet Cookies, Laddu, Puffed millets, Chips etc. as snacks (Ready to eat)

8. Mention any food items made with millets in your region. (Eg. Upma, Puttu, Ragi Mudde etc.)

9. Would you recommend millets to others? - Yes/No/Maybe

The Google Forms platform was selected for its ease of use and efficient data management capabilities. English was the medium of language while the regional names of the millets in Hindi, English, Telugu, Tamil and Malayalam were tabulated in the table.^{[5][6]} The Google Forms link was shared via various channels to reach a diverse and representative sample of participants who had access to internet and mobile phone. After the data collection phase, the responses were exported into a spreadsheet for further analysis. Data cleaning and processing were performed to eliminate any incomplete or duplicate entries and ensure the accuracy of the dataset. Finally, data was analyzed to provide valuable insights into the research questions posed in this study.

RESULTS

The responses were carefully reviewed to ensure their quality and validity. Any ambiguous or inconsistent answers were cross-referenced and, if necessary, clarified with the participants to maintain the accuracy of the data.

The survey gathered 75 responses (47 females and 28 males) from participants residing in various states with the highest number of respondents coming from Karnataka (24) and Kerala (26). Other states such as Andhra Pradesh & Telangana (9) and Tamil Nadu (10) also contributed to the dataset, along with 6 respondents from different regions, among which 39% of the participants resided in urban areas, 21% in towns, and 15% in rural regions. The majority of participants fell into the 20-29 age group, representing 53% of the respondents. The 30-39 age group accounted for 20%, followed by 50-59 years (13%), 40-49 years (7%), 60 and above (4%), and the lowest percentage in the 10-19 age group (3%). The survey also explored the participants' occupations, and the responses varied among different professions. The medical field had the highest representation, comprising 35% of the respondents, followed by students (20%), individuals in the

teaching field (15%), homemakers (11%), IT professionals (4%), retired persons (5%), and while 7% were of other occupations. Among them, 75% of the respondents demonstrated awareness regarding the declaration of 2023 as the International Year of Millets.

The survey investigated the timeline of millet consumption among the participants. The responses indicated that millets were adopted at various stages of their lives. Approximately, 23% of individuals began consuming millets 1-10 years ago, another 23% started 10-20 years ago, and an additional 23% started within the last 20-30 years. Similarly, 21% respondents reported adopting millets for less than 1 year. On the other hand, a smaller number of participants, 8% respondents mentioned that they were consuming millets 30-40 years ago. Only 3% of them stated that they have never consumed millets.

Reasons for taking millets varied among the survey participants. The majority of respondents (55%) indicated that they were habituated to consuming millets due to their family's dietary practices. Participants cited healthcare professionals and nutritionists as their source of guidance for starting to consume millets (13%), with an equal number mentioning that recommendations from relatives or friends influenced their decision. Social media platforms like youtube, facebook etc. have played a role in the decision of 18% respondents to include millets in their diets, potentially due to increased awareness campaigns and information shared through these channels. Only 1% mentioned that sales offers or discounts in supermarkets or shops influenced their decision to try millets.

The frequency of millet consumption was also surveyed. Twenty-five respondents reported frequent millet consumption, including them in their meals approximately 10-15 times a month. Meanwhile, twenty-two participants indicated that they consume millets on an occasional basis, typically adding them to their diet around 2-4 times a month. It was reported that 12 individuals consume millets on a daily basis, making them a regular part of their everyday meals. Another 12 respondents stated that they consume millets only 1-2 times within a span of 4 months. Remaining respondents had responded that they no longer consume millets, etc. The data of consumption of different variety of millets are condensed in the figure 1.

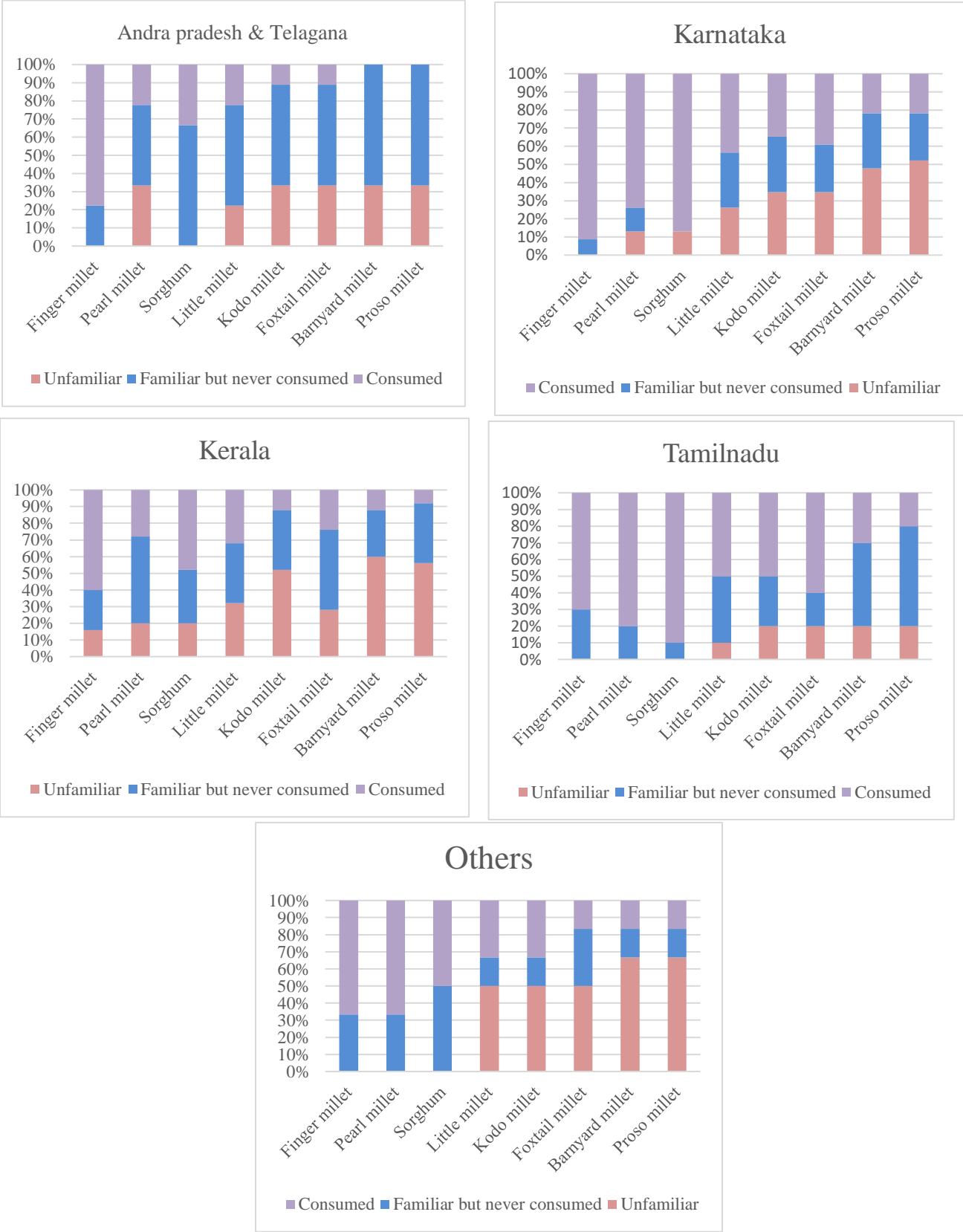


Figure 1: Consumption pattern in different location with respect to different type of millets



The survey indicated that "Ready to Cook" millet products were preferred by 41% of the participants, while 34% opted for whole grains. Additionally, 25% of the respondents favored "Ready to Eat" millet products. When inquired about dishes commonly consumed using millets, some of the items such as *Dosa*, *Roti*, *Upma*, *Mudde*, *Puttu*, String hoppers, Porridge, *Halwa*, *Kheer*, *Khichadi* and Malted health drinks were mentioned. Overall, about 90% people agreed that they would recommend millets to others.

DISCUSSION

Trend analysis is used to identify and examine patterns, behaviors or tendencies over a period of time. This helps us to understand the past and predict the future changes. This survey is a small attempt to predict the trend and align ourselves for it.

- **Increasing Awareness:** The data shows that 75% of respondents were aware of the declaration of 2023 as the International Year of Millets. This indicates a growing level of awareness about millets' significance and their potential as a sustainable and nutritious food source. The increasing awareness is likely due to various awareness campaigns, media coverage, and efforts to promote millets' benefits.
- **Traditional and Social Influences:** The habituated millet consumption in the family and recommendations from healthcare professionals, relatives, and friends suggests that both traditional practices and social influence play significant roles in promoting millet consumption. This can contribute to the normalization of millet consumption within communities and social circles.
- **Growing Acceptance and Consumption:** The survey indicates that a substantial number of respondents consume millets frequently or occasionally. This trend suggests a positive shift in millet consumption behaviors, with a significant proportion of individuals actively incorporating millets into their diets. This rising acceptance is a positive indication of the increasing popularity of millets as a dietary choice.
- **Influence of Social Media:** The social media influence on millet consumption is evident in the data, with 18% respondents stating that they were introduced to millets through social media channels. This trend highlights the role of digital platforms in disseminating information and creating awareness about millets. The influence of social media is likely to continue to impact millet adoption in the future.
- **Millet consumption pattern:** Among the various millet types, the data indicates that Finger millet is the most commonly used millet among the participants. On the other hand, the survey data shows that Barnyard and proso millets are relatively rare in terms of consumption among the respondents. This trend may be attributed to several factors, including limited awareness and availability of these millet types in the market, as well as preferences for other millet varieties that have been more extensively promoted and integrated into diets. This observation highlights the significant role that the local food environment can play in

shaping dietary preferences and habits. It suggests that efforts to promote millet consumption and improve overall dietary diversity should consider not only the nutritional benefits of millets but also their accessibility and affordability within the region.

- **Food processing:** The preference for whole grains (34%) indicates a substantial segment of the population opting for the traditional and unprocessed form of millets. Whole grains offer culinary possibilities, giving consumers the flexibility to incorporate millets into their meals as per their preferences. Yet, food processing transforms raw millet grains into more convenient and accessible forms for consumers, such as ready to cook mixes and ready to eat snacks. These products simplify the cooking process and enable consumers to prepare millet-based dishes quickly and effortlessly. They cater to the demands of health-conscious consumers who value convenience without compromising on their dietary choices. Simple processing methods like soaking, germination/malting, and fermentation can improve protein digestibility and mineral bioavailability whereas excessive dehulling can lead to lower fiber content and the loss of nutrient-rich bran and germ portions. Hence, the focus should be on finding processing methods that preserve or enhance nutritional properties.^[7] Few of the traditional dishes like *khichadi*, porridge etc. can be attempted as ready to cook mixes.
- **High recommendation rates:** While the consumption of millets have been staple since a long time, their versatility in cooking might also make them suitable for a wide range of diets and meal preferences in the form of porridge, in salads, as a side dish, or even in baking. Some individuals may simply enjoy the taste and texture of millets in their meals, leading them to recommend them to others.

LIMITATIONS

While the trend analysis has provided valuable insights, the sample size limit the generalization of the findings. Additionally, the survey's focus couldn't capture regional variations in millet consumption across the country. Furthermore, the survey did not delve into the specific reasons behind participants' preferences for certain millet varieties, which could provide deeper insights into their choices.

FURTHER SCOPE OF THE STUDY

To build on the findings of this survey, future research could expand the sample size to increase the study's robustness and explore regional variations in millet consumption patterns. By addressing the limitations and capitalizing on the opportunities revealed by trend analysis, policymakers, agricultural agencies, and food industries can collaboratively drive the growth of millet consumption.

CONCLUSION

The trend analysis of millet consumption patterns provided valuable insights into the evolving preferences and behaviors of individuals towards millets. This research contributes to our



knowledge of millet consumption and sets the stage for further exploration and initiatives aimed at harnessing the full potential of millets in enhancing global nutrition.

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REVIEW OF DARUHARIDRA IN CLASSICAL TEXTS

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ABSTRACT

Berberis aristata, commonly known as 'Daruharidra', is a renowned plant that has been utilized in various medicinal systems such as Ayurveda, Homeopathy, Unani, Chinese, and Allopathic for an extensive period. This versatile medicinal plant is employed either independently or in conjunction with other medicinal herbs to address a diverse range of ailments, including jaundice, leprosy, fever, rheumatism, and more. Belonging to the family Berberidaceae, it is characterized by its spinous, hard, and yellowish herbaceous nature. The plant's distribution spans sub-Himalayan regions, Sri Lanka, Bhutan, and the hilly areas of Nepal. Its historical significance as an herbal remedy extends over 2500 years, and it has played a crucial role in traditional medicine. One of its notable formulations, 'Rasoul' acts as both a tonic and blood purifier, additionally used in the treatment of ulcers and ophthalmic diseases. Numerous reported clinical and experimental studies highlight the plant's diverse pharmacological properties, including antimicrobial, anti-inflammatory, analgesic, antipyretic, hepatoprotective, immunomodulatory, and cardiotonic activities. The wealth of therapeutic attributes associated with *Berberis aristata* underscores its importance in the realm of natural medicine.

KEYWORDS- Daruharidra, Antidiabetic, Rasapanchak, Ayurveda, Berberine.

INTRODUCTION

Medicinal herbs have a significant historical record of being employed to address a variety of ailments. India stands out among the nations that have cultivated a diverse range of medicinal plants and is often referred to as the "Botanical Garden of the World." These medicinal plants play a crucial role in the discovery of new drugs globally. Many of the drugs currently in use incorporate herbal components derived from plants. An example is *Berberis aristata*, known as *Daruharidra* in Ayurveda, which is a versatile medicinal plant utilized either independently or in combination with other medicinal plants to treat liver disorders, skin conditions, and allergic reactions.

BOTANICAL DESCRIPTION

Berberis aristata is a vertically growing, spiny herb with a smooth surface. The plant typically reaches a height of 2 to 3 meters and has a sturdy, woody structure. The bark is yellow to brown on the outside and yellow on the inside. The thorns, resembling modified leaves, are three-branched and 1.5cm in length, easily removable by hand in longitudinal strips.¹

The leaves are arranged in clusters, numbering 5-8, and are spiny, simple, lanceolate, leathery, toothed, sessile, and verticillate. They measure 4.9cm in length and 1.8cm in breadth, displaying a light green color on the ventral surface and a deep green hue on the dorsal surface, characterized by reticulate pinnate venation.²

The flowers of *Berberis aristata* are yellow, complete, perigynous, hermaphrodite, and actinomorphic, arranged in racemose clusters with 11 to 16 flowers per raceme. The fully opened flower has an average diameter of 12.5mm. The calyx is polysepalous, comprising three small and three large sepals, each measuring 4 to 5mm in length. The yellow corolla is polypetalous, consisting of 6 petals. The androecium is polyandrous, featuring 6 stamens that are 5-6mm long, while the gynoecium, the female reproductive structure, is 4-5mm long and consists of a broad stigma and a short style. Flowering commences in mid-March and extends throughout the month of April.³

The fruit is edible, acidic, and succulent, having an ovoid to elliptical shape and a bright red color. The fruit measures approximately 7mm in length and 4mm in breadth, with a weight of about 227mg. Seeds are yellow to pink, range from 2 to 5 in number, weighing 25mg and occupying a volume of 29ml.

Phytochemicals in Daruharidra- Different chemical components are present in various parts of Daruharidra (*Berberis aristata*). One of the most significant alkaloids in the plant is berberine. The root bark of *B. aristata* contains various protoberberine alkaloids, including Karachine, dihydrokarachine, tetrahydropalmatine, tetrahydroberberine, epiberberine, palmatine, palmatine dehydrocaroline, jatrorrhizine, columbamine, and palmatine chloride.⁴ Additionally, alkaloids such as Aromoline, oxyberberine, berbamine, oxyacanthine, and



berberine chloride are also extracted from the plant.⁵ The bark of *B. aristata* is used to extract alkaloids such as pseudopalmitine chloride, pseudoberberine chloride, taxilamine, pakistanine, and 1-Omethylpakistanine.⁶ In the flowers of the plant, polyphenolic flavonoids like quercetin, meratin, and rutin are present.⁷ These diverse chemical components contribute to the plant's pharmacological properties and therapeutic potential.

Daruharidra in Ayurveda- *Ayurveda* is the oldest traditional medical system, and within its extensive repertoire, *Daruharidra* holds a paramount position. Referenced in ancient *Ayurvedic* texts such as *Charaka* and *Susruta Samhita*, as well as numerous *nighantus*, this herb is recognized for its multifaceted medicinal properties. It has been historically employed to address a diverse range of conditions, including dysentery, wound healing, skin ailments, inflammations, diarrhea, jaundice, menorrhagia, and eye disorders.

Sanskrit Name- *Pitadru, Kaleyak, Haridrav, Pachampacha, Kantakateri, Kamani, Hemakanti, Daruharidra, Pitadaru, Pitachandana, Karkatakini, Katamkati, Kanchani, Kamavati, Kastharanjani, Kusumbhaka, Krimihara, Darvi, Darunisha, Darupurba, Drabidabi, Nisha, Parjani, Parjanya, Pita, Pitaka, Poutika, Bishodhani, Swarnavarna, Stiraraga, Haridra, Haridru, Hemavarnavati, Hemakanta, Hemakranta, Hemakanti.*

Vernacular Names- Bengali-*Daruharidra*; Gujrati-*Daruharidra, Daruhlaadur*; Hindi-*Daruhaldi, Darhald*; Kannada-*Maradarishana, Maradarishina, Daruhaladi*; Malayalam- *Maramannal, Maramanjil*; Marathi-*Daruhaladi*; Oriya-*Daruhalidi*, Punjabi-*Sumalu*, Tamil-*Gangeti*, Nepali-*Chutro*. English- Indian berberry, Tree turmeric, Termeric wood.

Classifications of Daruharidra in Ayurveda- *Daruharidra* is important medicinal plant in *Ayurveda* and have classifications on various *varga* as in table – (Table no. 1)

Name of the text	Classification under varga (grouping)	References
<i>Charak samhita</i> ⁸	<i>Arshoghna, Kandughna, Lekhananiya</i>	<i>Sutra-4/3,12,14; 5,60; Viman-7/17;8/143,150 Chikitsha-6/27, 28; 7/45, 60, 83, 90, 93, 96, 102, 113, 119, 135.139; 8/136; 14/160, 186,196, 221, 231, 234; 15/135,137; 16/53, 62, 72, 96; 26/52, 187, 190, 196, 197, 199, 200, 236, 241.</i>
<i>Sushruta samhita</i> ⁹	<i>Haridradi, Mustadi, Lakshadi</i>	<i>Sutra-46/432; 38/27, 54; Chikitsha-2/69;5/42; 9/35; 18/18; 19/40; 11/8</i>
<i>Astanga Hridaya</i> ¹⁰	<i>Arshoghna, Sirovirachana</i>	<i>Sutra-15/4;20-38;22/19; Saarir-1/62; Chikitsha-8/103, 131; 9/58, 90; 10/35; 11/8; 12/6,7; 16-16, 43; 26/26; 37/73</i>
<i>Dhanvantari nighantu</i> ¹¹	<i>Guduchhadi varga</i>	56-59
<i>Kaiyadev nighantu</i> ¹²	<i>Aushadi varga</i>	1116-1117
<i>Raj nighantu</i> ¹³	<i>Pipalyadi varga</i>	202
<i>Bhavprakash nighantu</i> ¹⁴	<i>Haridradi varga</i>	201-205
<i>Priya nighantu</i> ¹⁵	<i>Satapuspadi varga</i>	172-174
<i>Nighantu adarsha</i> ¹⁶	<i>Daruharidradi varga</i>	6 th Varga

Table 2: Rasapanchak of Daruharidra in different texts-

Name of text	Guna	Rasa	Virya	Vipak	Doshakarma	References
<i>Dh.Ni.</i>	<i>Ruksha</i>	<i>Tikta</i>	<i>Ushna</i>	-	-	<i>Guduchayadi varga: 56-58</i>
<i>Ka. Ni.</i>	<i>Ruksha</i>	<i>Tikta, Katu</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphapittanashana</i>	<i>Aushadi varga: 1116-1117</i>
<i>Bhav.Ni.</i>	<i>Ruksha</i>	<i>Katu, Tikta</i>	<i>Ushna</i>	<i>katu</i>	<i>Kaphapittanashana</i>	<i>Hritakyadi varga: 201-205</i>
<i>Pri.Ni.</i>	-	<i>Tikta</i>	<i>Ushna</i>	-	<i>Kaphapittahara</i>	<i>Satapuspadi: 172-174</i>

(*Dh.Ni.*- *Dhanvantari nighantu*, *Ka. Ni.*- *Kaiyadev nighantu*, *Bhav.Ni.*- *Bhavprakash nighantu*, *Pri.Ni.*- *Priya nighantu*)

Karma (Action)-of Daruharidra-

Shothahara- Employed in the treatment of edema, *Daruharidra* demonstrates efficacy in reducing swelling.

Vedana Shapan- Functioning as an analgesic, it alleviates pain.

Vrana Shodhana- Facilitating wounds healing, it contributes to the purification of wounds.

Pitta Sarak- With its impact on metabolism, it is utilized in addressing liver disorders, jaundice, and digestive and pancreatic issues.

Grahi- it is beneficial in the management of diarrhea and dysentery problems.

Rakta Shodhaka- Acts as a blood purifier, aiding in maintaining blood purity.



Garbhashayashothahara- Improves uterine health and is employed in the treatment of pelvic inflammatory diseases.

Stravahara- Addresses issues related to abnormal discharge.

Guna (Properties) of Daruharidra (*B. aristata*-)

Lekhaniya- Aids in reducing toxicity and unnecessary fat in the body.

Kandughna- it is beneficial in the treatment of skin disorders

Arshoghna- Acts as an anti-hemorrhoidal agent.

Ropana- Exhibits properties that contribute to wound healing.

Twacha- it is useful in the treatment of skin diseases and finds applications in cosmetic products.

Stanyasodhana- Supporting the purification of breast milk.

Svedala- Promotes sweating, assisting in the elimination of toxins through perspiration.

Rasayana- Acts as a rejuvenating agent, contributing to overall well-being and vitality.

Table no. 3- Indications of Daruharidra in different texts

Indication	Dh.N.	M.N	K.N.	B.N.	R.N.	P.N.
Mukharoga	+	+	+	+	-	-
Netraroga	+	+	+	+	+	+
Karnaroga	+	+	+	+	+	-
Twakroga	-	-	+	+	+	-
Kandu	+	-	-	-	+	-
Shotha	-	+	+	+	-	-
Varna	+	+	+	+	+	+
Prameha	+	+	+	+	+	+
Yakritroga	-	-	-	-	-	+
Pandu	-	+	+	+	-	+
Raktavikara	-	-	-	+	-	+
Varnya	-	-	+	+	-	-
Visha	-	-	+	-	+	-
Visarpa	-	-	-	-	+	-

Table 4: Common Formulations of Daruharidra in Ayurvedic texts-

Name of text	Formulations	References
<i>Charak samhita</i>	<i>Phaltrikadi kwath</i>	Cha.Chi. 6/40
	<i>Triphaladi Churna</i>	Cha.Chi.7/68
	<i>Madhvasav</i>	Cha.Chi. 7/53
	<i>Kanakksheeri tail</i>	Cha.Chi. 7/111
	<i>Kalyanak grita</i>	Cha.Chi. 9/35
	<i>Sidharthak Agad</i>	Cha.Chi. 9/69
	<i>Kanakarista</i>	Cha.Chi.14/160
	<i>Kiratitiktadya churna</i>	Cha.chi.15/137
	<i>Mandura vataka</i>	Cha.chi.16/73
	<i>Punarnava mandura vataka</i>	Cha.chi. 16/93
	<i>Dravadi leha</i>	Cha.chi.16/97
	<i>Vyoshadya ghrita</i>	Cha.chi.16/119
	<i>Mritsanjivani Agad</i>	Cha.chi.23/16
	<i>Peetak Churna</i>	Cha.chi. 26/54
<i>Khadiraadi Gutika</i>	Cha.chi. 26/206	
<i>Astanga Hridaya</i>	<i>Patoladi churna</i>	Ast.Hri.Chi.10/35
<i>Chakradatta</i> ¹⁷	<i>Darvadi leha; Vyoshadya ghrita</i>	8/28; 8/56
	<i>Trausanadya mandura</i>	8/34
	<i>Punarnava mandura</i>	8/42
<i>Sarangadhar samhita</i> ¹⁸	<i>Triphaladi swaras</i>	Sa.ma.1/9
	<i>Punarnavadi kwath</i>	Sa.ma.2/76
	<i>Mandura vatak</i>	Sa.ma.7.34
<i>Bhav prakash Samhita</i> ¹⁹	<i>Punarnava mandura</i>	Bha.ma.chi.8/30
	<i>Triushanadi mandura</i>	Bha.ma.chi.8/50
	<i>Astadashanga lauha</i>	Bha.ma.chi.8/55

(**Sa.ma.**- *Sarangadhar samhita madhyam Khand*, **Bha.ma.chi.**- *Bhav prakash Samhita Madhyam Khand*)



CONCLUSION

Berberis aristata, commonly known as *Daruharidra*, stands as a notable medicinal plant with a rich history of use in Ayurvedic, Chinese, Unani, and other medicinal systems worldwide, dating back to ancient times. Traditional applications involve utilizing the plant as a tonic, demulcent, diaphoretic, diuretic, and alternative for the treatment of various ailments, including wound healing, skin diseases, rheumatism, snakebite, menorrhagia, jaundice, and eye problems. Clinical and experimental studies have shed light on the plant's chemical constituents, particularly berberine, showcasing a spectrum of pharmacological properties. These include anti-diabetic, anti-microbial, anti-cancer, antipyretic, hepatoprotective, ophthalmic, and cardiotoxic activities. The wealth of therapeutic potential within this plant underscores its significant medicinal value. While the existing research provides promising insights into the use of *Berberis aristata* for treating a multitude of diseases and disorders, it is evident that further research and studies are essential to develop additional herbal and Ayurvedic formulations. The plant's versatility and historical efficacy make it a compelling subject for continued exploration and application in the realm of natural medicine.

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UNLEASHING THE IMPACT OF FINTECH ADOPTION BY COMMERCIAL BANKS: A DYADIC APPROACH THROUGH TECHNOLOGY DRIVEN INNOVATION THEORY

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ABSTRACT

The banking sector has been enduring a rapid evolution with the growth of fintech products. Fintech products (FTPs) are innovative methods that use technology to enhance financial services and provide customers with innovative products and services. There is hardly found any research in aspects of customers and employee perspective. Therefore, this research paper explores impacts of fintech products in financial and non-financial performance in banking industry in Bangladesh on aspects of customers and employee perspective. To conduct the research, Technology Driven Innovation (TDI) theory is employed. Technology Driven Innovation is essential for banking industry as it qualifies banks to develop customer experience, to be competitive and overcome emerging encounters and unveil new opportunity for expansion & growth. To investigate the research, primary data is employed as a quantitative method. Smart PLS 4.0 is utilized to run the analysis. In findings, perceived usefulness and perceived difficulty of use of FTPs have significant relation with firm performance. Perceived usefulness of use of FTPs is highly related to customer satisfaction as well as Firm performance. Similarly, perceived difficulty of use of FTPs is related with service quality and work efficiency.

KEYWORDS- *Customer Satisfaction, Fintech, Fintech Product, Service quality and Work Efficiency.*

01. INTRODUCTION

Fintech is indeed a mix of innovative services and ideas in globe which is provided by companies utilizing technologies for communication and information. Fintech (Financial technology) also defines new technologies that are focused on enhancing and optimizing the delivery and use of financial services by organizations. (Islam et al., 2021) Cloud computing, Big Data and Artificial Intelligence (AI) are also incorporated with FinTech. (Zhao et al., 2019) . Fintech is currently being utilized extensively in all aspects of e-commerce.

Especially in past years, financial organizations all over the globe, notably banks and investment organizations, have become more dependent on such high-tech functions. This trend can be seen in both developed and developing countries. It has been observed that the financial institutions are interacting with this idea of FinTech more often because it is convenient. Because of globalization, there has been a growth in the number of international transactions and consumers are progressively preferring to conduct virtual transaction (Islam et al., 2021). Fintech is an industry that concentrates on the use of newly developed technology in conventional financial services, and it is quickly becoming an essential component of the expansion of the financial sector.

In this circumstance, the financial firms in Bangladesh are literally falling more and further behind (Islam et al., 2021). However, government is taking different initiatives to endorse fintech rapidly.

1.2 Problem Statement

Many scholars have focused their interest on FinTech products as well and the effect those products have on the overall performance of banks (X. Chen et al., 2021; Wang et al., 2021a; Yao & Song, 2021; Yin et al., 2022). For instance, we can say – Mobile banking and internet banking, machine learning and also cybersecurity. Furthermore, lots of researcher evaluated bank performance in different way but ROA, ROE and survey are most frequent methods (X. Chen et al., 2021). This research study will evaluate commercial banks non-financial and financial performance in Bangladesh. According to the best of the authors' knowledge, no research has yet tended to focus on the preconceptions of both the customers and the employees, particularly in the context of commercial banks in Bangladesh considering the fact of perceived usefulness and the perceived difficulty use of fintech products and their impacts in bank performance in both financial and non-financial sector.



1.3 Research question and objective

RO: To investigate the factors influencing the role of fintech product in the financial and non-financial performance in banks in Bangladesh (From customer and employee point of view)

2. LITERATURE REVIEW

2.1 Fintech revolution and its application in different industry:

Fintech industries use technology to provide brand new and creative financial products and services, frequently more affordably and conveniently than classical financial institutions. According to (Acar & Çitak, 2019; Gai et al., 2018) Fintech is also used in peer-to-peer lending (P2P), third party payments, distributed ledger technology as well (Acar & Çitak, 2019). (Ramlall, 2018) defined Fintech refers to applying new challenges such as AI, blockchain, and big data to the financial sector so that these technologies can endorse rising business models, progressive product services, and creative technology implementation. In this interpretation, this segment will inaugurate the fintech revolution and its application in financial industry.

2.2 The use of fintech in financial industry

Blockchain Technology

Another significant technological advancement is blockchain. Based on the most popular interpretation, it is an accessible decentralized database where transactions are carried out in an anonymous manner. Simply described, a blockchain is a shared data automation system (Martinčević & Klopota, 2020). A lot of authors discussed about blockchain technology in different way. (M. A. Chen et al., 2019) explained blockchain is a shared ledger technology for example bitcoin and also additional blockchain technology with fundamental financial facility. He also added that blockchain is the fast-growing fintech innovation and had significant future promise in financial service. Blockchain is the game changer for fourth industrial revolution (D. Lee & Chuen, 2019).

Bitcoin and Cryptocurrency

Early in 2009, when the first Bitcoin block was formed, the world witnessed a transition that few could have anticipated (D. Lee & Chuen, 2019). Surprising to many, the creation of the resulting Bitcoin network—with a capital B to designate it from the tiny b for the digital currencies it generates, bitcoin—started a global change remarkably similar to what the Internet did (Lee 2015a and 2015b). In 2017, its current market value was USD40 billion (D. Lee & Chuen, 2001).

2.3 FTPs in Commercial Bank in Bangladesh

Automated Teller Machine (ATM)

Customers can access their bank accounts via automatic teller machines which is known as ATMs. It is a self-service bank device, without the assistance of a bank teller or bank employee.

RQ1. What is the impact of fintech product from customer point of view in financial and non-financial performance in commercial banks of Bangladesh.

RQ2. What is the impact of fintech product from employee perspective in financial and non-financial performance in commercial banks of Bangladesh.

They serve to facilitate financial transactions and are available around-the-clock to assist users with cash withdrawals, cash deposits, money transferring, checking account balances, and printing statement of accounts. They are established in quick and easy areas like retail establishments, financial facilities, grocers, shopping centers, and petrol stations (Qadrei & Habib, 2009). However, over the last ten years, customers have grown increasingly dependent on and comfortable with the competence of automatic teller machines (ATMs) to satisfy their banking requirements in a time and space-efficient manner (Rumman et al., 2020).

Mobile Banking

The term "mobile banking" refers to a system that enables customers of a financial institution to carry out a variety of financial transactions through the use of a mobile gadget such as a mobile phone or personal digital assistant. Mobile payments, on the other hand, entail the use of a mobile device to pay for products or services whether at the point of sale or online. Mobile banking is not the same thing as mobile payments. SMS banking was one of the first types of mobile banking services available, and it was provided to customers through text message. In 1999, when the first smart phones that supported WAP and allowed users to access the web from their mobile devices were released, the very first European banks began providing mobile banking services to its clients using these devices (Bangladesh Bank, Information on Mobile Banking 2021)

Perceived Usefulness of Fintech product (FTP)

Flexibility is a potential factor for considering characteristics to make anything straightforward and accessible for customers. This serves as an initial variable that helps determine customer satisfaction and allows for a better understanding of the user's usage intention (Zhang & Kim, 2020). A psychological state of client satisfaction is produced because of a positive response from the consumer. Explain to them that when their feelings go above their expectations, they feel an overwhelming sense of contentment and joy. Firms who are able to meet the demands of their consumers are rewarded with a number of competitive advantages (M. A. Chen et al., 2019).

Theoretical Framework

Technology Driven Innovation Theory (TDI)

Technology Driven innovation (TDI) theory is a theoretical framework that illustrates how technological developments generate creativity in different sectors. According to the theory, the advancement and implementation of new technologies may



result in substantial changes to different business operations, goods, and services (Lyn and Heinz,1992) (Maarse & Bogers, 2011).The key component of TDI is the advancement and adoption of modern technologies, the innovation of new business strategies and models and the development of new ecosystems & markets. (Lyn and Heinz,1992) suggested that in summary, Technology Driven Innovation (TDI) theory provides a framework for analyzing how technology can stimulate creativity in various sectors, including the banking industry, whereas the acceptance of fintech products and services has contributed to significant changes in customer experiences, business procedures, and dynamic of the market. . Technology has also played a crucial role in enhancing the security of banking transactions. Advanced security technologies such as biometrics and two-factor authentication have helped to reduce fraud and increase customer confidence in online banking. technology-driven innovation theory has been critical in enabling banks to remain competitive in an increasingly digital world. Banks that have embraced technology and innovation have been able to enhance customer experience, reduce costs, and over all a good financial performance. Nevertheless, In the banking industry, technology-driven innovation has played a crucial role in transforming the way banks operate and deliver services to their

customers. Technology has led to the automation of many banking processes, reducing the need for manual intervention and improving operational efficiency. Banks are now able to process transactions more quickly, accurately and at a lower cost, it is nothing but blessings of advanced analytics and machine learning algorithms. banks to offer a range of innovative services and products to customers. For instance, mobile banking apps have made it easier for customers to manage their accounts and conduct transactions on the go. In addition, online platforms have enabled banks to offer new products, such as digital wallets, peer-to-peer payments.

Construct of the study

The proposed model shows that Perceived Usefulness and Perceived difficulty of use have direct influence on Firm Performance. whereas perceive usefulness directly impacts customer satisfaction and service quality and intended to influence firm Performance. Again, perceived difficulty of use directly impacts customer satisfaction, service quality and work efficiency and intended to influence firm Performance. Whereas customer expectations of assistance is influenced by perceived usefulness and perceived difficulty of the and has no impact of firm Performance.

3. METHODOLOGY

3.1 Research Methodology

This research was conducted by quantitative research methodology and followed primary data collection. All the questions were collected by previous research and carefully developed. There are two types of questionnaires – Employee perspective and Customer perspective. All questionnaires were collected from (X. Chen et al., 2021) (Sharma & Sharma, 2019) (Kaddumi, 2020)

3.2 Data Collection & Period

Here, we used Google Form to collect data from respondents which is a tool for managing surveys that allows you to make questionnaires. Because of certain constraints, the questionnaire was sent through traditional mail, social media sites, and digital peer-to-peer networks. In some banks in Chittagong, surveys were done offline at a time that was convenient. the survey started on 27th March ,2023 and ended on 4th April ,2023. The survey was built in English so that everybody can understand. All questions were evaluated on five-point Likert scale where ranging 1 (strongly disagree) to 5 (strongly agree).

3.3 Questionnaire Design

For customer perspective questionnaire, there were total thirty-eight questions. In first section, we developed four questions for demographic information about customer. In second section, there were twelve questions for perceived usefulness. In third

section, we set seven questions for perceived difficulty of use of fintech products. In fourth, fifth and sixth sections, we constructed total fourteen questions for customer satisfaction, customer expectation of assistance and customer trust issue towards using of fintech products.

For employee perspective there were in total thirty-three questions were constructed in seven sections. Demographic part is in the first section to collect respondents' gender, age, designation in bank and work experience. In second section , there were seven questions for perceived usefulness. In third section, we developed four questions for perceived difficulties of use of fintech products for customers. Additionally, in fourth, fifth, sixth and seventh section there were total eighteen questions to measure service quality, service efficiency and financial performance in bank.

3.4 Sample Size

The ethical procedure for research was carefully observed when the survey was conducted. The anonymity and confidentiality of the respondent's information were ensured for the survey. It highly recommends against writing the responders' names, emails, and other identifying identifiers to maintain authenticity.

We got total 320 respondents including 142 customers and 178 employees. All the respondents completed their survey.



Employee Perspective

Table Demographic Profile

Gender	Male 71.3% Female 28.7%
Age	18-30 years 12.4% 31-40 years 28.1% 41-50 years 37.6% 51 years and above 21.9 %
Experience	1-5 years 9% 5-10 years 34.3% 10-15 years 36 % 15-20 years 18% More than 20 years 2.8 %
Designations	Head of Branch 6.7% Operational manager 7.3% Customer service officer 9.6% Credit in charge 6.2% Others 70.2%

Customer questionnaire illustrates that in demographic section respondent age of 18-30 responded 62% (88) then age 41-50 is 16.2% (23) and age 51 and above is 11.3% (16) then 31-40 is 10.6% (15). That means, age 18 to 30 people are mostly interested about FTP and use of FTP among all age people. In this survey, females participated 42.3% (60) and males participated 57.7% (82) among all respondents. If we talk about occupation then mostly are students of 45.1% (64), job holders are 25.4% (36), businessman 9.2% (13), housewife 8.5% (12) and others (pilot, doctors, army officer, engineer (ETC) are 11.8%. Moving forward, participants hold bank account most from 1-5 years 31.7% (45), 1 year or less is 31%(44), 5-10 years is 21.1% (30) and least is 10 years & above is 16.2% (23).

Employer questionnaire shows that most of the participant are from age 41-50 years of 37.6% (67); 31-40 years is 28.1% (50); 51- above is 21.9% (39); lastly 18-30years is 12.4% (22). That

04 FINDINGS AND RESULTS

4.1 Data Analysis

To evaluate the hypothesized links in this research work, the study employs the method of partial least-squares structural equation modelling (PLS-SEM) and utilizes the advantage of the smart pls 4.0 software (Hair et al., 2013). The use of PLS-SEM is justified since it is more suited for this research's prediction-oriented model to investigate the casual association between numerous variables (Hair et al., 2014). The model developed in this research has undergone testing employing a method of analysis known as the "two-stage approach," as recommended by X. The first step involves the evaluation of the outer model, also known as the measurement model, which includes an assessment of the reliability and validity of the items. In the second stage, the path coefficient is estimated to establish the structural connection.

Customer's Perspective

Gender	Male 57.7% Female 42.3%
Age	18-30 years 62% 31-40 years 10.6% 41-50 years 16.2% 51 years and above 11.3 %
Experience of holding bank account	1 year or less 31% 1-5 years 31.7% 5-10 years 21.1% More than 10 years 11.2 %
Occupation	students 45.1% businessman 9.2% job holders 25.4% housewife 8.5% Others 11.8%

means, most respondents are experienced in this sector. In this survey, males participated in 71.3% (127) and females are 28.7% (51). Different designation people participated in survey. Among them, 12 head of brunch responded with 6.7%, about 7.3% were operational manager in 13, Customer service officer were 17 with 6.2% and major portion of our data is collected from others in 70.2% where Vice President, Additional Operational Manager, Assistant Vice President, Probationary Officer, Customer Relationship Manager, Senior Executive Officer, Management Trainee, Deputy Governor, MTO responded. With 64 participants, group of 10-15 years' experience shows 36%; 61 responded group of 5-10 years in 34.3% and 1 to 5 years' experience respondents are 9% in 16. On the other contrary, 15-20 years group shows 18% with 32 respondents; 1-5 years group of people shows 9 % with 6 respondents and 20 years & above, the most experienced among the group shows less in 2.8% with only 5 participants.

4.2 The Assessment of Measurement Model

The model fit was assessed through the proposed model's standardized root mean square residual (SRMR). This indicator represents the root mean square variation between the correlations that were observed and the implied correlations of the model. The result of 0.121 (estimated model) and 0.128 (Saturate model) indicate an appropriate fit of the model as the given threshold level suggested by (Henseler et al, 2016) is 0.008. The measurement model's inspection of the adequateness of measures and item reliability was conducted through examining the impact of the measures on their corresponding constructs. All Cronbach's alpha values were greater than 0.7 except one variable and all of the composite reliability values were greater than 0.8. Consequently, all constructs are reliable without one. To assess the reliability of each construct , the Composite reliability Index (CRI). The CRI is higher than 0.7 for all components (Hair et al, 2016). They were confirming its reliability.


Table Psychometric properties of the variable

Constructs	Items	Item loading	Cronbach Alpha	CR	AVE
CUSTOMER SATISFACTION	CS33	0.784	0.824	0.877	0.588
	CS44	0.810			
	CS55	0.747			
	Cs11	0.693			
	Cs22	0.797			
Customer Expectation of Asst.	CEoA1	0.770	0.771	0.868	0.687
	CEoA3	0.840			
	CEoA4	0.874			
Firm Performance	FP1	0.649	0.868	0.899	0.562
	FP5	0.729			
	FP6	0.761			
	FP7	0.746			
	Fp2	0.812			
	Fp3	0.861			
	fp4	0.670			
Perceived Difficulty of Use	<u>PDU1</u>	<u>0.739</u>	0.838	0.885	0.606
	<u>PDU2</u>	<u>0.811</u>			
	<u>PDU3</u>	<u>0.799</u>			
	<u>PDU4</u>	<u>0.759</u>			
	<u>PDU5</u>	<u>0.782</u>			
Perceived Usefulness	<u>PU22</u>	<u>0.734</u>	0.775	0.848	0.529
	<u>PU33</u>	<u>0.624</u>			
	<u>PU66</u>	<u>0.745</u>			
	<u>PU77</u>	<u>0.816</u>			
Service Quality	<u>SQ11</u>	<u>0.809</u>	0.852	0.894	0.628
	<u>SQ22</u>	<u>0.852</u>			
	<u>SQ33</u>	<u>0.726</u>			
	<u>SQ44</u>	<u>0.770</u>			
	<u>SQ55</u>	<u>0.801</u>			
Work Efficiency	<u>WE2</u>	<u>0.886</u>	0.514	0.741	0.538
	<u>We1</u>	<u>-0.205</u>			
	<u>we3</u>	<u>0.888</u>			
	<u>we4</u>	<u>0.731</u>			

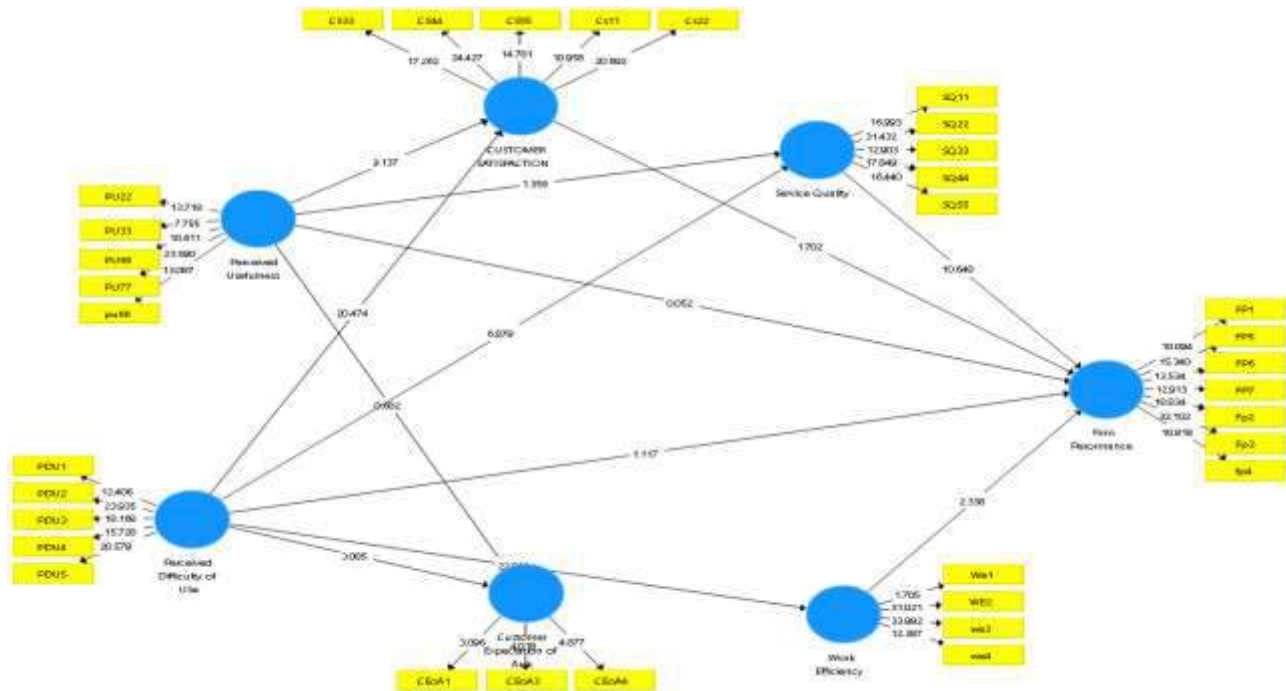


Figure Measurement Model

The Assessment of Structural Model

The proposed model's casual relationships are tested by employing the bootstrap method. All of the hypothesized relationships without customer satisfaction <- firm performance (H1), Perceived Difficulty of Use -> Customer Expectation of Asst (H3), Perceived Difficulty of Use -> Firm Performance (H4), Perceived Usefulness -> Customer Expectation of Asst. (H8), Perceived Usefulness -> Firm Performance (H9), Perceived Usefulness -> Service Quality (H10) have been found significant. Because, in H1, customer satisfaction and firm performance has been assessed statistically and found insignificant as P value is 0.089 which is higher than 0.05, B value is 0.157 and t value is 1.702. Again, H3, Perceived Difficulty of Use and Customer Expectation of Asst were examined statistical test and found P value 0.932, b value 0.017 and T value 0.085. as p value is higher than 0.05 oh H3, it is not supported here. H4, Connection between

Perceived Difficulty of Use and Firm Performance have been measured statistically and P value is 0.264, b value is 0.085 and T value is 1.117 that means this hypothesis is not supported for the higher range of P value. Additionally, H8 and H9 relation between Perceived Usefulness & Customer Expectation of Asst and relation between Perceived Usefulness & Firm Performance have been tested statistically and established the value respectively p value 0.495 & 0.948, b value is -0.128 & -0.002 and T value 0.682 & 0.052 which means P value is higher in range and consequently these two hypothesis H8 and H9 are not significant. Lastly, relationship between Perceived Usefulness & Service Quality examined statistically and developed (P value 0.175, b value 0.142 and t value 1.356) which determines that this hypothesized relationship is insignificant as P value is more than 0.05.

Table R Square

	R Square	R Square Adjusted
CUSTOMER SATISFACTION	0.941	0.940
Customer Expectation of Asst.	0.013	-0.001
Firm Performance	0.969	0.967
Service Quality	0.653	0.648
Work Efficiency	0.605	0.602



Table Path Coefficient and testing of hypothesis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Value	P Values	Hypothesis
H1. CUSTOMER SATISFACTION -> Firm Performance	0.157	0.153	0.092	1.702	0.089	Not supported
H2. Perceived Difficulty of Use -> CUSTOMER SATISFACTION	0.689	0.688	0.034	20.474	0.000	Supported
H3. Perceived Difficulty of Use -> Customer Expectation of Asst.	0.017	0.016	0.197	0.085	0.932	Not supported
H4. Perceived Difficulty of Use -> Firm Performance	0.085	0.088	0.076	1.117	0.264	Not supported
H5. Perceived Difficulty of Use -> Service Quality	0.691	0.693	0.100	6.879	0.000	Supported
H6. Perceived Difficulty of Use -> Work Efficiency	0.778	0.780	0.034	22.822	0.000	Supported
H7. Perceived Usefulness -> CUSTOMER SATISFACTION	0.329	0.330	0.036	9.137	0.000	Supported
H8. Perceived Usefulness -> Customer Expectation of Asst.	-0.128	-0.142	0.188	0.682	0.495	Not supported
H9. Perceived Usefulness -> Firm Performance	-0.002	-0.001	0.040	0.052	0.958	Not supported
H10. Perceived Usefulness -> Service Quality	0.142	0.143	0.105	1.356	0.175	Supported
H11. Service Quality -> Firm Performance	0.635	0.646	0.060	10.648	0.000	Supported
H12. Work Efficiency -> Firm Performance	0.164	0.152	0.070	2.338	0.019	Supported

On the other contrary, in H2 influence on Perceived Difficulty of Use has direct and positive impact on & CUSTOMER SATISFACTION. In H5, Perceived Difficulty of Use has positive and direct impact on Service Quality (p value 0.000, b value 0.691 and t value 6.879) . When customer face difficulties using fintech products they will need more support from bank employee. As a result, bank employees have to give attention to so many clients which leads their lower service quality. Thus, perceived difficulty of use and service quality has direct and positive relationship. Simultaneously, in H6 influence on Perceived Difficulty of Use has positive and direct relationship with Work Efficiency (p value 0.000, b value 0.778 and t value

22.822) In H7, influence on Perceived Usefulness has direct and positive impact on customer satisfaction (p value 0.000. b value 0.329 and t value 9.137). when the customer has a more positive opinion of how useful using fintech services is, they are also more likely to have a more positive attitude overall. Hence, the relationship is positive and supported. Repeatedly, In H10, Perceived usefulness and Service quality has direct and positive relationship where p value 0.175 b value 0.142 and t value 1.356. The ease of use of fintech services can influence client engagement. Due to its importance, the service will improve service quality and user efficiency. So, the hypothesis is significant. Again, Service Quality and Firm Performance (H11)



has positive and direct relationship as p value is 0.000, b value is 0.635 and t value is 0.648. when a bank gives good service to its customer, customer gets satisfied for the service quality and more customers as a result attracted to this bank. Thus, banks profitability increases. so, Service Quality is positively related to Firm Performance. In H12, Work Efficiency has positive and direct relationship with Firm Performance as p value is 0.019, b value is 0.164 and t value is 2.338. Banks with high satisfied

Discussion

This article's proposed conceptual model was applied to measure and consider the findings suitable. The recent study allows the acceptance of constructs – Service Quality (SQ), Customer Expectation of Assistance (CEoA), Customer Satisfaction (CS), Work Efficiency (WE) and firm Performance (FP) are connected to measure financial and non-financial performance in banking industry. The coefficient of determination (R²) for CS, CEoA, FP, SQ, WE are 9.41%, 0.13%, 9.69%, 6.53% and 6.05% respectively which indicates significant degree of explanatory power.

The key purpose of the research is to determine the relationship of customer satisfaction, perceived usefulness, perceived difficulty of use, customer expectation of assistance, work efficiency, service quality influence with firm performance. all hypothesis got acceptance without customer satisfaction <- firm performance (H1), Perceived Difficulty of Use -> Customer Expectation of Asst (H3), Perceived Difficulty of Use -> Firm Performance (H4), Perceived Usefulness -> Customer Expectation of Asst. (H8), Perceived Usefulness -> Firm Performance (H9), Perceived Usefulness -> Service Quality (H10).

From the analysis H1, relationship between customer satisfaction and firm performance is insignificant as P value is greater than 0.05. In H2, connection between Perceived Difficulty of Use and CUSTOMER SATISFACTION is direct and positive. In H3, relationship between Perceived Difficulty of Use and Customer Expectation of Asst is not supported as p value is greater than 0.05 and the value is 0.085. Repeatedly, in H4, influence on Perceived Difficulty of Use and Firm Performance is not supported as p value is 1.117 which is greater than 0.05. thus, this is not significant. Perceived Difficulty of Use has positive and direct impact on Service Quality (H5) when consumers find fintech product is difficult at using while doing transaction their money they need assistance from bank employee. Thus, The employees

employee will more productive than any other institutions. Satisfied employees in bank work harder, understand bank's situation, knows how to handle the customers, and assists them in their needs. As a result, banks will be assessed by their customers and employee for their higher work quality. Thus, consumers will be more satisfied and attracted to bank which leads their higher profitability. So, this hypothesis supported, and Work Efficiency has positive and direct relationship with Firm Performance.

are required to allocate their focus towards a multitude of clients who are encountering difficulties with fintech products. Consequently, the quality of their service decreases. Moving forward to H6, influence on Perceived Difficulty of Use has positive and direct relationship with Work Efficiency where p value 0.000, b value 0.778 and t value 22.822. Specially, situations in which consumers encounter difficulties in using fintech products during their transactions, they may require increased support from bank workers. As a result, the increased workload placed on bank employees may lead to a rise in work-related stress, potentially restricting their ability to perform the rest of their tasks with optimal efficiency. This hypothesis is accepted in a good way. So, the H7 proved that perceived usefulness and customer satisfaction has positive connection. It was found that relationship between Perceived Usefulness and Customer Expectation of Asst. in H8, is not supported as P value is 0.495 which higher than 0.05. Thus, result finds this hypothesis insignificant. Same as H9, Perceived Usefulness and Firm Performance relationship is not supported and insignificant as P value is 0.958. Findings found relationship between Perceived Usefulness and Service Quality in H10 has positive and direct relationship. In H11, influence on Service Quality with Firm Performance has positive and direct relationship. When a bank provides excellent service to its clients, those consumers feel satisfied with the level of service they have received, which in return attracts an increased number of potential consumers to the bank. It ends up resulting in an increase in the profitability of the bank. Work efficiency and firm performance has positive and direct relationship as findings. Employees at a bank who are delighted with their jobs put in greater effort to understand the current situation at the bank, can deal with clients, and assist customers with their various requirements. Because of this, clients are going to evaluate the banks' level of work based on its high standard of excellence. As a result, customers will have a better level of satisfaction and will be more attracted to the bank, which will lead to the bank having a higher level of profitability. So more the service quality, more the firm performance can achieve positively



05. CONCLUSION, POLICY IMPLICATIONS AND LIMITATIONS

5.1 Conclusion

The objective of this research is to assess the effects of perceived usefulness (PU) and perceived difficulty (PD) of fintech products (FTPs) on both financial and non-financial performance indicators (namely, customer satisfaction, service quality, customer expectation of assistance, and work efficiency) of commercial banks in Bangladesh. To achieve this goal, total of twelve hypotheses have been proposed and seven hypotheses accepted. This paper examines the distinct variables that influence firm performance individually. One of the most notable contributions is the evaluation of banks' non-financial and financial performance from the viewpoints of both customers and bank employees. In order to ensure the success of a firm, it is imperative to assess both financial and non-financial factors. The present research paper reports on the measurement of customer and employee acceptance of fintech products, specifically examining the extent to which they have adopted these products and their willingness to do so. The study explores the benefits and challenges of fintech products, focusing on enhancing bank employees' work efficiency through high-quality customer service and ensuring consumer satisfaction and security. It emphasizes the importance of preventing cyber-attacks and unauthorized disclosure of personal information to maintain customer loyalty. The research recommends the government promote younger generations' involvement in financial technology education to encourage future innovations. The study concludes that fintech products can advance due to consumer and staff adoption and survival of the fittest, as they play a significant role in the financial industry.

5.2 Theoretical Implications

Technology-driven innovation (TDI) is a trend in the banking industry, with fintech products like ATMs, mobile banking, and digital payments becoming increasingly popular. TDI emphasizes the importance of technological advancements for bank employees to maintain efficiency and customer satisfaction. If customers understand and use fintech products effectively, it will make it easier for bank employees to perform their tasks efficiently. This, in turn, will lead to quality service, satisfaction, and positive financial and non-financial performance. However, if customers and bank employees are resistant to technological advancements, it can negatively impact the organization's financial and non-financial performance. Therefore, understanding FTPs is crucial to maintain a balance between financial and non-financial performance in banks.

5.3 Practical Implication

Financial technology is crucial for various industries, including banking. It can enhance banker and customer relationships by enhancing efficiency and quality of service. Banks should employ more fintech products, hiring expert teams to handle related issues. This will help bankers provide better assistance to

customers, ensuring transactions and account-related problems are handled efficiently. Additionally, banks should use secure databases to protect consumer personal data. Bankers should encourage customers to use fintech products, as adopting them will lead to increased engagement and experience. R&D departments should focus on updating banks to stay modern and prevent theft.

5.4 Limitation and future Research Direction

This study has some limitations. Such as, in this study, data was collected through online and offline. Online data was collected through Google Form. Face to face survey or focused group discussion could be an option for better collecting and understanding data. Geographic limitations also included. We collected data only from Chittagong based banks, some of Dhaka based. If data can be collected all over from Bangladesh, the better data and situation can be researched. There are also can be added more factors without our factors. We used Smart PLS 4.0 to analysis the data. There are plenty of techniques to analysis data, can be used here as well. We collected total 320 data where more than these can be collected. From our model the mediating effect can be focus for future research. We focused on financial and non-financial performance in banking industry where other industry like - hospitals, hotels, apparel and manufacturing industries can be also added for new research.

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FEMALE CHARACTERS IN THE PLAYS OF GIRISHKARNAD

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ABSTRACT

The purpose of this essay is to highlight the role of women in the plays of GirishKarnad works. This study investigates how Karnad depicted the role of women with the use of examples taken from his chosen plays. This essay provides a comprehensive understanding of Karnad's attitude towards women. The plays of GirishKarnad are extremely important from a feminist perspective. As a living legend, He was regarded as one of India's greatest playwrights. He assesses each of his female characters critically. They are given a lot of room to express themselves. To achieve their goals, they go beyond social standards. They represent power, honesty, and protest against social structures that devalue women's roles in societies where men predominate.

KEYWORDS: *Feminism, patriarchy, courageous, dominating, liberty, strength.*

INTRODUCTION

The Women characters in GirishKarnad's plays are actual characters rooted in the Indian psyche throughout time, not just objects of society's infatuation with beauty. They are bright, brave, and sensible, in addition to being sensitive and reasonable. They are strong because of their vulnerability; they are protected by their delicate interpretation; their tongue is their sword; and, perhaps most importantly, they are led by spontaneity even in their most oppressed circumstances. By acting on their unrestrained urges like rage, passion, and desire within the confines of the man-made world, individuals not only represent the tendencies of social change but also serve as its agents. The most amazing double subalterns are Swarnalata, Sharmistha, and Kurudavva. They are the ones who have a much deeper understanding of reality and life's purpose than other characters. Women take the initiative to challenge the patriarchal attitudes and thoughts that dominate the leading male characters when those features are almost unchanging. They do this by asking crucial questions and acting differently. In most plays, men are the dominant characters and the towering figures, although women are thought of as having a variety of positions that allow them to be at the centre of the action or storyline.

In the plays of Karnad, there are at least three sets of female characters, and sometimes even more. The first group of characters did not perform on stage, but their stories nonetheless strongly influenced the audience and served to tie the plays' plots together. The second set of characters are vitally important to the plot yet are positioned lower among the women. This list includes Swarnalata, Kurudava, and Radhabai.

Devyani, Sharmistha, Chitrlekha, Vishakha, Nittlai, Rani, Padmini, Manjula, and Vidula are the play's third group of heroines. These characteristics are renowned for their inner fortitude, impulsivity, and ruggedness, which make them energetic, brave, disobedient, and forward-thinking. This

species has evolved into a superior creature than its competitors thanks to its constant need to reinvent its place in society.

Although women hold a prominent position in society, they are viewed as the "other" or "second" sex in a patriarchal society. Karnad speaks out against this rather than continuing to glorify his son's selflessness. Devayani, the queen, must endure humiliation before going insane. Sharmistha is an easy target for Yayati's sexual fulfilment, while Swarnalata is tormented by her husband's accusations of infidelity and is ultimately abandoned. Even though Chitrlekha likewise experiences these issues, she emerges as a new woman who bravely contests Pooru's choice and the erroneous rhetoric of Yayati. She forbids Pooru from going into her bedroom because he accepts his father's route due to his morally deficient demeanour and age.

In addition to being a playwright, GirishKarnad is a highly skilled communicator with In two different ways, women are portrayed in Karnad's plays. Despite not being truly modern, several other characters in his plays are given more freedom to express themselves. Another one of Karnad's characters is Chitrlekha. No, sir, I didn't push him over to the edge of the pyre. I did. You talk about my wifely obligations; what about your responsibility to your son? Did you stop to consider your actions before blaming your son for your problems? Chitrlekha appears to be looking for a guy to define her and give her some recognition in a world where men are in charge.

Karnad emphasises in the play the close connection between the oral storytelling tradition and the subculture of women that exists in patriarchal countries. prejudices rooted in culture in a patriarchal society dominated by men. Women are still perceived as being stupid and uneducated, and their intelligence is not fully appreciated. They also lack the freedom to express themselves in public. Rani serves as a metaphor for all women of that era who go through socialisation in a patriarchal society in the current drama. She respects social norms on the surface, as evidenced by her conventional appearance, yet she stands out



as a lady of courage, confidence, and self-trust. She prepares for any examination in an effort to establish her purity and succeeds in doing so regardless of gender.

Karnad is successful in demonstrating this through Rani's personality. As a religious piece, Tale Danda draws more attention to castism. Women's oppression and vulnerability are both depicted through the character of Rambhavathi in the reformation, and neither a woman of high status nor a woman of lower status are exempt from this circumstance. Rambhavathi, a middle-class wife and mother of Jagadevas, is likewise a target of oppression. His depictions of female characters reveal a deeper comprehension of Indian women. He has subjected his female characters to all of life's important phases, particularly guilt. The female character in almost all of his plays is the one who is in charge. He described how women are portrayed in his stories with all of his freedom. In his plays, he has developed a number of additional methods for portraying both classical and contemporary archetypes of female characters. Because women were not subject to sociocultural, political, or economic difficulties in ancient times, women are often portrayed in historical plays as submissive roles.

Hayavadana's mother, "the princess," is the only one who has crafted his past narrative. The princess is portrayed in this instance as being obstinate. By swapping the heads of both guys, she brazenly ruined the situation. She didn't pass up the opportunity to coexist with Kapila's body and Devadatta's soul. She defends what may be considered an unlawful connection with her justifications. Devadatta fought with Kapila until the very end although never suspecting her of the events. Padmini never allowed the pandemonium to affect how much she was enjoying her life. She herself makes the decision to kill both guys.

Kapila was represented as Hanuman since he assisted Padmini and Devadatta in getting married. In Bhagavata's hands, Padmini's son laughs for the first time in his five-year life. This demonstrates the fact that Padmini is a terrible mother. Such a representation of women is not a healthy one. In a patriarchal society, women are expected to follow the directives of the men in the household, but Karnad gave Padmini the authority to make decisions, which led to the tragic conclusion of the story. After being married, a woman is expected to completely rely on her husband's words rather than her parents' advice. But in the case of Padmini, Karnad deviates from the norm and gives Padmini the freedom to express herself and make her own decisions. The exchange that follows between Padmini and Devadatta demonstrates Padmini's courage in defying her husband.

In this play, Karnad employed a female chorus in addition to Padmini. This chorus of women is significant because it shows that the sole choices made by the female characters are what direct the plot. He used this chorus as a situational allusion as well as a symbol for the subconscious thoughts of the human mind. encourages her to have guts and bravery. Even though Rani was the primary character and the focus of the plot, she was once again portrayed as a rigid patriarchal adherent. She pays attention to the male cobra's comments once more. His

main character similarly abides by the established norms that are intended to create a patriarchal society. Appanna, Rani's husband, was genuinely portrayed as a tyrannical figure who cares little for either his life or his wife. Rani works very hard to maintain their bond, even going so far as to play a nasty joke on her spouse. Despite Rani's admiration in some places, Karnad also criticises her for her immaturity. She is portrayed in Karnad as an immature young woman who is easily seduced by anyone's seductive words. Even the cobra, who visits Rani every night in disguise, manages to fool her. She lacks the maturity to distinguish between the genuine Appanna and the Cobra in disguise. She is portrayed by Karnad as a woman who yearns for love and devotion. The village elders also made Rani submit to a purity test; however, Appanna maintains that the kid growing inside of her is not his. Despite her husband accusing her, she still lets the cobra in disguise inside her room. She once more makes the irrational decision to follow the cobra's advice and believes its tales wholeheartedly.

Karnad portrays her in these situations as an example of a post-modern Indian woman who battles for her freedom and works hard to understand her role in society. In other circumstances, her actions raise questions about the patriarchy's demands on how she should behave. But she was frequently forbidden from sticking out her tongue. Karnad places Rani in a position where she must demonstrate her virginity, just as Sita did in the Ramayana. Through this scene, Karnad imbues the reader with Sita. Karnad attempted to portray the mindset of a post-modern woman who craves modernity but still adheres to the patriarchy through the female characters Rani and Padmini. Karnad demonstrated that while it's great for women to oppose the patriarchy, there are occasions when it really protects them from calamity.

Two ladies play parts in the other drama, Bali. The other character is a queen and her mother. Queen Mother is the mother of the king and practises Hinduism. She adheres fervently to the customs, rites, and cultural practises of the Hindu religion; she worships gods and goddesses and enjoys offering sacrifices of human blood to them. She demands that every member of the family adhere to Hindu traditions, which have a long and illustrious past. However, the mother of the other character, Queen, the wife of the King, is aware of their extramarital relationship. Without citing the aforementioned justification, she instructs her son to kill his wife by stating that she is sterile. It shows the queen mother's conservative mentality, which was created in a patriarchal society, and how deeply ingrained conventions were in her life. Her daughter-in-law's extramarital connection was something she could not stomach. Instead of blaming her son for not being able to satisfy his wife's desires, the mother of the queen accuses the queen of being impure and betraying her husband. Karnad tries to introduce both characters in two different ways, with the queen mother serving as an example of tradition in a patriarchal society.

CONCLUSION

In Karnad's drama, every single female character is harmed by the male-dominated culture. They were more severely repressed because they attempted to enter the social system that



was dominated by men. While the female is silent, absent, and helpless, the male has a voice, is present, and has influence. By giving women the power to follow their inner convictions and challenge deeply ingrained social conventions, rites, and rituals that are dominated by men, the Karnad movement has, to some extent, been successful in lessening the immense unfairness that women experience in patriarchal society. The article ends with some recommendations made by Amartya Sen in his book "more than 100 million women are missing" to help women in societies dominated by men. He claims that the only way to elevate her status would be through gainful employment outside the home. In family matters, her recommendations are appreciated. She might achieve gender equality by taking on the job of the breadwinner, and gradually society would begin to treat women with the same respect and equality as men. Many societal prejudices that support male dominance may disappear. Karnad has given the female characters the least emotional nuance possible so that they can break free of their customary confines and either protest against injustice or pursue their own desires. They are the ones who have a much deeper understanding of reality and life's purpose than other characters. Women take the initiative to challenge the patriarchal attitude and thought that dominates the leading male characters when those features are almost unchanging. They do this by asking crucial questions and acting differently. In most plays, men are the dominant characters and the towering figures, although women are thought of as having a variety of positions that allow them to be at the focus of the action or storyline.

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PRAGMATIC IMPLICATIONS OF LITERARY WORKS (BASED ON UZBEK EXAMPLES)

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ABSTRACT

This text discusses the importance of text analysis from multiple linguistic perspectives, such as linguo-poetic, psycholinguistic, sociolinguistic, cognitive, linguo-cultural, discursive, and pragmatic. It focuses on the elements and components of text pragmatics, including the addressee's attitude, intention, content, and effect. The text also reviews the existing literature on the pragmatic aspects of translation, highlighting the works of scholars such as V. Dressler, Peter Newmark, Lawrence Venuti, and Jorge Cunha. It emphasizes the need to consider pragmatic factors in translation, including cultural and social contexts, stylistic features, and the intended effects on readers.

KEYWORDS: *text analysis, linguistics, text pragmatics, addressee, intention, pragmatic factors, cultural context, literary translation*

INTRODUCTION

In addition to the usual grammatical, semantic, and methodological analyses, the text is now analyzed from linguo-poetic, psycholinguistic, sociolinguistic, cognitive, linguo-cultural, discursive, and pragmatic perspectives in linguistics. This is, of course, the result of disciplinary integration; yet, it can be argued that the approach to text analysis based on the principles of modern linguistic trends is broadening the field of linguistic study in every way. Its purpose is to shed light on the speech capabilities, social and cultural essence, intellectual-cognitive, spiritual, and ethnic aspects of language units.

Because the idea of text pragmatics is employed in so many contexts, it was necessary to identify several text pragmatics mandatory components. In this regard, V. L. Nayer stated that the following elements should be included in the text:

- text pragmatics as a global category, it is a mandatory property of all texts and reflects the addressee's attitude towards the object of communication, the communicative act itself, and through it to the addressee;
- presence of addressee and addressee;
- pragmatic intention of the text;
- pragmatic content;
- pragmatic effect of the text.

The compatibility of the addressee's aim with the addressee's intention explains the text's pragmatic value. Furthermore, as V. Dressler points out, no matter what language the text is written in, it has pragmatic substance derived from a specific problem, circumstance, area, or time. The fundamental feature of the text, in our opinion, is that it has a communicative role, which is a factor connecting it to the pragmatic side. Because pragmatics arises throughout communication as well.

LITERATURE REVIEW

In order to increase the quality of translation and to comprehend the genuine meaning conveyed by the text, it is helpful to pay attention to pragmatic facts and principles during the translation process. Several scholars have studied the pragmatic aspects of translation up to this point; some are concerned with the pragmatic features of folk work translation, while others have studied the pragmatic aspects of poetic translation and attempted to provide solutions to translation problems that have arisen. M. Baker, a European scientist, in his "In other words". There was a mention of this in "A Coursebook on Translation", B. Hatim's work on the problems of intercultural translation, and H. Abulhassan's monograph.

Peter Newmark's influential work, "A Textbook of Translation", emphasizes the importance of considering pragmatic factors in literary translation. His concept of "communicative translation" encourages translators to go beyond a strictly literal approach and take into account the cultural and social context, stylistic features, and the intended effects of the source text on readers. Additionally, Lawrence Venuti's work has significant implications for the pragmatics of literary translation. In "The Translator's Invisibility: A History of Translation", he argues for a domesticating vs. foreignizing approach, emphasizing the importance of considering the cultural and pragmatic implications in the translation process. Venuti encourages translators to highlight the foreignness of the source text to disrupt ethnocentric assumptions and reveal the cultural context of the original work. Jorge Cunha: Jorge Cunha's book "The Pragmatics of Translation" delves into the pragmatic aspects of translation, including the translation of speech acts, implicatures, politeness, and cultural references. Cunha explores how these pragmatic elements impact the transfer of meaning and cultural nuances in literary translations, highlighting the essential role of pragmatics in achieving successful communication.

DISCUSSION

Several researchers have characterised the pragmatics of artistic language based on the above theoretical perspectives. In her

research, Z.Dotmurziyeva categorises the pragmatics of creative writing as follows.



Figure 1. Pragmatics of literary text

The researcher separated the pragmatics of the artistic text into four levels, as shown in this table, and explained how they emerge in the text:

1. The phonographic level is the smallest and is demonstrated in the text by making use of graphon, italics, capital letters, and quotation marks.

2. The lexical level includes lexis with emotional coloring, stylistic diversity of the language, and the author's neologisms and occasionalisms.

3. The pragmatic characteristics of interrogative questions, elliptical sentences, inversion, and repetition are studied at the syntactic level.

4. At the general text level, the interaction between the author and the character, as well as the pragmatic interpretations derived from the macro context, are examined. The addresser signals the addressee to express certain information or a concept at the phonographic level by using graphs, capital letters, and italics. One of them is the use of graphon in artistic text for a variety of objectives. To create the effect of someone's speech being authentic, the author inserts additional conversational components into the story's text. This applies to both the characters' direct speech and the narrator's indirect discourse. As a general rule, authors strive to make their characters' lines more comparable to the rules of live voice speech.

Furthermore, the use of italics has a pragmatic impact by emphasising the sentence and drawing the attention of the interlocutor or reader to certain words of the speaker. on example, the following paragraph is italicised in Utkir Hoshimov's "Notes for a Rainy Day":

"... Kambag'al yanayam qashshoqlashib ketaversayu, bironi holing nima kechdi demasa, boy yanayam boyib ketsada, ajoyib kunlarning birida kambag'al qo'shnisining uyini sotib olmoqchiligi, buzib tashlab o'rniga "kichikroq xususiy

gastinitsa" qurish niyati borligini shama qilsa, Bedil hazratlari ko'p asrlar avval yozgan bayt haqiqatga aylanishi mumkin.

*"Hech kim o'z kissasini to'ldira olmas,
O'zganing kissasiga toki qo'l solmas..."*

The italicized portion can even disclose the story's central theme, as the line that has been highlighted demonstrates. In this chapter, the author established the foundation for enhancing the pragmatic effect of the artistic text by quoting another author and placing the quote in italics.

Capital letters, in turn, impart meaning to even the most basic words and produce emotional overtones. If we pay attention to the following line from the work, we can comprehend a certain notion that the writer wishes to express to the reader using the term written in capital letters:

*DEBOCHA
Adolat HAQIQATni aytish va tinglashdan boshlanadi.*

We can see the writer's stress on the word "truth" in this sentence, as well as the fact that it is written in capital letters. The writer's pragmatic purpose is realised here by encouraging the addressee to focus on the word "truth" rather than other terms, and emphasising how vital "truth" is in securing justice.

The usage of quotation marks, which are also utilised to have a pragmatic effect on the addressee, is the main tool of the following phonographic level:

"Ayol qavmini ipidan ignasigacha bilaman", deysizmi? O-o-o siz daho ekansiz!

In general, phonographic means are crucial in helping the addressee understand the practical significance of creative works.

Given the incommensurability of lexical units in the artistic text, lexical language units play a critical role in the pragmatics



of the artistic text, namely in transmitting the writer's pragmatic aim. In text pragmatics, for example, the use of each word or phrase is explained and analysed in terms of its utility. In uncovering the pragmatic aspects of words in works of art, it is more crucial to consider what meaning they have in a certain context rather than their original dictionary meaning.

CONCLUSION

The pragmatics of literary translation plays a vital role in ensuring effective communication and maintaining the intended meaning and impact of the source text in the target language. Scholars such as Peter Newmark, Lawrence Venuti and Mona Baker have contributed significantly to our understanding of the pragmatic aspects of literary translation. Their works emphasize the significance of recognizing and preserving implicatures, speech acts, cultural references, and contextual nuances in the translation of literary texts.

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TEACHING AND STUDYING THE HISTORY OF THE UZBEK LANGUAGE - AS A COMPLEX ETHNOGENETIC PROCESS

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ANNOTATION

The emergence and formation of the language of any nation is directly related to the history of its origin. The study of the language, including Uzbek, is unthinkable without the joint efforts of historians, ethnographers, linguists, archaeologists and other representatives of related sciences. The article discusses aspects of the formation of the Uzbek language at different stages of its historical development, in particular the formation of the people themselves, revealed specific features of the structure and lexical composition.

KEY WORDS: *ethno genetic process, the formation of the language, the dialectal composition of the Uzbek language, tolerant relations, specific features.*

As humanity gained awareness of its social significance, the recognition of language's profound benefits emerged—a realization that languages serve as a conduit to grasp that which extends beyond one's immediate reach. Motivated by apprehensions of ignorance, uncertainty, and errors, diverse human communities embarked on the exploration of their shared traits and distinctions. These investigations encompassed a spectrum of factors, ranging from climatic, linguistic, and cultural attributes to communicative, ethnic, and dialectical competencies. Of particular note, and widely acknowledged globally, is the ethno-philological dimension, which played a pivotal role in the genesis and consolidation of communities into distinct peoples. Within this context, the focus lies on the examination of the emergence and consolidation of the Uzbek community as a distinct people, the evolution of its language, and the identification of specific differentiators, accounting for traditions, customs, history, and culture.

Perspectives on the objectives and methodologies of historical language studies have been largely established and accepted within the linguistic community. However, a comprehensive exploration of the histories of various national languages remains incomplete. While some languages have undergone thorough investigations, considering all facets of ethnogenesis, others have received only cursory attention from researchers. The Uzbek language falls into the latter category, boasting a wealth of written materials that serve as valuable sources for both linguistic and historical studies of the Uzbek people.

The historical distinctiveness of the Uzbek people lies in their interethnic, interfaith, intercultural, and interlingual tolerance. A notable quote underlines Uzbekistan as a state of immense opportunities, a collective home. “Uzbekistan is a state of enormous opportunities, our common home. Protecting, preserving and increasing its wealth, we must always remember and sacredly cherish the most important thing - this is the

agreement between us, these are those spiritual and moral values that from time immemorial, developing in every nation, in every ethnic group, mutually enrich each of us living under a single peaceful sky of Uzbekistan” [1, p.178].

The intricate ethnogenetic process of the Uzbek people, absorbing diverse non-Turkic ethnic elements with distinct historical and cultural backgrounds, is evident in written literature. This literature, produced in various languages, both Turkic and non-Turkic, as well as reflecting the dialectical composition of the Uzbek language during different periods, encapsulates the complex historical journey of the Uzbek people.

The historical trajectory of the Uzbek language gains significance when examined in direct correlation with the formation and progression of the associated people. A comprehensive understanding of the language's distinctive features, encompassing changes in vocabulary, phonetic system, and, to some extent, grammatical structure, necessitates an appreciation of its historical developmental patterns [2, p.44].

Consequently, investigating the Uzbek language across different stages of the historical evolution of the Uzbek people involves discerning specific features within its grammatical structure and lexical composition during various developmental epochs. Additionally, establishing the connection between the written language and the diverse spoken language manifestations, represented through numerous dialects, and determining the foundational dialect, contributes crucially to a more accurate comprehension of the comprehensive history of the Uzbek language.

The exploration of the ancient Uzbek and old Uzbek literary language, referred to as “Chagatai”, remains undefined and necessitates a thorough examination of specific literary



monuments spanning various periods. Equally crucial is the elucidation of the Uzbek language's connection to the ancient Turkic written monuments from the 6th-8th centuries, involving Turkic tribal groups that later integrated into the Uzbek language community as integral components.

The term "Old Uzbek" (Chagatai) was introduced by A.Y. Yakubovsky in 1941 and is predominantly employed by historians and orientalists within the CIS. Initially conceptualized as the legacy of the Chagatai culture during the Timurid era, the Chagatai language canonized during this historical period came to be known as Old Uzbek. Presently, in literature published in Uzbekistan, the term "Chagatai" [3, p. 313] is entirely omitted, replaced comprehensively by the term "Old Uzbek". Until recently, Old Uzbek (Chagatai) primarily denoted the language of Alisher Navoi's works, produced in Herat during the 15th century, and the works of Babur, whose residence was the Fergana Valley before his expulsion by the Shaybanids. However, recent perspectives assert that the language's distribution was more extensive, with antecedent languages already incorporating elements of Old Uzbek.

The forebears of the Uzbeks, dwelling in ancient Turkestan, communicated in Arabic, Bactrian, Avestian, Khorezmian, and Sogdian languages. The linguistic transition to the Turkic language commenced in the 6th century, driven by its perceived simplicity and ease of use. Notably, the term "ton", basis of the Uzbek word "tongich" (elder) in the name of Tunayobgu, the ruler of Tokharistan, may indicate the incorporation of Sogdian elements into the Chagatai language during this period. The proto-Uzbek language's initial remnants are discernible in Hakim at-Termizi's (859 - 932) work "Irshod-ul tolibin", where words such as arslon (lion), tovushkon (hare, rabbit), chakal or chiyaburi (jackal), urdak (duck), toti (parrot), ilon (snake), eshak (donkey), ot (horse), etc., find resonance in the later development of the Uzbek language. The relics "Kul Tegin" and "Tunyukuk" affirm the existence of Turkic peoples, forebears of the Uzbeks, in the ancient Surkhan Valley in the 7th century. Copper coins from Samarkand in the 12th century, inscribed with "olmaguchi yazuklukdur (guilty)" (he, who did not take it, is guilty), further exhibit a genetic connection with the Chagatai language.

During the VIII-II centuries BC, Central Asia was inhabited by Scythians, Massagetae, Sogdians, Khorezmians, and other ethnic groups. Thus, the Massagetae lived in the lower reaches of the Amu Darya and Syr Darya (Trans-Caspian Plain), and the territory of Kazakhstan, the southern and eastern parts of Central Asia (up to Altai) was inhabited by the Saks, Turkic-speaking ethnic groups (Kanguys, or Kangliys) lived in the oases of Tashkent and Khorezm, as well as the Fergana Valley and most of the territory of Sogdiana, part of which formed the state of Kangkha, or Kangyuy (from the 2nd century BC to the 1st century AD). Alexander the Great's conquest (329-327 BC) and the subsequent Greco-Macedonian rule for 150 years had no impact on the ethnic composition and language of the local population [4, p. 200].

The subsequent influx of Turkic ethnic groups, such as the Yue-Chzhi (Kushans or Tochars of the 3rd-2nd centuries BC), Huns

(II-IV centuries), and Hephthalite tribes (V-VI centuries), who were Turkic-speaking, contributed to the formation of the Uzbek people.

The Arab conquest in the 8th century marked a significant period in Central Asia, with the Arabs ruling over Sogds in settled regions like Bukhara, Samarkand, Karshi, Shakhrisabz, and the Karluks in the Fergana oasis. Turkic tribes, including the nomadic Turgesh, occupied vast territories of Central Asia and present Kazakhstan. The historian Tabari points out that the leaders of the Sogdians were Turks. In Central Asia in the 9th-10th centuries Samanids dominated [5, p.346]. During this period, Arabic functioned as the language of office and scientific works. The spoken, everyday language was the language of various Turkic tribes. The Karakhanids assumed power in the X-XI centuries, leading to a division into eastern (centered in Balasagun, then Kashgar) and western states (centered in Uzgend, then Samarkand). The territory of the eastern state consisted of Eastern Turkestan, Semirechye, Shash, Fergana, ancient Sogdiana, the territory of the western state - Afghanistan, Northern Iran. At the same time, the Ghaznavid state was formed in Khorasan (Ghazna) in 977, which existed until 1040, after which it was conquered by the Turkmen clans - the Seljuks (the first half of the 11th and the beginning of the 12th centuries) [6, p.348].

At the beginning of the 12th century, Central Asia was captured by the Karakitai, who came from the East. They left no traces either in ethnic composition or in linguistic terms. From the end of the 12th to the beginning of the 13th century, the Khorezm state was gaining strength. The peoples of Central Asia from the first half of the 13th century (i.e. from 1219) until the second half of the 14th century (1370) were dominated by the Mongols; from the second half of the 14th century power passed into the hands of the Timurids, who ruled until the second half of the 15th century. It should be emphasized that the Arabs, Persians, Mongols, who were the rulers of states in Central Asia in those historical periods, were unable to have any impact on the ethnic composition of the local population and their language, although, as already mentioned, the Arabic and Persian languages in those years were recognized as the languages of office and science.

After the collapse of the Golden Horde (beginning of the 14th century), as well as with the decomposition of the Timurid state (second half of the 15th century) as a result of internecine wars in the eastern part of Deshti-Kipchak, which stretched from the Volga in the East to the northern side of the Syr Darya River (which included the territory of modern Kazakhstan and South-Western Siberia), the state of nomadic Uzbeks was formed (20s of the 15th century). The founder of this state was the grandfather of Muhammad Sheybanikhan -Abulkhairkhan, who overthrew the power of the Timurids. Sheybanikhan, continuing his conquests, began to own the territory from the Syr Darya to Afghanistan.

During this period, the main everyday language was Uzbek. Literary and scientific works were written in Uzbek, and the Tajik language was adopted in the office. In Samarkand and Bukhara they spoke Tajik and Uzbek.



In general, the Turkic-Mongol tribes that wandered in the second half of the 14th century in the eastern part of Deshti-Kipchak, were called Uzbeks, and their territory was called the region of the Uzbeks. After their conquest in the first half of the 15th century, in Maverannahr, the local population also began to be called Uzbeks.

It should be noted that the ancient clans of Massagetae, Sogdians, Khorezmians and Turks, as well as other ethnic groups that joined them somewhat later, formed the basis for the formation of the Uzbeks, Kazakhs, Kyrgyz, Karakalpaks, Uyghurs and other Turkic peoples, and also participated in the formation of the neighboring Tajik people.

It should be taken into account that the same clans and tribes could have participated in the formation of different Turkic peoples. For example, among the Uzbek and Kazakh peoples there are clans of Kipchaks, Jalairs, Naimans, and Katagans. Therefore, the fact of the presence in the Uzbek and Kazakh languages of common phenomena inherent in the languages of the above-mentioned genera should not be considered as a product of the relationship between the Uzbek and Kazakh languages of a later time.

Depending on which clan found itself in the position of dominant in a given period, the state language was determined. As a rule, the language of the more privileged dominant clan or tribe begins to perform the functions of a written and national language, and the languages of other clans, finding themselves in the position of dialects and patois, find use in spoken language.

During the period of dominance of any of the above states (Kangyu, Kushans, Hephthalites, Karakhanids, Turkic Khaganate, etc.), the process of uniting various ethnic groups and bringing their languages closer together was simultaneously underway. This led to the formation and spread of a national language, as well as its adoption by various ethnic groups.

Thus, it is impossible to identify the modern Uzbek people only with the Uzbek tribes, which were part of various states that existed for a long time in Central Asia in the 14th century.

The formation of the Uzbek people was based on many ancient ethnic groups of Central Asia: the Sakas, Massagets, Kanguians, Sogdians, Khorezmians and the Turkic clans and tribes that subsequently joined them. The process of formation of the Uzbek people began in the 11th century and by the 14th century this process was largely completed. Approximately from this time, the ethnonym - Uzbek - was assigned to the people. A small number of Uzbek tribes that came from Deshti-Kipchak were only the last component of the Uzbek people.

The formation of the Uzbek language dates back to the 14th century. The dialect composition of the modern language indicates the complex historical path that the Uzbek language has taken, formed on the basis of the Samarkand-Bukhara,

Tashkent, Fergana and Khorezm groups of dialects, reflecting the Karluk-Uyghur, Oghuz and Kipchak linguistic features.

The main sources for determining the periodization of the history of the Uzbek language should include, first of all, written monuments written on the basis of the Turkic-runic, Uyghur and Sogdian scripts, very similar to each other, although found over a vast territory in Mongolia, the oases of Turfan, Eastern Turkestan, Eastern Siberia, Central Asia, Kazakhstan, Altai, Khakassia, Tuva, Buryatia, and in 1979 in Hungary in the village of St. Nicholas. However, the languages of the monuments written from the 12th to the 14th centuries have significant differences among themselves: in some, new features of Karluk-Uyghur predominate, in others - Oghuz, in others - Kipchak. Since the end of the 14th century, the linguistic features of written monuments again have acquired a general character and differed little from each other. This, of course, reflects the role of socio-political factors of the time: the formation of a centralized state, as a rule, led to the unification of peoples and the convergence of their languages (i.e., integration), and the fragmentation of the state led to the separation of peoples and the strengthening of the role of local dialects.

Based on data from the history of the formation of the Uzbek people and analysis of the language of existing written monuments, the following five layers can be distinguished in the process of formation of the Uzbek language, each of which is characterized by its own phonetic, lexical and grammatical features:

1. The oldest Turkic language is a language that evolved from ancient times before the formation of Turkic Kaganate (i.e. until the 4th century). The languages of the ancient Sakas, Massagets, Sogdians, Kanguys and other ethnic groups of that period are the fundamental basis for the formation of the modern Turkic languages of Central Asia and Kazakhstan, including the modern Uzbek language.

2. Ancient Turkic language (VI-X centuries). Monuments of this period were written in runic, Uyghur, Sogdian, Manichaeic and Brahman (Brahmi) scripts. They were found on stones (for example, Orkhon-Yenisei inscriptions), leather or special paper (found in Turpan), etc.

3. Old Turkic language (XI-XIV centuries). During the period of its formation, Uzbek, Kazakh, Kyrgyz, Turkmen, Karakalpak and other Turkic languages were formed.

4. Old Uzbek language (XIV-first half of the 19th century). At the beginning of the 14th century, the Uzbek language began to function independently. This can already be seen in the works of the poets Sakkaki, Lutfi, Durbek, written in the 14th century, in which the linguistic features of the Karluk-Uyghur groups that took part in the formation of the Uzbek people are increasingly evident.

It is interesting to note that the works of Lutfi, Sakkaki, Durbek and others, written in the early periods of the functioning of the Old Uzbek language, more reflect the features of the living spoken language of the Uzbeks. This language is well understood by our contemporaries. Alisher Navoi in his works improved this literary language, enriching it with Arabic and Perso-Tajik language means. As a result, a unique written



literary language was formed, which for several centuries served as a model and standard for writers and poets. Only in the XVII-XVIII centuries, in the works of Turda, Abdulgazy and Gulkhani, this literary written language was somewhat simplified and closer to the living spoken language.

5. New Uzbek language (from the second half of the 19th century). From the second half of the 19th century, a literary written language began to take shape, reflecting all the features of the living spoken Uzbek language. This process was expressed in a departure from the traditions of the old Uzbek literary language, in the rejection of archaic forms and constructions, in its rapprochement with the living common language.

The Uzbek language, unlike other Turkic languages, consists of three large dialectical units: Karluk, Kipchak and Oghuz. Karluk dialect - this dialect is predominantly urban. It is not homogeneous; three subgroups can be distinguished in it - dialects of the Tashkent, Fergana and Samarkand-Bukhara zones. Currently, the number of people speaking the dialect of the Tashkent zone is two to three times greater than those who speak the dialects of the Fergana, Samarkand-Bukhara zones combined.

Works written in the early periods of the functioning of the Uzbek language more reflect the features of the living spoken language of the Uzbeks. This language is well understood by our contemporaries. Poets and writers in their works improved the literary language, enriching it with Arabic and Perso-Tajik language means. As a result, a unique written literary Uzbek language was formed, which for several centuries served and continues to serve as a model, a standard for the Uzbek people.

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EXPLORING ETHICAL VIEWS IN “KABUSNAMA”: UNRAVELING THE LEGACY OF UNSURUL-MAOLIY KAYKOVUS

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ABSTRACT

The study delves into the historical and philosophical exploration of the spiritual culture of thinkers, emphasizing the significance of understanding their philosophical legacies. In times of socio-political and cultural transformations, the breakdown of traditional norms prompts a reevaluation of values, necessitating the exploration of past thinkers to guide modern society's ideological development. A focal point is the revival of universal values such as humanism, justice, mercy, compassion, friendship, and mutual understanding to address the contemporary spiritual crisis.

The article argues for a deep examination of the ethical views of historical thinkers, particularly Unsurul-Maoliy Kaykovus (1020-1083). Despite being part of the influential medieval East thinkers, Kaykovus's ethical ideas remain inadequately explored. The study proposes that understanding his ethical views is crucial for comprehending the development of practical philosophy and bridging the historical gap in ethical thought.

Highlighting the scarcity of systematic research on Kaykovus's ethical ideas, the article emphasizes the need for a scientific approach. Kaykovus, a prominent figure in medieval East philosophy, expressed his social and ethical views in “Kabusnama” a moral and didactic literary work. The study of “Kabusnama” not only sheds light on Kaykovus's worldview but also contributes to understanding socio-ethical thought in the 11th century and its impact on the Near and Middle East.

KEYWORDS: *Kabusnama, Medieval East Philosophy, Ethical Views, Practical Philosophy, Spiritual Culture, Ideological Values, Humanism, Justice, Mercy, Compassion, Friendship, Mutual Understanding, Socio-Ethical Thought, Historical Philosophy.*

Studying the history of the spiritual culture of the thinkers, in particular their philosophical heritage is important for substantiating ideological values that would correspond to the main trends in the development of modern society.

Therefore, it is not surprising that deep socio-political and cultural transformations, changes in social life are accompanied by the breakdown of traditional forms of life for the most diverse segments of society, a reevaluation of values and ideals, a loss or at least less stability of habitual beliefs and ideas, searching for new life attitudes.

Currently, in order to form a new worldview to overcome the spiritual crisis and find a moral ideal, it is necessary to revive the priority of such universal values as humanism, justice, mercy, compassion, friendship, mutual understanding and others.

Ethics, like any other philosophical science, over the course of many centuries has developed a system of its own concepts and categories. Therefore, in order to create an adequate picture of its formation and replenishment of its categorical apparatus, a deep and comprehensive study of the worldview of individual thinkers of the past who contributed to its development is also necessary. From this point of view, the study of the ethical views of the famous thinkers, in particular, Unsurul-Maoliy

Kaykovus (1020-1083) is relevant and is of certain historical and philosophical interest.

In our opinion, it is particularly difficult to create a general picture of the practical philosophy of past thinkers, since the ethical views of medieval thinkers have still not been sufficiently studied. In other words, studying the history of the ethical views of progressive thinkers of the past allows us to create the dynamics of the development of practical philosophy.

In this regard, the study of Kaykovus's ethical views is important and timely. Their relevance, first of all, follows from the considerations that the ethical views of Kaykovus are still poorly understood and the ideological sources of the spiritual life of his time are not defined and the continuity in the history of ethical thought is not entirely clear. The same ambiguity remains in the issue of the relationship between religious and secular morality in the era of the thinker. No less important is the definition of the category of general and special within the framework of the ethical views of Kaykovus and his ideological predecessors.

Kaykovus belongs to the galaxy of the greatest progressive thinkers of the medieval East who dealt with the problems of practical philosophy. The social and ethical views of the moral thinker are expressed not in the form of philosophical and ethical treatises, but in the form of edification in his remarkable



work “Kabusnama”, which belongs to the type of moral and didactic literature.

The study of “Kabusnama” is significant not only for determining the worldview of Kaykovus, but also for a complete understanding of the levels of development of the socio-ethical thought of the people in XI century, for the ethical teaching of the thinker had a significant impact on the general course of development of the ethical ideas of the peoples of the countries of the Near and Middle East.

Despite the popularity and scientific and philosophical significance of Kaykovus’s legacy, his ethical ideas has not yet become the object of systematic philosophical research, although the need for such a scientific approach arises not only from the interests of theoretical understanding of the heritage of the past, but also from the tasks of promoting and applying progressive trends in spiritual values at the present stage.

Among the scientists, who studied the works of Kaykovus are the Tajik legal scholar R.Sh.Sativaldyev, who specially studied the political and legal thoughts reflected in “Sinbadnama” and “Kabusnama” [1].

The life and works of Kaykovus has long attracted the attention of scholars in the East and West. Information about it can be found in anthologies, catalogs and reference books.

In addition, some authors specifically examined the life and work of Kaykovus in their studies. For example, the famous orientalist A.E.Krymsky studied the “Kabusnama”. He devoted his work “The History of Persia, its Literature and Dervish Theosophy”[2], to the literary analysis of that period and ends this chapter with a valuable bibliographical review. A.E.Krymsky talks about the author of the book, the reasons for its composition, and then moves on to explain its title. After this explanation, A.E.Krymsky tries to evaluate the ethical views of Kaykovus and comes to some one-sided, and to some extent, vulgar conclusion that in “Kabusnama” the morality is not high, one might even say low. However, A.E.Krymsky considers Kaykovus talented, emphasizes the harmonious and artistic manner of presentation.

The famous English orientalist E.Brown also studied the Kabusname [3]. In his work “History of Persian Literature”, he dwells mainly on the description of the book. He provides brief, incomplete information about the author, the date of compilation of the book, its publications, translations, and he also gives a list of chapters and stories contained in the book, points out the most interesting names of the poets quoted in it, and mentions the proper names in it. E.Brown emphasizes Kaykovus’s resourcefulness and is amazed at his “amazing modernity.” He characterizes all moral norms as sound and correct. E.Brown compares the language of the “Kabusnama” with the language of Saadi, considering it less elegant, but emphasizes its superiority in relation to the “Siasatnama” of Nizamulmulk. He characterizes Kaykovus himself as a simple-minded, but at the same time cunning, pious person. In conclusion, he cites the most interesting for him excerpts from chapter 9. Although you can get the necessary and useful facts

from his work, the question of Kaykovus’s worldview as a whole, his place in the history of culture is not touched upon and the work.

The study on “Kabusnama” by the famous Russian orientalist E.E.Bertels is of great scientific value [4]. In the preface to the second edition of “Kabusnama”, Professor E.E.Bertels provides in detail the biographical data of Kaykovus, drawn from the writings of his contemporaries. The scientist speaks of Kaykovus as an educated, talented poet, an amazing stylist, whose letters have long been considered a classic example.

Then, E.E.Bertels, speaking about the translations of “Kabusnama” compares them with the original language and emphasizes the shortcomings that exist in them.

The work evaluates morality, talks about the practicality and resourcefulness of Kaykovus. He believes that “Kabusnama” is not only a monument of classical literature, but historians can also benefit greatly from it.

From a literary point of view, E.E.Bertels emphasizes the skill and talent of Kaykovus, who skillfully, captivatingly presented his work in an edifying manner. When analyzing the language of “Kabusnama”, E.E.Bertels comes to a very valuable conclusion that this work, from the point of view of linguistic culture, is undoubtedly a written monument of the Central Asian people, that the language of “Kabusnama” is “the language of Rudaki and Ferdowsi”.

Another Russian orientalist I.S.Braginsky in his articles in a very concise form provides information about the content and style of presentation of Kaykovus’s work “Kabusnama” [5].

From a substantive analysis of the relevant literature, one can come to the following conclusion that almost all authors provide mainly bio-bibliographic information, and in some cases, philological scientists have attempted a thematic analysis of the content of Kaykovus’s “Kabusnama”. However, the content of the work, the ethical and pedagogical views in it were not sufficiently studied in these works. Therefore, there is a great need for further study of these thematic concepts.

In conclusion, the article underscores the importance of studying Kaykovus’s ethical views for a comprehensive understanding of medieval East philosophy and its influence on ethical ideas in the region. Despite the attention from scholars such as R.Sh.Sativaldyev, A.E.Krymsky, E. Brown, and E.E.Bertels, the ethical dimensions of “Kabusnama” and Kaykovus’s place in cultural history remain understudied.

The current state of literature review reveals a gap in the exploration of the content and ethical-pedagogical views in “Kabusnama”. The article advocates for further research in this thematic realm to provide a nuanced understanding of Kaykovus’s contributions. Ultimately, such endeavors not only serve the interests of historical comprehension but also contribute to promoting progressive spiritual values in contemporary society.



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NAVIGATING COMPLEXITY: THE VITAL ROLE OF MEDICAL AND SOCIAL COMPETENCE OF INTERNAL AFFAIRS OFFICERS AND TRAINEES

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ABSTRACT

This article explores the crucial role of medical and social competence in the responsibilities of internal affairs officers, extending beyond traditional policing. In a diverse and dynamic society, officers must possess a multifaceted skill set, particularly in medical and social considerations. The article concludes by emphasizing the far-reaching benefits of cultivating medical and social competence among internal affairs officers, including enhanced public trust, safer interactions, and improved community relations. It posits that these competencies are not merely additional skills but fundamental requirements for effective and community-oriented policing, enabling officers to navigate the ever-changing challenges of modern society.

KEYWORDS: *Internal Affairs, Medical Competence, Social Competence, Community Policing, Crisis Intervention, Procedural Justice, Cultural Competence, Continuous Training, Public Trust, Community Relations.*

Internal affairs officers play a crucial role in maintaining public safety, and their responsibilities often extend beyond traditional policing. In today's diverse and dynamic society, officers must possess a multifaceted skill set that goes beyond internal affairs tactics. One essential aspect of this skill set is the concept of medical and social competence – a combination of knowledge, skills, and attitudes that enables officers to effectively address situations involving medical and social considerations.

This issue has been debated by a lot of scientists all over the world. David Weisburd was a prominent criminologist known for his work in the field of police research. He has contributed to the understanding of effective policing strategies, including community-oriented policing. Weisburd's research emphasizes the importance of law enforcement agencies engaging with the community to build trust and address social issues collaboratively [1]. Jerry Ratcliffe's works focus on understanding crime patterns and developing strategies to enhance police effectiveness. Ratcliffe's research emphasizes the need for law enforcement agencies to adopt data-driven approaches, which can indirectly contribute to improving social outcomes [2]. Tom Tyler's work delves into the relationship between the public and legal authorities. His research on procedural justice highlights the significance of fair and respectful treatment by law enforcement in fostering public cooperation. Tyler's ideas have implications for the social competence of officers and community relations [3].

Anthony Braga's research emphasizes the need for police agencies to focus on specific areas with high crime rates, which can indirectly address social issues and improve community well-being [4].

Gary Cordner's research highlights the importance of community engagement, problem-solving, and the

development of partnerships between law enforcement and other social services to address broader community issues [5].

From the literature reviews above, we can define several key points in the studied problem. First and foremost, officers must be equipped with medical competence to respond swiftly and appropriately to emergencies. Basic first aid and emergency response training are fundamental components of this competency. In situations where every second counts, officers should be able to provide initial care for injuries, and manage medical emergencies until professional medical help arrives.

A crucial element of medical competence is health awareness. Understanding common health issues, recognizing signs of distress or medical conditions, and knowing how to respond appropriately are essential for officers working in the field. This knowledge not only facilitates rapid response but also ensures the safety and well-being of all parties involved.

In addition, a trauma-informed approach is paramount. Acknowledging the potential impact of traumatic events on individuals allows officers to approach situations with sensitivity and minimize additional harm. This involves recognizing the signs of trauma and employing strategies to de-escalate high-stress situations.

Internal affairs officers operate within diverse communities, and social competence is critical for effective policing. Crisis intervention training equips officers with de-escalation skills and the ability to manage situations involving individuals experiencing mental health crises or emotional distress. This not only ensures the safety of everyone involved but also contributes to building trust within the community.

Cultural competence is another essential aspect of social competence. Officers must understand and respect diverse



cultural backgrounds, recognizing the influence of cultural nuances, beliefs, and practices on individual behavior. This understanding fosters positive interactions and reduces the risk of misunderstandings.

Community engagement is a key component of social competence. Building positive relationships with community members, effective communication, and collaboration with social services contribute to a safer and more supportive community environment. Officers who actively engage with their communities are better positioned to address underlying social issues and build trust.

The true strength of internal affairs lies in the intersection of medical and social competence. Officers must be adept at recognizing the signs of mental health issues, understanding substance abuse problems, and addressing domestic violence situations with sensitivity and efficiency. The ability to navigate the complex interplay of medical and social factors in various situations is a hallmark of a well-rounded and competent officer.

Continuous training and education are essential to maintain and enhance these competencies. Officers should stay updated on best practices, new information, and emerging trends in both medical and social domains. Collaboration with specialists, including medical professionals, social workers, and mental health experts, enriches officers' understanding and facilitates effective collaboration when necessary.

The benefits of cultivating medical and social competence among internal affairs officers are far-reaching. Enhanced public trust, safer interactions, and improved community relations are direct outcomes of officers who possess these competencies. As internal affairs continues to evolve, officers equipped with a diverse skill set are better prepared to meet the challenges of an ever-changing society.

In conclusion, the concept of medical and social competence is not just an additional skill set for internal affairs officers; it is a fundamental requirement for effective and community-oriented policing. By investing in continuous training, fostering cultural competence, and recognizing the intersectionality of medical and social issues, internal affairs agencies can ensure that their officers are well-equipped to navigate the complexities of modern policing.

The evolving landscape of modern society demands a multifaceted skill set that transcends traditional policing, making these competencies indispensable. Drawing on insights from renowned criminologists such as David Weisburd, Jerry Ratcliffe, Tom Tyler, Anthony Braga, and Gary Cordner, the article has navigated through the global discourse on effective policing strategies, community engagement, and procedural justice.

The literature reviews have illuminated critical aspects, emphasizing the imperative for internal affairs officers to be well-versed in medical competence. This includes swift response to emergencies, basic first aid, trauma-informed

approaches, and health awareness. The recognition of signs of distress is identified as fundamental, ensuring the safety and well-being of all parties involved.

Equally vital is social competence, encompassing crisis intervention, cultural awareness, and proactive community engagement. The article has demonstrated that officers who actively understand and respect diverse cultural backgrounds are better positioned to build trust and address underlying social issues. The true strength of internal affairs officers lies in the nuanced intersection of medical and social competence, enabling them to navigate complex situations with sensitivity, efficiency, and a holistic understanding of human dynamics.

Continuous training and education are identified as pivotal for maintaining and enhancing these competencies. Collaboration with specialists, including medical professionals, social workers, and mental health experts, enriches officers' understanding and facilitates effective collaboration when necessary.

The far-reaching benefits of cultivating medical and social competence among internal affairs officers are profound. The article has highlighted outcomes such as enhanced public trust, safer interactions, and improved community relations. It concludes by asserting that these competencies are not mere additional skills but fundamental prerequisites for effective and community-oriented policing. In recognizing the dynamic nature of contemporary challenges, internal affairs agencies that invest in continuous training, foster cultural competence, and acknowledge the intersectionality of medical and social issues ensure their officers are well-equipped to navigate the complexities of policing in the 21st century.

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SAADI SHIRAZI: ILLUMINATING PERSIAN LITERATURE AND ETHICAL PHILOSOPHY IN THE 13TH CENTURY

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ABSTRACT

This article delves into the profound literary and philosophical contributions of Saadi Shirazi, a distinguished poet, philosopher, and mystic of the 13th century. Grounded in the socio-political context of his time, Saadi's life and works, particularly "Bustan" and "Gulistan," reflect the cultural confluence and intellectual currents of the Islamic Golden Age. Scholars such as Nicholson, Browne, and modern academics like Janet Afary and Franklin Lewis offer insights into Saadi's multifaceted significance, emphasizing his enduring impact on Persian literature, ethical philosophy, and Sufi traditions.

KEYWORDS: *Saadi Shirazi, Persian literature, ethical philosophy, Sufism, "Bustan," "Gulistan," socio-political context, Islamic Golden Age, literary renaissance.*

Saadi Shirazi, a distinguished poet, philosopher, and mystic, occupies an eminent position in Persian literature, leaving an indelible mark on the cultural landscape of the 13th century. As scholars such as Nicholson [13] and Browne [1] have asserted, Saadi's literary legacy transcends mere poetic brilliance; it encapsulates profound ethical and philosophical reflections, making him a quintessential figure in the Persian literary tradition.

To comprehend Saadi's significance, one must contextualize his life within the socio-political milieu of the 13th century. During this era, Persian literature and philosophy experienced a renaissance, influenced by the cultural confluence of the Islamic Golden Age. As Ibn Khallikan (1211–1282) observed, Saadi's contemporaneous environment shaped his worldview and ethical outlook, reflecting the broader intellectual currents of the time.

Born in Shiraz, Saadi's poetic genius manifested in works such as the "Gulistan" and the "Bustan". FitzGerald [9] contends that Saadi's unique narrative style and philosophical depth distinguish him, positioning him alongside the literary giants of his era. Saadi's eloquence in blending moral lessons with poetic beauty remains a hallmark of Persian literature.

Despite the geopolitical upheaval, the 13th century witnessed a literary renaissance in Persia. Eminent scholar Edward Browne highlights the efflorescence of Persian poetry during this era [1]. The court of the Ilkhans became a patronage hub for poets and scholars, contributing to the development of Persian literature. Saadi's contemporary, Rumi, and other luminaries enriched this literary effervescence.

As noted by historians like Juvayni [2], the Mongol rulers, including Hulagu Khan, demonstrated a nuanced approach to Persian culture. Persian administrators retained their positions,

contributing to the synthesis of Persian and Mongol traditions. This cultural amalgamation is reflected in Saadi's works, where Persian aesthetics intertwine with the ethos of a changing sociopolitical landscape.

During Saadi's time, Sufi thought experienced a renaissance, profoundly shaping the spiritual landscape. Scholar Annemarie Schimmel [3] elucidates the surge in mystical expressions, emphasizing the role of Sufi orders in providing solace and spiritual guidance. Saadi's affiliation with Sufism imbues his works with a profound spiritual undertone.

Saadi's life unfolded in the crucible of historical upheavals, where political turbulence, literary renaissance, cultural synthesis, and spiritual resurgence converged. As historians and scholars meticulously unravel the historical fabric of Saadi's time, the profound impact of these dynamics on his life and literary legacy becomes evident. Saadi emerges not merely as a poet but as a reflective chronicler of a complex era, transcending his role as a literary luminary to embody the spirit of a transformative epoch.

Saadi's "Bustan," a poetic gem, explores ethical and moral lessons through captivating anecdotes. Renowned Persian literature scholar E.G.Browne [4] delves into the depth of "Bustan," appreciating its narrative richness and moral teachings. The work has been a focal point for scholars unraveling Saadi's ethical philosophy.

Saadi's "Bustan," a timeless masterpiece in Persian literature, serves as a rich repository of ethical insights and narrative brilliance. This poetic work, composed in the 13th century, transcends its temporal origins to offer profound reflections on human nature, morality, and the intricacies of life.

"Bustan," translated as "The Orchard," is a compilation of Saadi's poetic narratives, interspersed with allegorical tales and



moral reflections. The work is divided into ten chapters, each addressing different aspects of life, ethics, and spirituality.

Central to “Bustan” are Saadi’s allegorical tales that convey moral lessons. The narratives are often set against the backdrop of nature, symbolizing the interconnectedness of human existence with the natural world. Each story unfolds with simplicity, yet carries profound ethical weight.

One notable tale recounts the encounter between an Arab and a serpent. The Arab, ungrateful for a previous act of kindness by the serpent, attempts to kill it. The serpent, despite the betrayal, refrains from harming the Arab when it gains the upper hand. This story serves as a metaphor for the consequences of ingratitude and the virtue of forgiveness.

Saadi explores a myriad of ethical themes in “Bustan,” offering readers timeless wisdom. The work delves into the nature of justice, compassion, humility, and the consequences of one’s actions. Saadi’s ethical teachings are universal, transcending cultural and temporal boundaries.

Saadi extols the virtue of generosity, emphasizing the positive impact it has on individuals and society. The poet underscores the idea that acts of kindness and benevolence contribute to personal well-being and the collective harmony of communities.

Beyond its ethical focus, “Bustan” delves into the spiritual and philosophical dimensions of human existence. Saadi contemplates the transient nature of life, the pursuit of knowledge, and the quest for inner wisdom. The work encourages readers to reflect on their purpose and the impermanence of worldly pursuits.

Saadi uses the metaphor of a drop of water in the sea to illustrate the fleeting nature of material wealth. He emphasizes the ephemeral quality of riches and suggests that true wealth lies in spiritual fulfillment.

“Bustan” has left an enduring imprint on world literature, inspiring subsequent generations of poets and philosophers. Its allegorical style and ethical teachings have resonated far beyond the borders of Persia, contributing to Saadi’s recognition as a luminary in the realm of ethical literature.

Saadi’s magnum opus, “Gulistan,” weaves tales of love, ethics, and social critique into a vibrant tapestry. Scholar G.M. Wickens [5] provides an insightful analysis of “Gulistan,” highlighting its cultural significance and timeless relevance. This work has captivated scholars, serving as a reservoir of Persian literary excellence.

Saadi’s “Gulistan,” a masterpiece of Persian literature, unfolds as a multifaceted garden where the blossoms of wisdom and ethical teachings flourish. This revered work, composed in the 13th century, showcases Saadi’s unparalleled narrative artistry, offering readers a rich tapestry of anecdotes, poetry, and profound insights into human nature.

“Gulistan,” translated as “The Rose Garden,” is a compendium of poetic prose and verse. Comprising eight chapters, each referred to as a “gate,” the work combines allegorical tales, moral reflections, and lyrical poetry, presenting a harmonious blend of entertainment and ethical instruction.

The brilliance of “Gulistan” lies in Saadi’s masterful storytelling and vivid imagery. The work adopts a conversational style, featuring anecdotes and parables that captivate readers with their simplicity and depth. Saadi’s seamless integration of poetry enhances the literary charm of “Gulistan”.

One notable narrative recounts the story of a prodigal son who squanders his inheritance but finds redemption through a series of life-altering experiences. The tale serves as a moral lesson on the consequences of heedless actions and the potential for transformative change.

Saadi employs “Gulistan” as a platform to impart profound ethical teachings. The work explores themes such as justice, humility, gratitude, and the consequences of ethical and unethical conduct. Saadi’s observations on human behavior offer readers enduring lessons on virtuous living.

In one section, Saadi emphasizes the virtue of humility through the allegory of a humble ant advising an arrogant elephant. The ant’s wise counsel underscores the transformative power of humility, inspiring reflection on the importance of modesty in human interactions.

“Gulistan” is not only a repository of ethical wisdom but also a lens through which Saadi critiques societal norms and human folly. The work incorporates satirical elements, prompting readers to reflect on the follies of pride, greed, and societal inequities.

Saadi employs humor and satire to expose the hypocrisy of individuals who outwardly display piety but lack sincerity. Through witty anecdotes, he critiques the disparity between professed beliefs and genuine actions, urging readers to cultivate authenticity.

The universal appeal of “Gulistan” has transcended cultural and linguistic boundaries, earning Saadi recognition as a literary luminary. Its translations into numerous languages attest to the work’s enduring impact, inspiring writers, philosophers, and readers worldwide.

Saadi’s “Gulistan” invites readers into a garden of literary and ethical marvels, where the fragrance of wisdom lingers. Through its eloquent prose, poetic charm, and timeless ethical teachings, “Gulistan” remains a testament to Saadi’s enduring legacy as a sage and storyteller, weaving together the threads of humanity’s collective wisdom.

Scholars like Janet Afary [6] contribute to the academic discourse surrounding Saadi, emphasizing the cultural and philosophical dimensions embedded in his works. Afary’s meticulous examination sheds light on Saadi’s influence on Persian thought and society.



Saadi's influence extends to Persian Sufism, a facet explored by prominent scholar Franklin Lewis [7]. Lewis delves into the spiritual dimensions of Saadi's poetry, uncovering the symbiotic relationship between his works and the spiritual ethos of Sufi traditions.

In conclusion, Saadi Shirazi emerges not only as a literary luminary but as a reflective chronicler of a transformative era. Rooted in the historical tapestry of the 13th century, Saadi's "Bustan" and "Gulistan" transcend temporal boundaries, offering timeless ethical insights and narrative brilliance. As scholars meticulously unravel the layers of Saadi's life and works, his profound impact on Persian thought, society, and Sufism becomes increasingly evident, securing his enduring legacy as a beacon of wisdom in Persian literature and philosophy.

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KATARUNGANG PAMBARANGAY IN METRO VIGAN, PROVINCE OF ILOCOS SUR: AN ASSESSMENT

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ABSTRACT

This study assessed the Katarungang Pambarangay as it is implemented in Metro Vigan, Ilocos Sur by focusing on the extent of awareness of barangay officials and residents on its implementing rules and regulations. It also examined the relationship between respondents' profile and their awareness, the significant differences of the respondents' awareness if taken by municipality, and the experiences of the involved parties during the proceedings by the Lupon.

Results reveal that the respondents are dominated by those aged 31–40 years old, male, married, college graduate, residents of the barangays for more than nine years, and those who did not receive any training. They are “Much Aware” on the creation of KP in their respective barangays, on the qualification of members, on the implementing rules, on the rules during mediation and implementation, and on the procedures in solving cases and conflicts. On the other hand, they are “Very Much Aware” on the cases covered by the KP. There is a significant relationship between the extent of awareness of the respondents and their age, sex, highest educational attainment, number of years residing in barangay, and number of trainings and seminars attended. Also, there is a significant difference on the extent of awareness of the groups of respondents taken by municipality along qualification of the members, creation, and implementing rules of the KP. The most common problems encountered during the mediation and conciliation proceedings are hard-headedness and lack of cooperation between both parties.

The researcher recommends that cases to be resolved should be properly studied by the members of the Lupon. Also, the presence of the Katarungang Pambarangay and the composition of different committees must be informed to the community. Members of the KP in cases involving their families or relatives must not be biased in the resolution of cases. They may also undergo training programs and seminars to update themselves on the provisions of the law. Lastly, further studies should focus on the systematic resolution of cases that is fair and acceptable to all people concerned.

KEYWORDS: *Katarungang Pambarangay, Lupon, Awareness, Resolution*

I. INTRODUCTION

Katarungang Pambarangay is an empowering and alternative tool for the resolution of family and community disputes at the barangay level and as such, barangay constituents should take advantage of its value. Republic Act 7160, also known as the Local Government Code, was created in 1991 right after the implementation of the Republic Act 6975 or the Department of Interior and Local Government Act of 1990. It mandates each barangay to enforce peace and order and provide support for the effective enforcement of human rights and justice. It has also recognized the Barangay Justice System as an alternative venue for the resolution of disputes to reduce backlogs in the Criminal Justice System. The only challenge now facing local governments is to harness Katarungang Pambarangay as a valuable mechanism available in administering justice, advancing human rights, protecting the people, and resolving and mediating conflict at the barangay level through non-adversarial means.

According to the 2007 baseline study conducted for the access for justice for the Poor Project, 98% of the total 41,995 barangays all

over the country or around 41,155 barangays have functional BJS. This indicates a continuous increase from the data recorded in 1999 in the study funded by the USAID, where 38,008 Barangays out of the total 39,721 barangays at that time have Lupon Tagapamayapa in place. Empirical studies on the effectiveness of the KP recognize two kinds of outcomes resulting from implementation: instrumental and intrinsic worth. The instrumental worth focuses on the contribution of KP in de-clogging court dockets and thereby generating government savings. The intrinsic worth, on the other hand, measure the success of the KP in terms of behavioral changes in the community and the access of vulnerable groups to some form of security, dispute resolution, and justice, apart from its role in de-clogging court dockets. (Republic Act 7160, (1991) Local Government Code of 1991, Chapter VII, Title Book III)

With the fast-evolving demand for the access of justice nowadays, there is a need to utilize this mechanism more strategically and pro-actively as a way to promote peace and order in every barangay. The Punong Barangay (Barangay Captain), members of the



Lupong Tagapamayapa (Barangay Peace Council), as well as the community will benefit greatly from the mechanism. Under the Barangay Justice System, the main strategy of settling disputes is to provide a venue for the disputing parties to search for a solution that is mutually acceptable. Hence, the primary role of the system is not to decide disputes and impose a solution to the parties but to assist the parties to discuss the possible amicable settlement of their disputes. The Punong Barangay and Lupon Members do not act as the adjudicators of disputes; instead they will be acting as the facilitators for the discussion of possible solutions. The personal appearance and participation of the disputing parties is necessary to reach amicable settlement. The Barangay Justice System provides alternative mode for dispute resolution to costly and lengthy process of setting disputes in regular courts. Instead of going through the technical procedure of filing formal pleadings and presenting evidence in courts, the parties of disputes are given the opportunity to try to talk with each other and resolve their disputes amicably. In the Katarungang Pambarangay, the parties do not need to secure the service of the lawyer. In fact, the law prohibits the participation of the lawyers in the conciliation proceedings. While cases that are tried in courts generally take years to be resolved, cases that go through Barangay Justice System would generally only take few weeks (Republic Act 7160, (1991) Establishing a System of Amicably Settling Disputes at the Barangay Level.)

Simply put, the Katarungang Pambarangay provides a friendly, inexpensive, and speedy forum for the settlement of disputes where the parties can freely explore options for amicably resolving their disputes without resulting to courts. In some areas especially those remote areas where the courts are inaccessible, both because of the location and of the prohibitive cost of litigation, the Katarungang Pambarangay, despite its limitations, can be the only venue that the poor can avail of for the resolutions of their problems. The Katarungang Pambarangay also envisions complementing the court in administering justice. For cases covered by the Katarungang Pambarangay, it is compulsory for the parties to

go through the proceeding first before going to the court. It is only when the Katarungang Pambarangay has failed to resolve the dispute that the parties will be allowed to bring their case to court. With more disputing parties settling their disputes at the community level, it is expected that the filing of cases between the members of the same community will be minimized. This, in turn, will help reduce the congestion of the court dockets and hopefully improve the efficiency and quality of courts dispensation of justice. (Nolledo, J. N., (1992) The Local Government Code of 1991 Annotated. Metro Manila National Book Store. 1st ed.)

The study thus hopes to examine the Katarungang Pambarangay as it is implemented in Metro Vigan, Ilocos Sur with the end view of determining the successes and possible problems of the program. In so doing, the study aims to provide the agencies concerned with baseline data on the implementation, administration, and supervision of the Katarungang Pambarangay for future policy directions. It is also hoped that this study will be a positive contribution to both the academe and the government in general towards improving the administration of justice in our country.

II. METHODOLOGY

The study employed the descriptive correlational method of research. Adopting the purposive sampling procedure, the study involved 270 respondents among the top three most populated barangays of the municipalities in Metro Vigan. The municipalities are as follows: Caoayan, Vigan, Bantay, Sta. Catalina, and San Vicente. The respondents from every barangay were the Barangay Captain, representatives from Barangay Peace Action Team, the Barangay Kagawad who chairs the Committee of Peace and Order, five representatives from the non-governmental organization, five from the professional sector, and five respondents who experienced the proceedings of the Lupon. The five representatives from the different sector were arbitrarily set by the researcher. Table 1 shows the respondents' distribution.

Table 1
Respondents of the Study

Municipalities	Barangay Chairman	Representative from BPAT	Barangay Kagawad (Committee of Peace and Order)	Non-Government Organization Representative	Professional Sector Representative	Representatives who experience the proceedings of the Lupon
VIGAN						
Tamag	1	1	1	5	5	5
Ayusan Norte	1	1	1	5	5	5
Pantay Fatima	1	1	1	5	5	5
Total	3	3	3	15	15	15
SAN VICENTE						
San Sebastian	1	1	1	5	5	5
Pudoc	1	1	1	5	5	5
Bantaoyay	1	1	1	5	5	5
Total	3	3	3	15	15	15



STA. CATALINA						
Tamorong	1	1	1	5	5	5
Cabittaogan	1	1	1	5	5	5
Poblacion	1	1	1	5	5	5
Total	3	3	3	15	15	15
CAOAYAN						
Fuerte	1	1	1	5	5	5
Pantay Tamurong	1	1	1	5	5	5
Puro	1	1	1	5	5	5
Total	3	3	3	15	15	15
BANTAY						
Tay-ac	1	1	1	5	5	5
Bulag	1	1	1	5	5	5
Balaleng	1	1	1	5	5	5
Total	3	3	3	15	15	15
Grand Total	15	15	15	75	75	75

The main data gathering instrument in this study is a questionnaire which is composed of three parts. The first part inquired on the socio-demographic profile of the respondents. Part II dealt with the extent of awareness of the respondents on the

Katrungang Pambarangay. Part III was on the experiences encountered by involved parties during the proceedings.

In order to determine the extent of awareness on Katarungang Pambarangay in Metro Vigan the following norms were used.

Mean Rating	Descriptive Rating	Interpretation
4.21-5.00	Very Much Aware	Very High
3.41- 4.20	Much Aware	High
2.61-3.40	Moderately Aware	Average
1.81-2.60	Slightly Aware	Low
1.00-1.80	Not Aware	Very Low

To gather the necessary data for this study the researcher asked permission to the Barangay Chairpersons among the top three most populated barangay in each of the municipalities and city of Metro Vigan. A modified questionnaire checklist was adapted from the study of Torricer (2015) entitled "The Barangay Justice System in Municipality of Sto. Domingo, Ilocos Sur" to gather the data needed in this study. Records of cases were reviewed by the Barangay Secretaries and Barangay Chairpersons in order to determine the respondents for the last research question which is about the experiences of those involved in proceedings. The questionnaires were personally administered to the Punong Barangay, the members of their respective Barangay Lupon, and the other groups of respondents.

On Highest Educational Attainment. A great percentage of the respondents are college graduates (111 or 41.1%), followed by high school graduates (62 or 23%), high school undergraduates (40 or 14.8%), and college undergraduate (39 or 14.4%).

On number of years residing in the barangay. Most of the respondents (235 or 87%) have been residing in the barangay for more than nine years.

On related training programs/seminars attended. Great majority of the respondents (223 or 82.6%) had not yet attended trainings and seminars.

2. Extent of Awareness of the Respondents on the Katarungang Pambarangay

On the Creation of the KP. It is evident that the respondents were "Much Aware" regarding the creation of KP in their respective barangays with a mean rating of 4.01 ("High").

On the Qualification of the Members. The respondents were "Much Aware" on the qualification of the members of the KP with a mean rating of 4.01, described as "High."

III. RESULTS AND DISCUSSION

Based on the data gathered, the researcher obtained the following salient findings:

1. Socio Demographic Profile of the Respondents

On Age. A great percentage of the respondents (74 or 27.4%) are 31-40 years old.

On Sex. Majority of the respondents are males (177 or 65.6%).

On Civil Status. Great majority of the respondents are married (206 or 76.3%).



On Implementing Rules of the KP. The respondents were “**Much Aware**” on the implementing rules of the KP with a mean rating of 4.02 described as “**High**.”

On Cases Covered by the KP. The respondents are “**Very Much Aware**” on cases covered by the KP with a mean rating of 4.32 described as “**Very High**.”

On Rules during the Mediation and Implementation of KP. The respondents are “**Much Aware**” on the rules during mediation and implementation of the KP with a mean rating of 4.16 described as “**High**.”

On the Procedures in Solving Cases and Conflicts. The respondents are “**Much Aware**” on the procedures in solving cases and conflicts with a mean rating of 4.19 described as “**High**.”

3. Relationship between the Extent of Awareness on the Katarungang Pambarangay and the Profile of the Respondents.

There is a significant relationship on the extent of awareness on the KP on age, sex, highest educational attainment, number of years residing in barangay, and number of trainings and seminars attended. Other factor like civil status failed to attend significant relationship on the extent of awareness of KP among the selected barangays in Metro Vigan.

4. Significant Difference in the Extent of Awareness on the KP between and among the Municipalities

There is a significant difference on the extent of awareness of the respondents on the Katarungang Pambarangay along with qualification of the members of the KP, creation of the KP, implementing rules of the KP. This is supported by the obtained overall F-ratio value ($F=6.690$) which is significant at .05 probability level. Specifically, there are significant differences along the following:

On the Creation of the KP. Extent of awareness on the KP of respondents from Vigan reflected a significant difference with respondents from San Vicente and Sta. Catalina supported by the mean difference of .463 and .648 respectively which is significant at .05 probability level. Similarly respondents from Caoayan reflected a significant difference on the awareness on the KP with the respondents from Sta. Catalina supported by the mean difference of .463 which is significant at .05 probability level. Likewise respondents from Bantay reflected also a significant difference on the extent of awareness on the KP from the respondents in Sta. Catalina supported by a mean difference of -.463 which is significant at .05 probability level. This implies that respondents from Vigan, Caoayan, and Bantay are much aware particularly on the creation of the KP compared to those respondents from the municipalities of San Vicente and Sta. Catalina.

On the Qualifications of the Members. Extent of awareness on the KP of respondents from Vigan reflected a significant difference with respondents from Bantay, San Vicente and Sta. Catalina supported by the mean difference of .389 and .537 and .675

respectively which is significant at .05 probability level. Likewise respondents from Caoayan reflected a significant difference on the awareness on the KP with the respondents from Sta. Catalina supported by the mean difference of .453 which is significant at .05 probability level. This implies that respondents from Vigan and Caoayan are much aware and knowledgeable on the KP particularly on the qualification of the members of the Lupon compared to the municipalities of Bantay, San Vicente, and Sta Catalina.

On the Implementing rules of the KP. The extent of awareness on the KP of respondents from Vigan reflected a significant difference with respondents from San Vicente and Sta. Catalina supported by the mean difference of .370 and .481 respectively which is significant at .05 probability level. This implies that respondents from Vigan are much aware and knowledgeable particularly on the implementing rules of the KP compared to the municipalities of San Vicente and Sta. Catalina..

5. Experiences of both Parties during the Proceedings

The most common problems encountered during the mediation and conciliation proceedings are hard-headedness and lack of cooperation between the complainants and respondents. Most of the parties involved during the proceedings were not following the notices and summons issued by the Lupon.

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn:

1. Most of the respondents are adult, majority are male and married, and most of them hold a college degree, majority have been residing in their respective barangay for more than 9 years and majority of them have no trainings and seminars attended.
2. The respondent's extent of awareness on Katarungang Pambarangay is “**High**” as a whole.
3. There is a significant relationship on the extent of awareness on the KP on age, sex, highest educational attainment, number of years residing in Barangay, and number of trainings, seminars attended.
4. There is a significant difference on the extent of awareness of the respondents on the Katarungang Pambarangay along with qualification of the members of the KP, creation of the KP, implementing rules of the KP. There is significant difference on the extent of awareness on the pairs of respondents between and among the municipalities of Metro Vigan.
5. The most common problems encountered during the mediation and conciliation proceedings are hard-headedness and lack of cooperation between the complainants and respondents. Most of the parties involved during the proceedings were not following the notices and summons issued by the Lupon.



RECOMMENDATIONS

Based on the findings of the study, the researcher strongly recommends the following:

1. Members of the Lupon should undergo training programs and seminars to update themselves on the provision of the law.
2. The presence of the Katarungang Pambarangay and the composition of different committees must be informed to the community through information dissemination and that community must maintain “**High**” awareness or improve it to “**Very Much Aware**”, on the existence of KP law and its structural mechanisms.
3. Members of the Katarungang Pambarangay in cases involving their families or relatives must not be biased in the resolution of cases.
4. Cases to be resolved should be properly studied by the members of the Lupon chaired by the Barangay Chairman and all the members before the case is deliberated in the presence of both parties involved.
5. The College of Criminal Justice Education should conduct extension activities particularly seminars on the awareness of KP law especially to barangays in which the residents were not knowledgeable on the KP law and the law that governs it.
6. Further study should focus on the systematic resolution of cases that is based on the law and that is fair and acceptable to all people concerned.

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MODELLING AND FABRICATION OF POWER HAMMER MACHINE

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ABSTRACT

In the industrial and metallurgical sectors, there's a significant amount of activity, with numerous tasks requiring timely completion to optimize company profits. Technological advancements have led to increased market demands for various product components. To address this need, there's been a development of a cost-effective, compact, and user-friendly power hammer machine aimed at easing the forging operations of blacksmiths. This innovative machine targets small-scale industries or workshops seeking more efficient forging solutions that demand less force compared to existing hammer machines. It specifically aids in producing intricate small-scale components. The current project revolves around the modelling, design, and fabrication of this power hammer machine. AutoCAD was utilized for modelling, and design calculations harnessed kinetic principles to determine critical parameters such as motor capacity, hammer impact velocity, torque, kinetic energy, and sudden impact strokes.

KEYWORDS: Bearings, Motor, Pullies, Hammer, Anvil, Disc, Spring and Transvers switch.

1. INTRODUCTION

In today's rapidly advancing world of science and industry, the role of modern machinery has become increasingly vital in our daily lives. Among these advancements, the fabrication power hammer machine, operating in a Drop Shape mode, stands out as a crucial piece of equipment in factories reliant on blacksmithing or casting. These Forging Hammers are pivotal in shaping metals between two Dies, utilizing a Hammer and anvil in the Second Part of the Die. To facilitate this process, a typical Shock-Resistant Lifting Table with adjustable heights precisely positions the product in the lower die, aligning it at the optimal distance to the Hammer Ram before being hammered by the higher die (Pandey et al., 2020). Traditionally, forging was a manual process where metals were heated and hammered by skilled blacksmiths. However, in the current scenario, this process has shifted towards mechanization, employing hammer machine tools. This transition marks a significant shift from manual to automated forging processes, which naturally require a reliable power supply to operate seamlessly. The power hammer, a pivotal machine tool in forging operations, relies on a power source to facilitate its up-and-down motion for shaping various

parts or components. Since the 1880s, it has gradually replaced trip hammers and typically consists of several key components: the Ram, Frame, Anvil, Hammer head, Dies, Connecting Rod, and an electric motor serving as its power source. Effectively, the power hammer operates as a machine tool utilizing electric power to drive a motor, thereby enabling the reciprocating motion of the ram (hammer) through a spring-connected mechanism to the connecting rod, utilizing the motor's rotational energy. This work primarily involves the design, modeling and fabrication of tailor made machine for use in University of Technology and Applied Sciences – Salalah campus for the demonstration purpose in the Foundry and Forging Lab. The work was executed as a part of the Second Year Diploma Project.

1.1. Objective

The primary objective of this project is to design, model, and construct an economical and compact power hammer machine requiring minimal power input, emphasizing simplicity in its mechanisms. The aim is to reduce overall machine expenses by employing straightforward mechanisms. The core goal is to develop an automated power hammering apparatus utilizing



essential components such as a 2850 RPM motor, bearings, disc iron, pulley, hammer, and anvil. This machine is engineered to streamline and simplify hammering operations. Its functioning involves activating the connecting link, which, upon engaging the spring, lowers the pallet rubber to contact the motor. This action causes the hammer to move up and down, supported by two bearings. The significance of this power hammer machine lies in its exceptional efficiency and the capability to operate continuously for 24 hours, ensuring consistent and reliable performance.

2. LITERATURE REVIEW

Dynamic testing of materials, as investigated by (Agirre et al., 2020), proves necessary for modeling high-speed forming processes like hammer forging and blanking, and also for studying crash/impact behavior in structures. In their review, (Pandey et al., 2020) explored the utilization of various machines and equipment across industries, such as forging, hammering, and cutting operations. (Manaye et al., 2019) focused on designing and constructing a modified hammer milling machine to meet the increasing demand for cassava flour in bakery industries, addressing the limitations of existing mills. The work presented by (Emovon et al., 2021) introduced a fuzzy MOORA technique for the design and fabrication of an automated hammering machine. (Ocak et al., 2018) emphasized the importance of predicting the net breaking rate of an impact hammer and determining daily advance rates for scheduling and estimating project costs in mining, civil engineering, and tunneling projects. (Ojomo & Fawohunre, 2020) developed a hammer mill with a double sieving device for grinding grains and agricultural products, using locally available materials. (Akash Santosh Pawar, 2021) focused on the manufacturing, design, and analysis of a hammer mill machine and its rotor assembly with a capacity of 200 kg/hr. (Ezurike et al., 2018) designed, constructed, and evaluated the performance of a flat screen hammer mill machine, achieving 92.9% efficiency when tested with dried maize. (Musa & Glory, 2020) developed a compact single-acting hammer mill machine using locally sourced materials. (Abhijeet Dhulekar et al., 2018) designed and fabricated an automatic hammering machine, considering factors like maximum torque, impact velocity, torque force, and shear failure in bolt joints. (Dominguez, 2021) developed a financially feasible hammer mill for small-scale corn milling operations, also focusing on separating fine corn grits from coarse ones for diverse animal feed utilization. (Sivasubramanian et al., 2018) created a foot-pedal-operated blacksmithy hammer, providing a traditional yet functional tool. (Bhoyar & Umredkar, 2020) presented an inclusive review discussing various forging processes, marking a technological revolution in forging and its applications. (Praveena, 2019) explored the development of an Automated Open Die Forging Machine, demonstrating superior surface quality and accurate component shaping compared to manual forging. (Akmal Bin, 2021) designed and fabricated an automated hammering machine, eliminating the need for human intervention in hammering operations. (Jay Govind Yadav et al., 2019) also designed and fabricated an automatic hammering

machine, calculating key factors such as maximum torque, impact velocity, torque force, and shear failure in bolt joints. (Saber et al., 2021) delved into investigating mechanical vibrations in hammer forging processes. Their theoretical analysis demonstrated an approximate 4% increase in forging efficiency with an initial anvil velocity of 0.2 m/s, aligning well with experimental results."

3. METHODOLOGY

The project is to consolidate various forging operations into a single machine. This includes tasks like blanking, piercing, coin making, nail insertion, embossing, and metal hammering. To achieve this, a straightforward hammer machine was designed and fabricated to encompass all these diverse operations. The design concept was studied in terms of the motor's capacity relative to the hammer's needs. Similarly, the machine's compressive strength was evaluated using different materials. The most dependable design for the automatic hammering machine is elaborated below, accompanied by its specifications, showcasing various approaches to the compact and portable automatic hammering concept. These details serve as valuable insights during the initial sizing phase of the automatic hammering machine's design process. The comprehensive flowchart of the proposed project is depicted in Figure 1 below.

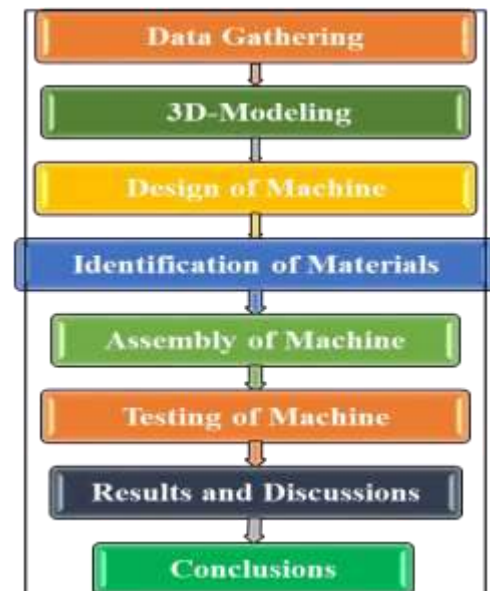


Figure 1: Flow Chart of Proposed Work

4. RESULTS AND DISCUSSIONS

4.1 Modelling

The modeling process was executed using AutoCAD 2020, ensuring precision in design and structure. Machine specifications were meticulously incorporated based on the project's demands. Various perspectives of the machine, including front, top, and side views, were captured in figures 2, 3, and 4. These comprehensive views aid in better comprehension during the fabrication phase, facilitating a clearer understanding of the machine's construction and assembly.

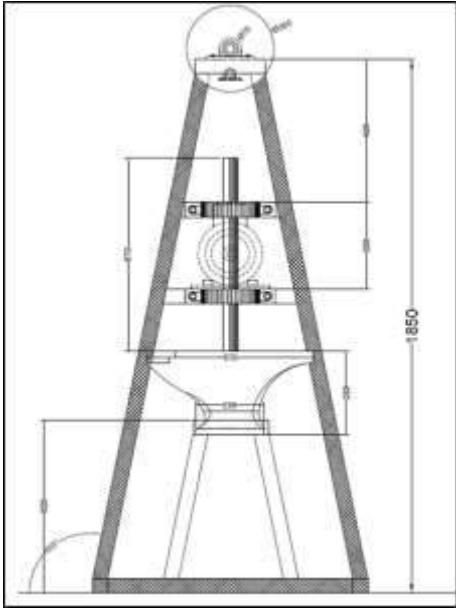


Figure 2: AutoCAD Model Front View

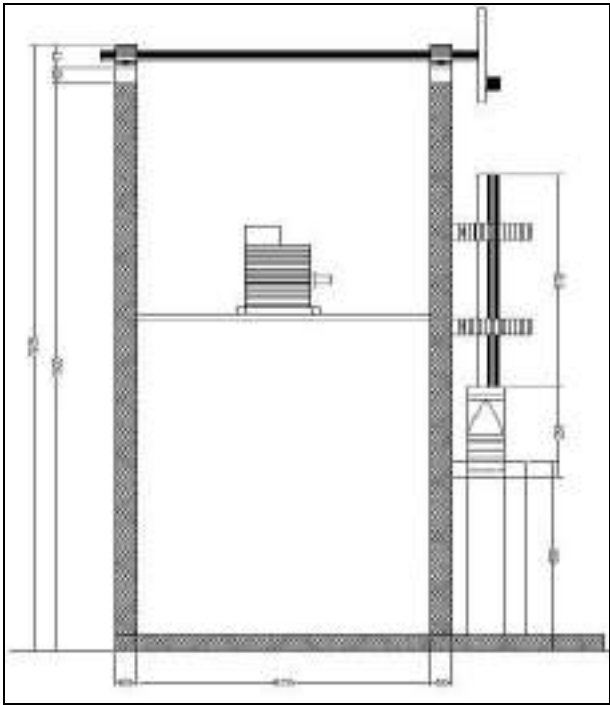


Figure 4: AutoCAD Model side View

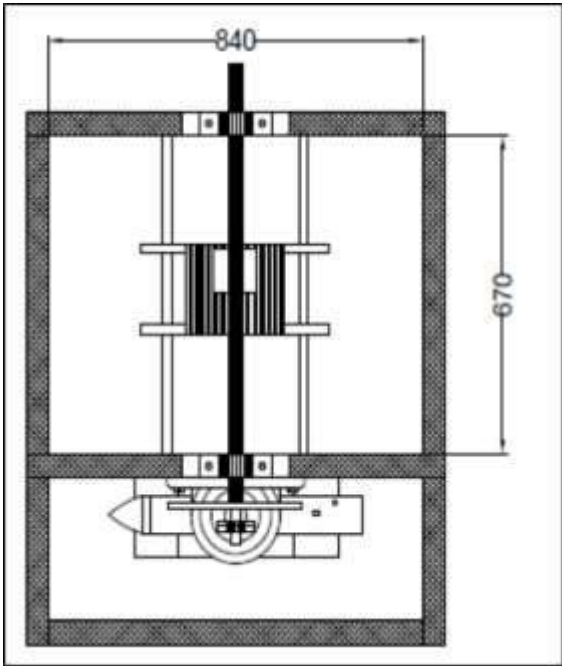


Figure 3: AutoCAD Model Top View

4.2 Design Calculations

Design calculations were conducted to ascertain the machine's capacity, a crucial aspect in determining its performance across diverse metals and materials used in forging operations. This comprehensive analysis aimed to gauge the machine's efficacy and suitability for various forging tasks, accounting for the distinct properties and characteristics of different metals and materials involved in the process.

Power Transmitted by Motor

$P = V \times I$ -----(1)

V = 230 - Voltage

I = 13.5 - Current

$P = 230 \times 13.5 = 3105 \text{ W}$

Torque by the motor

$P = 2 \pi NT / 60$ -----(2)

$T = P \times 60 / 2 \pi N$

$T = 3105 \times 60 / 2 \times 3.14 \times 2850 = 11.56 \text{ N - m}$

Impact velocity of Hammer = Change in momentum of the hammer with time

By applying the impulse momentum principle, we can find the impact velocity of hammer

$I = m \times (V_2 - V_1)$ ----- (3)

I – Impulse Momentum (Where I = F x t)

V₁ – Initial velocity of the hammer

V₂ – Final velocity of the hammer

$F \times t = m \times V_2$

$V \text{ or } V_2 = \frac{F \times t}{m}$ -----(4)

$V = 19.62 \text{ m/s}$

Kinetic Energy = $\frac{1}{2} m v^2$ -----(5)

$= \frac{1}{2} \times 15 \times (19.62)^2$

$= 2.88 \times 10^3 \text{ Joules}$



Impact Force (F)

Impact Force can be expressed from impulse momentum theorem.

$$\text{Impact Force (F)} \times t = mv_2 - mv_1 \text{ -----(6)}$$

Where,

Initial velocity $V_1 = 0$ m/s.

Final Velocity = 19.62 m/s

Mass of Impact (m) = 15 kg.

T = time taken for one rotation of the disc (2 sec)

$$F = \frac{15 \times 19.62}{2}$$

$$F = 147.15 \text{ N}$$

Compressive strength (or) The stress developed in the specimen is given by:

$$\sigma = \frac{F}{A} \left[1 + \sqrt{1 + \frac{2AEh}{Fl}} \right], \frac{N}{mm^2} \text{ -----(7)}$$

Where,

F – Impact force (N)

A – Cross sectional area of the hammer

($\pi * r^2 = 1963.5 \text{ mm}^2$)

E – Young's modulus of material (Mild Steel) = $210 \times 10^3 \text{ MPa}$

h - Hammer strike height (h = 110 mm)

l – length/ thickness of the specimen (25 mm)

$\sigma = 372.5 \text{ MPa}$

4.3 Fabrication Work

At the outset, an AutoCAD model was created to guide the selection of components for the power hammer machine. Initially, mild steel square tube channels were chosen and precisely cut to meet the required dimensions. The entire machine frame was constructed using these tubular channels, ensuring robustness and stability. A suitable motor was carefully selected to power the machine, positioned within a specially designed frame at the machine's core. Connecting the motor pulley to a larger pulley atop the machine via a V-belt, a shaft was utilized to drive a disc made of mild steel, boasting a diameter of 106 mm. Constructing a trapezoidal frame using mild steel square channels, a spring of appropriate specifications was securely fixed within this framework. One end of the spring was linked to the disc, while the other was connected to the hammer. Positioned beneath the hammer, an anvil was strategically placed to receive the impact during operations. For operation initiation, a pedal mechanism was integrated at the machine's base, facilitating the initiation of power supply to the motor. The resulting manual pedal-operated power hammer machine is now fully equipped to perform a range of operations. A detailed breakdown of the machine's components and their specifications is presented in Table 1 below. A final assembly of power hammer machine is illustrated in figure 5

Table1: Selected Components and its Specifications used in the Project.

S.NO.	Components	Specifications
1.	Total Wight of machine	175.3 Kg
2.	Hammer Wight	15 Kg
3.	Anvil	52 Kg
4.	Hammer strike height	110 (mm)
5.	Hammer (Diameter)	50 (mm)
6.	Pulleys (Diameter)	67 & 60 (mm)
7.	Bearings (Diameter)	50, 30 & 24 mm
8.	Length of link rod	628 mm
9.	Motor details	50(Hz), 15A, 230 (V), 2850RPM
10.	Disc iron (Diameter)	106 (mm)
11.	Disc (Thickness)	25 (mm)
12.	Bearing (Thickness)	10 (mm)
13.	Hammer (Length)	607 (mm)
14.	Hammer (Diameter)	50 mm



Figure 5: Power Hammer Machine

5. CONCLUSIONS

- The automated hammering machine demonstrated consistent performance across various forging operations, showcasing its repeatability and reliability. The structured design and predefined motion patterns of the hammer head contributed significantly to its consistent output.
- The project's emphasis on kinetic principles allowed for a thorough evaluation of the machine's capabilities. Calculations determining the motor's lifting capacity and hammer impact force provided crucial insights into the machine's performance potential.
- The compressive strength values obtained for various materials further validated the power hammer machine's suitability and versatility for forging operations. These values offered a comprehensive understanding of the machine's capabilities across different materials.
- The implementation of an adjustable force feature in the automated hammering process emerged as a significant advantage, offering adaptability and flexibility for diverse forging requirements.
- The observed repeatability and efficiency of the automated process indicate the potential for broader industrial applications.
- Future enhancements could focus on refining the adjustable force mechanism for greater precision and control in forging operations.
- Consideration of real-time feedback systems might further enhance the machine's adaptability to varying materials and forging requirements.

- The results demonstrate the successful design and implementation of an automated power hammer machine, showcasing its potential to revolutionize traditional forging processes through increased efficiency, repeatability, and reduced manual intervention.

ACKNOWLEDGMENT

This paper represents the culmination of the academic efforts undertaken during the 2022-23 academic year, specifically in Semester 1, as part of the second-year diploma project at the University of Technology and Applied Sciences –Salalah. The authors would like to extend their sincere gratitude to the university for its invaluable support, which played a pivotal role in facilitating the successful execution of this project by the students.

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HOME AUTOMATION SYSTEM USING WIFI, GOOGLE ASSISTANT

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ABSTRACT

Nowadays, technology is constantly evolving. Google Assistant home automation control is used to control home devices by voice. On this request, Google Assistant receives commands. Adafruit account is a free cloudbased IoT website for creating virtual switches that connect to the IFTTT website (abbreviated as "If This Then That") which is used to create further instructions. Voice commands for Google Assistant have been added from the IFTTT website. In this type of home automation, when users command Google Assistant, home appliances such as lights, fans, and motors can be controlled accordingly. The commands given by Google Assistant are considered and sent to the microcontroller, which in turn controls the relay connected to it. Connected devices can be turned on and off according to the user's request to Google Assistant. The microcontroller used is Node MCU (ESP8266) and communication between the microcontroller and the application is provided via Wi-Fi (Internet).

KEY WORDS: Google assistant-controlled home automation, IFTTT website (If This Then That)

1. INTRODUCTION

"Home automation" refers to the automatic control of home energy, activities, and devices. The electrical equipment and processes of our home can be easily controlled over the internet. A home automation system has three main components: sensors, controllers, and actuators. Nowadays, there are advances in technology and the sunrise is an exciting time for the world. The main purpose of technology is to increase efficiency and reduce labor costs. In this popular world, IoT has gained a very important place. Automation can reduce labor and increase efficiency. Thanks to the use of IoT, we have successfully managed devices in many areas; one of them is to control home automation using node microcontrollers. Raspberry pi, beagle bonnet etc. We can also use other boards such as Since all work is done through communication in today's technology, effective communication can also be achieved through voice. Although technology continues to permeate our daily lives.

2. SCOPE OF THE PROPOSED SYSTEM

Smart Home Technology Is a Necessity, Not a Luxury Home automation started as a symbol of luxury and status, then became a trend. However, home electricity has proven to be essential and indispensable in today's world. Ultimately, it makes life easier, stress-free and productive. Learn how every room in your home and your life within it can be transformed into a better place and success once you learn about automation below.

- You can turn the lights on and off and adjust the brightness in each room. You can also set a timer

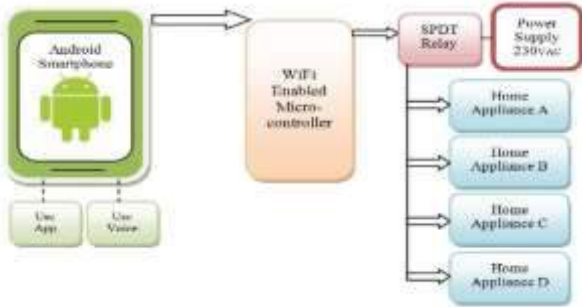
for when you leave and arrive.

- Set up your home base and schedule TV recording or control schedules and work on your phone whenever, wherever you want.
- Find out who is knocking on the door with your mobile phone and open the door remotely or wait for strangers.
- Use smart thermostats to control and maintain room temperature. Ultimately, it will reduce your labor costs.
- Home automation can alert you when high levels of carbon monoxide and smoke are detected.

Security is one of the main reasons to choose home automation. Automated systems use data from sound sensors and connected devices. So, when you leave the house, the system automatically closes the garage door, turns off the smart lock, turns off the lights, etc. Likewise, you can turn off connected devices if you forget.

3. METHOD OF EXECUTION

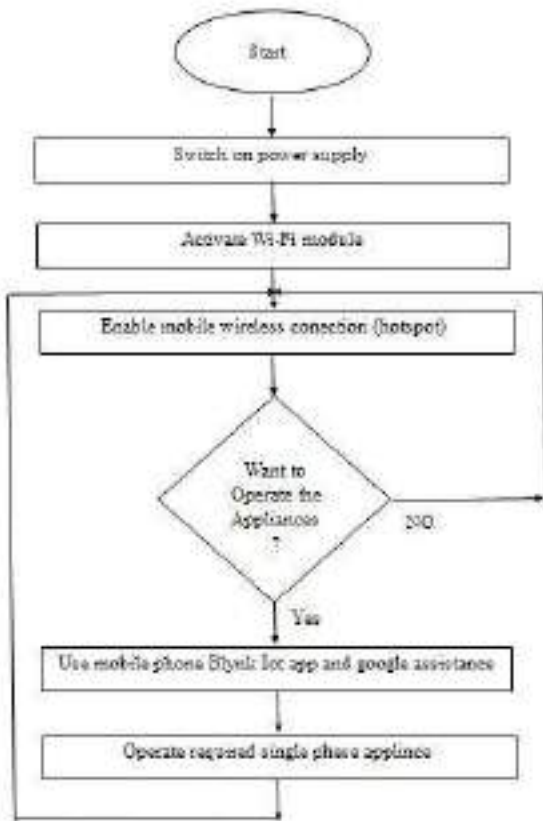
Home automation is a network of hardware, communications and electronic devices that connects everyday devices through the Internet. Each device is equipped with sensors and connected via Wi-Fi, so you can control it from your smartphone or tablet from home or from afar. This way, you can turn on the lights, lock the doors and even turn on the heating, no matter where you are.



4.COMMUNICATE WITH GOOGLE ASSISTANT & BLYNK



5.FLOW OF EXECUTION



A home automation system consists of three main components: sensors, controllers, and actuators. Home automation controls equipment connected to your home computer from a remote location over the Internet. You can access home devices (emulation) from your home computer without compromising security. We use a high level of security and do not provide direct access from public networks. Instead, you access your home computer information through a public email system. We use the Gmail SMTP/POP3/IMAP servers to perform these tasks.

Home automation simulation is therefore a faster, safer, and more efficient way to control the electrical devices in your home from your home computer from anywhere in the world.

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AN ANALYSIS OF THE ROLE OF OVER-THE-TOP (OTT) PLATFORMS IN THE CHANGING FACE OF INDIA'S FILM AND TELEVISION INDUSTRY

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ABSTRACT

The present study aims to examine the OTT consumption patterns of individuals, utilizing a sample size of 110 participants. The objective of this study is to acquire a comprehensive understanding of individuals' OTT content preferences and watching habits. This study utilized a quantitative research methodology and employed surveys as the major means of data collection. The survey questionnaire encompasses variables pertaining to social media platforms, over-the-top (OTT) platforms, and the devices employed all crucial factors for comprehending individuals' patterns of OTT consumption. This study indicates that the majority of viewers prefer Disney+ Hotstar, then Netflix, and finally other over-the-top (OTT) platforms. According to the findings of this study, the cost (high membership fees) and the need for advanced network and technological capabilities pose the greatest barrier to the use of OTT platform services.

INTRODUCTION

Over-the-Top (OTT) platforms have made a substantial contribution to the Indian entertainment sector in recent years. People have been able to access a wide variety of on-demand audio and video content thanks to the proliferation of over-the-top (OTT) platforms over the course of the past decade, which has completely changed the way that people consume digital media. The advent of over-the-top (OTT) platforms in India can be traced back to the time period around 2012, when services such as Netflix and Amazon Prime Video first started to expand into international markets. The actual growth in the over-the-top (OTT) business in India didn't start until the middle of the 2010s, when local platforms like Hotstar (now Disney+ Hotstar) and ALTBalaji began to gain popularity. The increasing number of people who have access to the internet, the decreasing cost of smartphones, and the accessibility of high-speed mobile data at affordable costs have been the key factors that have contributed to the expansion of OTT platforms in India. Because of these considerations, it is now much simpler for customers to access digital material while they are on the move, which has led to an increase in the demand for OTT services.

The over-the-top (OTT) platforms in India provide users with access to a wide variety of material spanning a variety of categories, such as movies, television shows, web series, documentaries, and live sporting events. They have not only offered a stage for well-known filmmakers and production houses

to exhibit their work, but in addition to that, they have made opportunities available to independent content creators and newcomers to the industry. The rise in popularity of over-the-top (OTT) platforms in India can be traced back to a number of different causes. To begin, they provide a personalized viewing experience by removing the need for traditional television schedules and enabling viewers to watch their favorite shows and movies whenever it is convenient for them, which eliminates the need for traditional television guides. In addition, these platforms offer a vast selection of regional material written in a variety of languages, making it possible to respond to the varied linguistic preferences of the Indian audience. The conventional methods of distribution and exhibition that were previously utilized in the Indian film business have also been rendered obsolete by the proliferation of OTT platforms. They have made it possible to circumvent the conventional method of releasing movies and web series in theaters and instead distribute them directly online. Not only has this provided filmmakers with greater room for their own creative expression, but it has also made Indian entertainment more accessible to a wider audience around the world.

The growth of over-the-top (OTT) platforms in India has led to the entrance of a number of new competitors into the industry. The emergence of their own platforms by major telecommunications firms and media conglomerates has further intensified competition and driven innovation in content creation and distribution. In recent years, the government of India has also



taken attempts to control the over-the-top (OTT) sector by adopting guidelines and policies to oversee content standards and censorship. These steps were taken in an effort to regulate the industry. This has been done to guarantee that the content that is made available on these platforms complies with the cultural sensitivities that are in place and does not breach any legal frameworks. The proliferation of over-the-top (OTT) platforms in India has had a significant impact on the entertainment industry as a whole. These platforms now allow customers access to a wider variety of material, as well as increased convenience and flexibility, and they have also opened up new doors for content creators. There is a good chance that the influence and reach of OTT platforms will continue to grow in India as a result of ongoing technological developments and improvements in internet connectivity.

ADOPTION FACTORS OF OTT PLATFORMS IN INDIA

- The widespread availability and declining cost of high-speed internet connections have been crucial in driving the rise in OTT platform usage. More and more people now have the hardware and connectivity to enjoy online streaming as the internet's reach has grown.
- The rise of mobile networks and the popularity of smartphones have facilitated ubiquitous access to over-the-top (OTT) services. Streaming material on the go has been a major driver in the rise of over-the-top (OTT) services, especially in countries like India with a sizable mobile user base.
- OTT services provide on-demand content, so consumers may view their most-loved episodes and movies anytime they like. Adoption has been fueled in large part by the public's preference for individualized viewing experiences over the more traditional, linear model of broadcast television.
- A wide selection of content from a wide range of genres and languages, as well as original programming, is available on OTT services. They have everything from full-length feature films to web series to documentaries to live sports. In addition, the proliferation of OTT's original

content has lured viewers with its unique and high-quality programming.

- Recommendation and Personalization Algorithms: Over-the-top (OTT) services provide customized recommendations based on viewers' likes, dislikes, and previous interactions with material. User engagement is boosted, and viewers are able to find material that is more relevant to them thanks to this individualized approach.
- Lower Monthly Costs Compared to Cable or Satellite TV Services Subscription-based arrangements are common on OTT platforms. Over-the-top (OTT) services have been popular among cost-conscious consumers due to the large variety of material available to users at low costs.

These considerations, along with evolving consumer tastes and technological progress, have driven the explosive expansion and widespread acceptance of over-the-top (OTT) platforms in recent years.

RESEARCH OBJECTIVES

1. To study OTT platforms' growth and popularity.
2. To explore how OTT platforms affect India's film and TV industries.
3. To examine Indian customers' OTT content preferences and viewing behaviors.

RESEARCH METHODOLOGY

In this study, the major research method that was utilized was a survey, and information was acquired from 110 participants through the use of a questionnaire that was intelligently prepared and consisted of two parts. The first group of comments explored the demographics of people who use OTT platforms, while the second group of comments compared the content preferences and viewing patterns of people who use OTT platforms to those of those who consume traditional media.

DATA INTERPRETATION

Demographic Profile: 1. Gender

According to Table 1, there are 58.2 percent of female respondents, whereas there are only 41.8 percent of male respondents who filled out the questionnaire.

Table: 1 Gender-Wise Analysis

	Frequency	Percent	Mean	Std. Deviation	Variance
Male	46	41.8			
Female	64	58.2			
Total	110	100.0	1.58	.496	.246

(Source: Collected from Primary Data/ data calculated by SPSS)

2. Age Group

Table 2 indicates that 52.7 percent of respondents fall within the age range of 23-35 years. The total percentage of respondents aged 23-35 years is 40.9 percent, while those aged 35-45 years

account for 3.6 percent. Respondents above the age of 45 constitute 2.7 percent, and there are no respondents below the age of 15.



Table 2: Age Group

	Frequency	Percent	Mean	Std. Deviation	Variance
15-23	58	52.7			
23-35	45	40.9			
35-45	4	3.6			
Above 45	3	2.7			
Total	110	100.0	2.56	.698	.487

(Source: Collected from Primary Data)

3. Occupation

According to Table 3, the data indicates that 69.1 percent of the participants are students, 15.5 percent are private employees, 10.9 percent are housewives, and 2.7 percent fall into the "other"

category. Additionally, both government employees and businessmen each account for 0.9 percent of the respondents in this table.

Table 3: Occupation

	Frequency	Percent	Mean	Std. Deviation	Variance
Government employee	1	.9			
Businessman	1	.9			
Private Employee	17	15.5			
Student	76	69.1			
Housewife	12	10.9			
Other	3	2.7			
Total	110	100.0	3.96	.703	.494

(Source: Collected from Primary Data)

4. From which area do you belong?

According to Table 4, there are 38.2 percent of respondents who live in rural areas, 43.6 percent of respondents who live in urban

areas, and 18.2 percent of respondents who live in semi-urban areas.

Table 4: Area of respondent

	No of respondent	Percent
Rural	42	38.2
Urban	48	43.6
Semi-urban area	20	18.2
Total	110	100

(Source: Collected from Primary Data)

5. Family Income (annually)

Table 5 shows that 22.7 percent of respondents have an annual family income of less than 1,20,000 rupees, 24.5 percent have an annual family income of between 1,20,000 and 2,00,000 rupees,

26.4 percent have an annual family income of between 2,00,000 and 4,00,000 rupees, 8.2 percent have an annual family income of between 4,00,000 and 5,00,000 rupees, and 18.2 percent have an annual family income of more than 5,00,000 rupees.

Table 5: Family Income

	Frequency	Percent	Mean	Std. Deviation	Variance
Below 1,20,000	25	22.7			
1,20,000-2,00,000	27	24.5			
2,00,000-4,00,000	29	26.4			
4,00,000-5,00,000	9	8.2			
Above 5,00,000	20	18.2	2.75	1.384	1.916
Total	110	100.0			

(Source: collected from Primary Data)



6. Have you ever used any OTT platform?

According to Table 6, 78.2 percent of respondents utilized an OTT platform, whereas 10.9 percent of respondents had never used any

OTT platform and 10.9 percent of respondents selected may be an option. They appear to have fewer opportunities to use any OTT platform.

Table 6: Have you ever used any OTT platform

	Frequency	Percent
Yes	86	78.2
No	12	10.9
May be	12	10.9
Total	110	100

(Source: Collected from Primary Data)

7. Which platform do you use to watch movies or TV shows?

According to Table 7, 32.7 percent of respondents watch OTT platforms, while 25.5 percent of respondents watch cable TV.

Furthermore, 41.8 percent of respondents indicate that they like to watch both platform cable TV as well as OTT platform.

Table 7: Which platform do you use to watch movies or TV shows?

	Frequency	Percent
OTT platform	36	32.7
Cable TV	28	25.5
Both	46	41.8
Total	110	100

(Source: Collected from Primary Data)

8. How frequently do you use the OTT platform?

According to Table 8, 21.8 percent of respondents use OTT platforms on a regular basis, 34.5 percent of respondents use them

occasionally, 10.9 percent of respondents use them infrequently, and the remaining 32.7 percent of respondents use OTT platforms on a few occasions per month.

Table 8: How frequently do you use the OTT platform?

	Frequency	Percent
Regularly	24	21.8
Occasionally	38	34.5
Seldom	12	10.9
Few times in month	36	32.7
Total	110	100

(Source: Collected from Primary Data)

9. Which OTT platform do you use mostly?

Table 9 displays that 29.1 percent of respondents mostly use Disney+ Hotstar, 28.2 percent of respondents primarily use Netflix, 20.9 percent of respondents primarily use Amazon Prime,

8.2 percent of respondents primarily use Voot, and the remaining 13.6 percent of respondents choose other OTT platforms instead of this platform. Table 9: Which OTT platform do you use mostly?

	Frequency	Percent
Netflix	31	28.2
Disney+ Hotstar	32	29.1
Amazon Prime	23	20.9
Voot	9	8.2
Other	15	13.6
Total	110	100

(Source: Collection from Primary Data)

10. How do you discover new TV shows and movies?

According to Table 10, the audience learns about new movies and shows in one of the following ways: 39.1 percent of respondents learn about new movies and shows through word of mouth and friends; 74.5 percent learn about new movies and shows through the internet and social media; 16.4 percent of respondents learn

about new movies and shows through the recommendations of streaming platforms; 9.1 percent learn about new movies and shows through newspapers and magazines; and the remaining 5.5 percent of respondents prefer other channels to learn about new movies and shows.



Table 10: How do you discover new TV shows and movies?

	Frequency	Percent
Word of mouth/ Friends	43	39.1
Internet/ Social media	43	74.5
Newspaper/ Magazines	10	9.1
Recommendations of streaming platform	18	16.4
Others	6	5.5
Total	110	100

(Source: Collected from Primary Data)

11. Which type of content do you prefer to watch on the OTT platform?

The preferences of the audience for the various types of material are outlined in Table 11. On over-the-top (OTT) platforms, 44.5 percent of respondents prefer movies, 15.5 percent of respondents

prefer television shows, 26.4 percent of respondents prefer web shows, 5.5 percent of respondents prefer sports, 5.5 percent of respondents prefer news, and the remaining 2.7 percent of respondents choose documentaries.

Table 11: Content is preferred by the audience of the OTT platform

	Frequency	Percent
Movies	49	44.5
Documentaries	3	2.7
Sports	6	5.5
News	6	5.5
TV Shows	17	15.5
Web shows	29	26.4
Total	110	100

(Source: Collected by primary data)

12. Which language do you prefer most to watch shows/ movies on OTT platforms and TV?

According to Table 12, 75.5 percent of the respondents had a preference for the Hindi language when it comes to matching

movies/shows. 17.3 percent of respondents have a preference for the English language, whereas 7.2 percent of respondents have a preference for the regional language.

Table 12: Language preferred most to watch shows/ movies on OTT

	Frequency	Percent	Mean	Std. Deviation	Variance
Hindi	83	75.5			
English	19	17.3			
Regional language	8	7.3			
Total	110	100.0	1.32	.605	.366

(Source: collected by Primary Data)

13. Do you think OTT platforms have more diversity in content as compared to cable TV?

Table 13 illustrates which platform offers a wider variety of content options than the others. 68.2 percent of respondents would prefer that the OTT platform provide more content, while

only 10 percent of respondents would prefer cable TV prefer more content. Additionally, 21.8 percent of respondents would like to pick less chance to provide more diversity in content as compared to cable TV.

	Frequency	Percent	Mean	Std. Deviation	Variance
Yes	75	68.2			
No	11	10.0			
May be	24	21.8			
Total	110	100.0	1.54	.831	.691

(Source: Collected from primary data)



14. What is the main reason for using the OTT platform instead of traditional TV?

Table 14 shows that 9.1% of respondents find the OTT platform to be more cost-effective, 15.5% find it to be more convenient,

48.2% find it to have a wider selection of content, 20.9% find it to be more personalized, and 6.4% find some other reason to choose the OTT platform.

Table 14: main reason for using an OTT platform instead of traditional TV

	Frequency	Percent	Mean	Std. Deviation	Variance
More affordable	10	9.1			
More convenient	17	15.5			
More variety of content	53	48.2			
More personalized	23	20.9			
Other	7	6.4			
Total	110	100.0	3.00	.995	.991

(Source: Collected from primary data)

15. Do you prefer an OTT platform while?

As can be seen in Table 15, the overwhelming majority of respondents (83.6%) prefer the OTT platform in their free time,

whereas 10% prefer it while traveling, and 6.4% prefer it for other reasons.

Table 15

	Frequency	Percent
Traveling	11	10
Free time	92	83.6
Other	7	6.4
Total	110	100

(Source: Collected from Primary Data)

16. Do you think OTT platforms are more affordable as compared to traditional media?

Table 16 shows that 49.1% of respondents believe that OTT platforms are less expensive than TV, 18.2% believe that OTT is

more expensive than traditional, and 32.7% do not know whether or not OTT is less expensive than traditional media.

	Frequency	Percent	Mean	Std. Deviation	Variance
Yes	54	49.1			
No	20	18.2			
Can't say	36	32.7			
Total	110	100.0	1.84	.894	.799

(Source: Collected from Primary Data)

17. Which feature is more important when choosing an OTT platform?

Table 17 indicates that 41.8 percent of respondents selected a diverse range of content when choosing an OTT platform, while 26.4 percent of respondents opted for a more affordable

subscription. Additionally, 10 percent of respondents prioritized consumer freedom, while 15.5 percent had access to multiple devices. Lastly, 6.4 percent of respondents cited other reasons for choosing an OTT platform.

Table 17: Features more important when choosing an OTT platform

Particulars	Frequency	Percent
Wide variety of content	46	41.8
Pocket-friendly subscriptions	29	26.4
High consumer freedom	11	10
Accessible to more than one device	17	15.5
Other	7	6.4
Total	110	100

(Source: Collected from Primary Data)



18. Have you ever waited for a movie to be released on OTT rather than watching it in a theater?

Table 18 shows that 54.5 percent of respondent waited for a movie to be released on OTT and 25.5 percent of respondent no waited

for a movie to be released in OTT rather than watching it on theater and 20 percent respondent waited as seldom for a movie to be released on OTT platform.

	Frequency	Percent	Mean	Std. Deviation	Variance
Yes	60	54.5			
No	28	25.5			
May be	22	20.0			
Total	110	100.0	1.65	.795	.632

(Source: Collected from Primary Data)

19. Do you think that an OTT monthly subscription is more expensive than a DTH monthly plan?

Table 19 shows that 43.6 percent of respondents prefer that OTT monthly subscription is more expensive than DTH or 28.2 percent

of respondent prefer that DTH monthly plan is affordable or 28.2 percent of respondent can't say that OTT platform is more expensive than DTH monthly plan.

	Frequency	Percent	Mean	Std. Deviation	Variance
Yes	48	43.6			
No	31	28.2			
Can't say	31	28.2			
Total	110	100.0	1.85	.837	.701

(Source: Collected from Primary Data)

20. Which marketing mix challenges restrict the use of OTT platforms services?

Table 20 indicates that 29.1% of respondents expressed a preference for the challenge posed by the high demand for network and technological advancements. Additionally, 39.1% of respondents encountered the challenge of high subscription rates,

while 11.8% faced the challenge of needing to upgrade their TV to a smart TV and support multiple devices. Another 6.4% of respondents reported facing difficulties related to promotional efforts or lack of awareness. Lastly, 13.6% of respondents cited other reasons for challenges encountered while using the OTT platform.

Table 20: Marketing mix challenges restrict the use of OTT platforms service

	No of respondent	Percent
Product (high requirement of network and technological advancement)	32	29.1
Price (High rate of subscription)	43	39.1
Place (Need to support device / upgrading TV into smart TV)	13	11.8
Promotion (lack of awareness/ promotional effort)	7	6.4
Other	15	13.6
Total	110	100

(Source: Collected from Primary Data)

21. Which challenges you have faced when you using the OTT platform service?

Table 21 indicates that 28.2% of respondents encountered the issue of uncensored content on the OTT platform, while 25.5% of the respondent audience faced problems related to lack of privacy.

Additionally, 10% of respondents experienced poor picture quality on this platform, and 16.4% faced the problem of excessive binge-watching. Furthermore, 37.3% of respondents cited other reasons for their challenges while using the OTT platform.

Table 21: Challenges Faced when you using OTT platform service

	No of respondent	Percent
Uncensored content	31	28.2
Lack of privacy	28	25.5
Poor quality picture	11	10
Binge-watching	18	16.4
Other	41	37.3
Total	110	100

(Source: Collection from Primary Data)



22. What is your opinion regarding imposing a censor board on the OTT platform?

Table 22 indicates that 30.9 percent of respondents support the implementation of a censor board on the OTT platform, while

18.2 percent of respondents believe that no censor board should be imposed. Additionally, 50.9 percent of respondents are open to the possibility of a censor board being implemented on the OTT platform.

Table 22 : Opinion regarding imposing a censor board on the OT

	Frequency	Percent	Mean	Std. Deviation	Variance
Yes	34	30.9			
No	20	18.2			
May be	56	50.9			
Total	110	100.0	2.20	.886	.785

(Source: Collected from Primary Data)

23. What is the overall experience of using the OTT platform?

Table 23 indicates that 46.4 percent of respondents reported a positive overall experience with using OTT. 25.5 percent of respondents reported an average experience, while 15.5 percent

reported a neutral experience. Additionally, 12.7 percent of respondents reported an excellent experience, and no respondents reported a negative experience.

Table 23: Overall experience of using the OTT platform

	Frequency	Percent
Good	51	46.4
Average	28	25.5
Neutral	17	15.5
Excellent	14	12.7
Bad	0	0
Total	110	100

(Source: Collected from Primary Data)

FINDINGS

- The majority of the audience consists of young individuals, ranging in age from 15 to 35 years. The target audience comprises students and private sector employees, while the remaining portion of the audience consists of housewives and other individuals.
- The urban area has the highest number of respondents among the audience. The majority of the audience is from rural and semi-urban areas.
- Most respondents have family incomes that fall within the higher range of 2,00,000-4,00,000 and the lower range of 4,00,000-5,00,000.
- The proportion of females is higher compared to males.
- When we spoke with the audience (respondent) about the platforms they utilize for viewing movies and shows, what were their responses? The audience answer indicates that approximately 25% prefer TV, while approximately 33% prefer OTT platforms.
- The majority of the audience primarily relies on the internet and social media to find new shows and movies. Following that, they tend to rely on word of mouth from friends and other channels of media to discover new material.
- The majority of the public has a preference for watching movies on OTT platforms, followed by web series, while documentaries are less favored.
- The majority of respondents had a preference for the Hindi language when it comes to watching movies and series,

while the remaining respondents favor regional and English languages.

- Most respondents indicated that OTT platforms offer a greater diversity of material compared to cable TV.
- When we surveyed the audience about the obstacles they encountered when using the OTT platform service, the main issues identified were the provision of uncensored content by the OTT platform and the subsequent lack of privacy. Another significant challenge reported was excessive binge-watching.
- The majority of the audience supports the imposition of a censor board on OTT services, while approximately 18% of the audience disagrees.
- The primary obstacle to utilizing OTT platform services is the cost (high membership fees) and the need for advanced network and technological capabilities.
- When surveying respondents about affordability, the majority of the audience expressed a preference for the OTT platform being more cost-effective.
- The bulk of the audience expressed that the monthly recharge for OTT services is pricier when compared to the monthly plan for DTH services.

RECOMMENDATIONS

- The audience should be required to pay a minimum monthly subscription fee for the OTT platform.



- An OTT platform should provide a complimentary trial period and additional exclusive content to encourage users to test it for a certain number of days.
- OTT platforms should consistently upgrade their services and strive to provide offline capabilities.
- The OTT platform should undergo a thorough examination to identify and address any platform-related problems. For example, the programmers may have a system crash or become non-responsive.
- OTT platforms utilize user personal information, including name, address, and bank details, to establish user accounts, thereby ensuring the security of audience data. Hence, the OTT platform plays a vital role in ensuring data security.

CONCLUSION

On the basis of this research, we are able to draw the conclusion that OTT will have significant growth in the future. This is due to the fact that in the past, audiences obtained their entertainment mostly through cable and satellite providers, television networks, and movie theaters. However, due to the rise in popularity of over-the-top (OTT) services such as Netflix, Amazon Prime Video, and Disney+, customers now have a greater number of options available to them as well as greater control over the content and timing of their viewing. One more distinct difference is the growing emphasis placed on providing individualized recommendations. OTT platforms give suggestions for content to users based on the preferences of individual users as well as their viewing habits by utilizing technology and the data of individual users. Users will have a better chance of discovering new episodes or films that correspond to their preferences as a result of this individualized approach, which also contributes to an overall improvement in the viewing experience.

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A MULTIPLE CASE STUDY ON IN-PRISON TREATMENT OF PERSONS DEPRIVED OF LIBERTY IN A PENAL COLONY WITHOUT WALLS

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ABSTRACT

This case study aimed to understand the lived experiences of the Persons Deprived of Liberty of Iwahig Prison and Penal Farm in Puerto Princesa City. The study utilized a qualitative research design using multiple case study approach, with seven Persons Deprived of Liberty chosen through purposive sampling. Coding type of analysis was used as a data analysis tool. Results revealed, that the PDL were experiencing just and humane treatment from the jail officers especially that they were provided meaningful and useful activities and programs. On the challenges and coping mechanisms, they mentioned that challenges are triggered by different factors and their coping mechanisms are varied and it is important for their survival inside the correctional facility. Further, their insights were shared by giving lessons they discovered through individual liberty deprivation. The lived experiences of the PDL are eye opener to the whole community, to support them in order to provide them a social service intervention meant to address the issues and difficulties encountered by the PDL, this support will bring great impact as it will transform the lives of the PDL.

KEYWORDS: *In-prison treatment, Persons deprived of liberty, transformation, case study, Puerto Princesa City, Philippines*

INTRODUCTION

Even the most physically and emotionally healthy individual experiences distress when they are in prison. The most distressing aspect of serving time in Philippine jails, though, is the severe congestion of Persons Deprived of Liberty (PDLs). Thousands of prisoners were vying for a little space in jails, much beyond the capacity of these detention centers (Alipoyo, 2022). Life in jails and penitentiaries is likewise brutalized by overpopulation. Herding people into small quarters is an unsafe, demeaning, and a discriminatory kind of punishment. Overcrowding poses a threat to both human life and health. It spreads illnesses, undermines authority, and heightens conflicts.

This research can contribute to the realization of Item Number 16 (Peace Justice and Strong Institutions) of the Sustainable Development Goals of the United Nations as adapted by the Philippine government. Every country's penal justice system constitutes prisons as a fundamentally important component. By ensuring that accused Persons Deprived of Liberty (PDLs) are held accountable and by penalizing severe malfeasance, it can be used to maintain the peace and order in a society. Hence, when a state takes away someone's freedom, it has a responsibility to make sure that person's dignity is protected. Countries must also guarantee the security and safety of prisons for Persons Deprived of Liberty (PDLs), administrators, guests, and the broader public. These two responsibilities are more complementary rather than in opposition to one another since security is best provided in a well-organized system that treats Persons Deprived of Liberty (PDLs)

fairly and humanely. At their finest, correctional facilities should still be able to provide Persons Deprived of Liberty (PDLs) with a humane environment and possibilities for support and rehabilitation. At its worst, however, jails can be places of horrifying torment, breeding grounds for illness, or ineffective holding facilities from which Persons Deprived of Liberty (PDLs) are poorly prepared to live law-abiding lives once they are released.

There are seven (7) penal facilities in the Philippines, one was located in the province of Palawan the Iwahig Prison and Penal farm. The Bureau of Corrections supervises and manages Prison and Penal Farms where rehabilitation programs like livelihood projects, educational and vocational courses, recreational and athletic events, and religious/spiritual activities are organized. These programs are designed to provide Persons Deprived of Liberty (PDLs) resources that will assist in their successful reintegration into society after release. Therefore, understanding the human being completely is fundamental to how Persons Deprived of Liberty (PDLs) should be treated in prison. Particularly, one must recognize the concept of human dignity, which is inalienable and ought to be honored in every individual. This implies that criminals get the same respect as people with clean records, regardless of the crime they committed.

Since detention has been used as a punishment for crime, significant advancements have been made to improve prison conditions. The development of criminal justice reform in



national legal systems is driven mostly by concerns about how PDLs are treated. There are several philosophical foundations that guide how Persons Deprived of Liberty (PDLs) are treated in prisons and other detention facilities around the world. Within the context of correctional management, four principles or philosophies of punishment are highly suggested. These include retribution, deterrence, incapacitation, and treatment (Gul, 2018).

While incapacitation and retribution are more concerned with the crime committed, treatment and deterrence are more focused on the offender. Retribution principles are widely criticized because most nations follow a predetermined penalty, which often results in a number of critical elements not being adequately taken into account (Lewis 2022; Apel and Diller, 2017). Deterrence frequently contradicts retribution because it views punishment as a security risk intended to stop criminal behavior in the future.

Incapacitation, like deterrence, aims to stop offenders from committing a crime in the future, but is typically done by physical methods. For instance, chopping off a robber's hand, which not only renders the culprit helpless but also discourages others from doing the same crime (Lewis 2022; Apel and Diller, 2017). Rehabilitation, in contrary to the first three principles, aims to reintegrate Persons Deprived of Liberty (PDLs) into productive lives. Its objective is to reduce criminal recidivism and prevent repetitive offenses (Lewis 2022; Apel and Diller, 2017).

Also, historical records reveal that Persons Deprived of Liberty (PDLs) were subjected to severe punishment and pitiful situations, including being left naked and chained. In the past, physical abuse was also a common occurrence. Persons Deprived of Liberty (PDLs) with mental illnesses were also housed in the general community without access to therapy (Rubin, 2019). However, a series of protests and mass demonstrations resulted in the adoption of the United Nations Standard Minimum Rules for the Treatment of Prisoners in 1955, which improved the conditions for Persons Deprived of Liberty (PDLs) and in correctional facilities (Rubin, 2019; UNODC, 1955).

Almost everybody agrees that the prime purpose of detention, whether it be in jails, juvenile detention centers, or other types of prison systems, is rehabilitation. Persons Deprived of Liberty (PDLs) are a complex, high-risk population (Day, 2020). Additionally, many prisoners are already in crisis as a result of their imprisonment. They deal with a variety of issues while they are detained and after they are released, including the stigma attached to having a criminal record, a lack access to social services such as housing, work opportunities, and access to education, as well as strained relationships with their families and other social welfare systems (Arbour et al., 2021).

Numerous studies have documented the lived experiences of Persons Deprived of Liberty (PDLs) as well as the policies and initiatives that have been established in order promote their well-being. The specific conditions of Persons Deprived of Liberty (PDLs)' infrastructure, services, health, and other opportunities

have, however, received relatively insufficient investigation (Kahambing, 2021).

It is therefore necessary for policymakers and other relevant stakeholders understand how in-prison treatment can be successfully conducted inside a correctional system. The Iwahig Prison and Penal Farm will be the central focus of this dissertation's analysis of how Persons Deprived of Liberty (PDLs) receive treatment while they are being detained and the factors that influence that treatment. This dissertation emphasizes the importance of the developing specific policy interventions, strategies, and programs that take into account the myriad needs of PDLs and elevate inmate rehabilitation to the social position of a criminal justice priority rather than an adjuvant to the country's conventional justice system.

Numerous studies have repeatedly focused on the intricacy of how Persons Deprived of Liberty (PDLs) are treated in prison. Years of research have gone into figuring out the fundamentals of efficient inmate intervention programs. According to several theories and studies, prison time is a useful and essential strategy for ensuring safety in societies.

Despite the fact that theories of punishment and social defense provide useful solutions to the growing concern of reinforcing public order among countries, these theories lack the objectivity required for prioritizing initiatives and lack confidence in the efficacy of a number of these desired outcomes, making it difficult for correctional facilities to implement relevant programs, influenced by the fact that these principles are antithetical (Jouet, 2021).

Therefore, compared to how Persons Deprived of Liberty (PDLs) are treated within prison in the earlier times, several theorists of criminal justice suggest that rehabilitation is a much preferable course of action. A better prison atmosphere and the inclusion of positive external influences can aid in the reformation of the criminals' existing subcultural values. This demonstrates that restorative community-based and treatment-focused services within the penitentiary system may be the ideal method for reducing crime rates in societies (Bazemore, 1998). Morris's (2000) transformational justice theory, addressing the economic and social inequalities that lead to crime is fundamental to improving the overall quality of life for victims, Persons Deprived of Liberty (PDLs), and the society as a whole.

However, this idea promotes the deinstitutionalization of criminal justice by granting people and communities more authority. It presents the argument that all forms of violence, including those permitted by the government, need to end (Morris, 2000). Furthermore, advocates of this theory argue that all forms of state punishment and retribution should be discontinued, including the death penalty, torture, and the establishment of jails. Proponents of the transformative justice theory also advocate for social and



governmental initiatives based on responsibility, forgiveness, inclusivity, and reconciliation (AVP, 2005; Morris, 2000).

The risk-need-responsivity (RNR) model, which was first created by Bonta and Andrews (1990), is now universally accepted as the best model for determining how to rehabilitate Persons Deprived of Liberty (PDLs). It asserts that an inmate's risk and needs should be adequately taken into account in designing interventions to manage his delinquent behavior, both before and after release (Jouet, 2021). The RNR model also describes the fundamental ideas of risk, needs, and responsivity to establish effective programs and interventions for inmate populations with the primary objective of rehabilitation and eventually, reintegration into society. The three significant aspects of the RNR paradigm are risk, need, and responsivity. The presence and probability of harmful circumstances are referred to as risks. Its two main components are the existence of potentially dangerous agents and the likelihood that the threats caused by these elements would materialize (Bonta, 1997; Bonta & Andrews, 2007).

The premise of risk is founded on values, and risk analysis is based on people's perceptions of the potential harm from an event and its probability of occurring. Consequently, determining a person's potential for harming himself or others is a component in the risk assessment process used in criminal justice. The assumption that the risk factors are separate and individualized is one that the RNR's proponents focus on (Ward & Durrant, 2021).

Therefore, the risk variables increase the probability that someone may act antagonistically or cause serious harm. Risk factors can be divided into four categories: dispositional, historical, contextual, and clinical (Ward & Durrant, 2021). Dispositional factors include cognitive qualities, antisocial or psychopathic personality behaviors, and demographic information. A negative psychiatric history, a criminal history, a history of sickness, and poor treatment compliance are examples of historical variables. Recidivism (risk factors for criminal activity), atypical social interactions, and an absence of supportive social networks are context-dependent variables. History of psychotherapy and medical records are examples of clinical factors (Herzog-Evans, 2017).

Risk and need are interrelated concepts. According to the RNR model, people whose needs are not addressed may pose a danger of harm. As a result, an unmet need can cause some harm (Bonta, 1997; Bonta & Andrews, 2007). In his hierarchy of needs, Maslow (1943) identified the following as the needs of an individual that must be met or satisfied: physiological needs, safety needs, social needs, and esteem needs. According to Maslow, satisfying all of these deficient needs is necessary for continuous growth and development, and doing so has a significant influence on how people behave (Maslow, 1970). After these inadequate requirements are met, humans can pursue higher-level "being needs" like self-actualization, in accordance with Maslow's theory. The aspects of psychological fulfillment

and well-being are included in human needs, and individuals can only grow if these needs are met (Maslow, 1968).

Although few of these weaknesses are linked to criminal behavior, the RNR model's proponents assert that these needs can be characterized as personal deficits (Hilton & Radatz, 2017). Criminally and non-criminally motivated needs are both referred to as needs. Criminogenic needs are pro-offending individual factors like impulsivity, lack of problem-solving capabilities, substance abuse issues, extreme animosity, and criminal affiliations. These are contrasted with non-criminogenic requirements, which refer to the characteristics of an individual or their environment that, if modified, may not directly affect recidivism rates, according to the RNR model (Hilton & Radatz, 2017; Viglione, 2018).

The process in which an offender responds to social interactions is referred to as "responsivity." This is influenced by the individual's willingness to engage in prison rehabilitation programs and commit to change. According to the responsivity principle, inmate activities should be adapted to their learning preferences, levels of motivation, and personal needs. As a result, the range of programs available to Persons Deprived of Liberty (PDLs) must be able to effect the desired changes that are in accordance with the inmate's preferred methods of learning (Bonta, 1997; Bonta & Andrews, 2007).

Although the RNR model is frequently used as the benchmark for assessing Persons Deprived of Liberty (PDLs) and determining how they should be treated, several researchers and professionals in the field of criminal justice contend that it lacks conceptual depth and theoretical underpinning (Ramezani et al., 2022). However, the model's proponents disputed this, asserting that it is based on three (3) theoretical frameworks: Psychology of Criminal Conduct perspective (Andrews, 1980), General Personality and Social Psychological Perspective on Criminal Conduct (Andrews & Bonta, 2010), and Personal Interpersonal Community-Reinforcement Perspective (Gillis, 2005).

The first stage or aspect of the RNR rehabilitation model consists of several basic considerations. First, reducing the harm that offenders cause to society and to the general public is the prime objective of rehabilitation programs for Persons Deprived of Liberty (PDLs) (Bonta, 1997; Bonta & Andrews, 2007). Second, there can be variations in each individual's inclination to commit crimes. Criminal behavior is influenced by a diverse range of factors, including contextual, psychological, social, cultural, cognitive, and physical factors (Taxman et al., 2018). Third, it is believed that the risk level varies with the degree of criminogenic needs as well as the strength or complexity of each. Fourth, the most important treatment priorities are those characteristics that research suggests may be associated with lower recidivism rates (Andrews et al., 2011).



The primary issue is that it is equally important to make the maximum use of the limited resources at hand to regulate criminality, which includes minimizing the situations that academic data has shown to trigger offenders (Tafra et al., 2019). A risk-management rehabilitation approach prioritizes lowering the probability that people will act in ways that are detrimental to the society. Fifth, it is claimed that identifying risk factors and/or criminogenic needs is an empirical method necessary in the process (Herzog-Evans, 2017). Sixth, individuals should be treated with respect while in detention centers that uphold moral principles. Due to attributes like responsibility and motivation, as well as respect to fundamental human rights, Persons Deprived of Liberty (PDLs) should be seen as sentient persons with the ability to commit crimes (Wormith & Zidenberg, 2018; Dyck et al., 2018).

As to the standard penal discipline, Persons Deprived of Liberty (PDLs) should be fitted with programs based on assessments of their vulnerability, needs, and responsiveness. RNR embodies the who, what, and how of inmate intervention strategies. In terms of risk assessment, the RNR model has a demonstrated track record of directing realistically relevant risk instruments by leveraging on empirical knowledge of the variables linked to possible crime and scientific data of the trends that motivate decreases in recidivism after programs.

The greatest of aspirations and the most egregious of injustices can both be found throughout the existence of imprisonment. Cargo enslavement, deportation, jails, penitentiaries, and correctional institutions are a few examples of penal structures and mechanisms that were developed in part to relieve urban streets of the undesirables—both impoverished and criminal—or at the slightest to manage and control them. Therefore, to prevent the adoption of more violent or aggressive responses to such people, jails and community correctional programs were also established.

A number of significant principles that apply to prisoners are outlined in the Universal Declaration of Human Rights (UDHR). The rights to life, liberty, and personal security (Article 3), as well as the prohibition against torture and other degrading or inhumane methods of punishment (Article 5) are among them (United Nations, 2015b). Consequently, the Nelson Mandela Rules, also known as the UN's Standard Minimum Rules for the Treatment of Prisoners (SMRs), are widely regarded as the mandatory requirement for the treatment of PDLs and serve as a framework for what are generally considered as sound practices and standards in the management of jail institutions (United Nations, 2015a).

However, a substantial percentage of correctional institutions worldwide are going through a period of upheaval, which has substantial negative repercussions on Persons Deprived of Liberty (PDLs), their relatives, and society (Abbott et al., 2018). Meanwhile, the situation in many prison frequently falls short of

international regulations and even threatens to undermine the main goal of a jail sentence: the defense of community against crime. Instead, there are numerous challenges that affect prison around the world. Overpopulation is a result of the world's correctional systems' ongoing growth in incarceration rates (United Nations Office on Drugs and Crime, 2017). It indicates that there are more Persons Deprived of Liberty (PDLs) than the facility can accommodate legally.

Since more individuals are being sent to prison and for prolonged terms of imprisonment than the prisons can accommodate, there is overcrowding. Either exploitation of incarceration or inadequate prison facilities are the immediate causes of overcrowding. As a result, it leads to poor and inhumane conditions that spill over into other organizational and societal problems (United Nations Office on Drugs and Crime, 2017). Prison overcrowding, notwithstanding geographical differences, has become a serious global issue and is a significant barrier to the application of the Standard Minimum Rules for the Treatment of Prisoners. As a result of this, prisons have the potential of becoming unsafe environments for Persons Deprived of Liberty (PDLs) and prison officials, as well as "crime schools" and attractive settings for radicalization, when penal systems are overburdened and poorly maintained (United Nations Office on Drugs and Crime, 2017).

The prevalence of infectious and chronic diseases, psychological problems, drug and alcohol abuse, brutality, self-harm, and death is exacerbated in overcrowded jails (Jacobson et al., 2017). Thus, the maintenance of prisoner wellness and the provision of a safe environment are challenging and common concerns caused by overcrowded prison all over the globe. Prisons that are overcrowded might have unsanitary, violent surroundings that are detrimental for

Persons Deprived of Liberty (PDLs)' physical and psychological well-being (United Nations Office on Drugs and Crime, 2017).

In addition to this, the degree of overcrowding among prison is still very severe. More than 10.35 million people are detained in prisons and jails around the world, primarily as pre-trial Persons Deprived of Liberty (PDLs), detention prisoners, or convicted criminals (MacDonald, 2018). With 27 countries running at 150% to 200% capacity, overcrowding in prisons remains one of the most significant challenges in 2018. (Baggio et al., 2020).

In response to these concerns, building more prisons or implementing policy reforms like amnesties and early release programs to lower the number of convicts are the basically two approaches to debates about the detrimental effects of prison overcrowding. However, none of these solutions are effective in permanently lowering the number of PDLs (MacDonald, 2018). A crucial step in effectively combating the issues and worries for the welfare of Persons Deprived of Liberty (PDLs) and staff brought on by being incarcerated and working in overcrowded prison is the prevention of congestion. These preventative actions



may include offering treatment for drug addiction programs, as well as enhancing educational and occupational opportunities (United Nations Office on Drugs and Crime, 2017).

The recommendations made by the UNODC in 2013 to lessen overcrowded prisons are largely similar and request for criminal justice system enhancements to achieve higher performance, create fair and equitable sentencing guidelines, and advance through-care initiatives to boost social reintegration and minimize the "revolving door" effect (European Parliament, 2017).

Two out of every five jails in England and Wales are unsafe, and two out of three prisons have subpar facilities, according to an assessment of prison inspection reports for 118 institutions the said regions (Savage & Townsend, 2018). Between 2013 and 2018, there was an average 175.4% congestion and a 73.2% turnover rate in the Swiss pre-trial prison. This indicated that the jail was overcrowded since there were more Persons Deprived of Liberty (PDLs) than the facilities that could accommodate (Baggio et al., 2020). In the same study, Baggio et al. (2020) observed that turnover and overcrowding both had a significant statistical impact on prison violence ($b = 0.001$, $p .001$). Higher incidence rates of violence were linked to increased congestion and turnover.

Prison violence increased by 0.1 percentage points for every one point rise in prison overpopulation (on a scale of 100%) was observed by Baggio et al. (2020). This latest research emphasizes that institutional jail conditions may have significant negative consequences on incarceration and reintegration (Baggio et al., 2020). Additionally, for especially vulnerable individuals living in confinement (such as those in poor health or with serious psychiatric conditions, and elder people), these negative impacts may be even more severe (Glazener & Nakamura, 2018).

The criminal justice system has reduced personnel and resources for prisons over the last three decades. Due to this, the prison system is now overburdened and unable to maintain the safety and decency norms demanded by international laws and regulations (MacDonald, 2018). Prison expenditures extend beyond the cost of the facilities and equipment. The institution that surrounds each individual, as well as the expenses of incarceration on their family members and children, have both social and psychological effects.

Additionally, although the "business" of prisons may assist the communities where they are situated, they are not always a desirable or appealing presence in neighborhoods (Gluckman, 2018). It is essential to consider about whether these incredibly high costs are effective in terms of improving victims' recovery, maintaining community safety, lowering crime and recidivism, and removing people from the "prison pipeline" (Jacobson et al., 2017). Programs for early intervention are unquestionably more cost-effective due to the high costs of criminality. Therefore, early preventive programs have been successful in significantly

lowering long-term criminal justice spending. Early preventative investment is more economical than incarceration. The most cost-effective programs are those that target the individuals at the greatest risk, especially when they start earlier in the life cycle (Gluckman, 2018).

Evidence from other nations that have been successful in reducing their prison overcrowding, the criminal justice system should focus less on punishment but rather on rehabilitative treatment and reintegration. This should be done by increasing the alternatives for rehabilitation programs, such as intensive community supervision (Van Camp, 2017). The body of evidence needed for treatments inside and outside of the correctional system will often be produced through in-depth analyses of global criminal justice systems and an examination of pertinent policies and laws (Visher et al., 2017). In order for criminal justice reform to be successful and long-lasting, efforts should not be restricted to prison management and correctional institutions (United Nations Office on Drugs and Crime, 2017). Additional participation and recommendations from lawmakers, administrators, and criminal justice professionals from the authorities, prosecution, legal aid organizations, judges, and court systems may also be included.

On the other side, Southeast Asian prisons are typically extremely congested with Persons Deprived of Liberty (PDLs) who must work, eat, and sleep in severely confined spaces. Prisons in Myanmar are notoriously out-of-date, overcrowded, and incapable of providing enough space and privacy (World Prison Brief, 2018; Human Rights Watch, 2020). With an occupancy rate of more than 400%, the Philippines currently has one of the most overcrowded jail systems in the world (Statista, 2021). Although challenging, reducing jail overpopulation ought to be a top priority. One of the most difficult issues facing Asian criminal justice systems, particularly in the Southeast Asian region, is the dramatic increase of the inmate population (Jefferson & Jeffries, 2022).

Southeast Asia's growing prison population is caused by a variety of factors that differ from each country. The size of those population densities is influenced by a variety of factors including social and economic policies, the presence or absence of social community resources and healthcare insurance services available in the community, crime prevention programs, the evolution of the criminal justice system, societal perceptions of violence, and the role of incarceration in combating crime (Jefferson & Jeffries, 2022). Other elements, such as a disproportionate use of prisons, mismanagement, punitive social programs, and rising income disparity, can also significantly affect the number of people imprisoned (United Nations Office on Drugs and Crime, 2017).

The effectiveness of the correctional facilities to provide convicts' basic healthcare, nutritional, and housing needs in addition to providing rehabilitation programs, education, training, and recreational opportunities is compromised by overcrowding in



prisons, which also jeopardizes the welfare of prison staff and the general population (Jefferson & Jeffries, 2022).

In addition to making it difficult for correctional facilities to efficiently manage their resources, attend to Persons Deprived of Liberty (PDLs)' demands for reintegration into society, and make sure that their rehabilitation complies with UN standards and guidelines, overcrowding can also put corrections officers in danger on the job. Additionally, it might prevent a reliable survey and efficient prisoner categorization (Jacobson et al., 2017). Persons Deprived of Liberty (PDLs) who have limited access to rehabilitation programs are more likely to commit crimes again after being released. The inability of Persons Deprived of Liberty (PDLs) to reintegrate into the societal structure has a significant cost, both monetarily and in terms of public security (Day, 2020).

On the other hand, correctional facilities in Southeast Asia are also cautious about Persons Deprived of Liberty (PDLs) becoming radicalized. To prohibit radicalization and the establishment and integration of terrorist groups inside facilities, the Indonesian government created the administration of high-risk prisons for terrorists in 2017. (Maulana et al., 2022). Another issue is that former prisoners who rejoin terrorist groups or networks as a result of poor intervention methods (Sumpter et al., 2019). Additionally, with a prison overcrowding proportion of 188%, the current state of affairs puts Indonesia in a vulnerable situation. This leads to a number of concerns, including inmate escapes, violence, organized narcotics trafficking inside jails, inmate-started prison fires, illegal payments made by prison guards, and other problems. These issues are brought on by a number of things, including the failure of correctional officers to follow prison guidelines correctly, a scarcity of resources and infrastructure, and an inefficient jail system (Utami Larasati et al., 2022).

Another major issue with Indonesia's penal system is the fact that there are less institutions and training courses accessible for female Persons Deprived of Liberty (PDLs) than for male Persons Deprived of Liberty (PDLs) in the same regions (Institute for Policy Analysis of Conflict, 2020). The majority of these female Persons Deprived of Liberty (PDLs) continue to reside in facilities that also house men. As a result, only sections or cell blocks separate the majority of Indonesia's female convicts from their male counterparts in detention facilities and correctional facilities (Wiryanan, 2019).

The same issues that affect its neighboring countries also plague Thailand's prison systems. The most urgent problem in Thai jails is still overpopulation and congestion. Thailand has the unfortunate reputation of having the most inmate population and the highest incarceration rate among the Association of Southeast Asian Nations (ASEAN) member nations. The country's inmate population has continuously expanded over the years (Jeffries et al., 2018). These correctional facilities are operating with an

incarcerated population that is more than double the original capacity, with an occupancy level of 224%, according to the most recent official statistics, which constitute 91% of the total inmate population in the country (Bing & Albano, 2017).

On the other hand, Thai jails are still plagued by inadequate access to healthcare and other basic medical services, an insufficient supply of food and water, and poor sanitation facilities. Pregnant women are also in more need of medical treatment and special facilities to address their concerns (Chokprajakchat & Techagaisiyavanit, 2019). Persons Deprived of Liberty (PDLs) are frequently exposed to abusive treatment inside the facilities, which include unfavorable workplace environment and inadequate compensation. International conventions are breached by jail punishments, which can occasionally constitute torture and other forms of maltreatment (Jeffries et al., 2018).

On the other hand, it has been noted that the preponderance of the population in Singapore complies with the law. With multiple societal changes, including the adoption of new technology in the supervision of convicts and programs designed to prepare them for their reintegration into society, correctional facilities in Singapore have made significant progress over the past 20 years (Keung, 2017).

The Risk-Needs-and-Responsivity (RNR) Model, a widely used framework for the assessment and rehabilitation of delinquents, serves as the foundation for Singapore's strategy (Keung, 2017). Persons Deprived of Liberty (PDLs) are evaluated upon admittance to identify their needs for rehabilitation and likelihood of committing crimes. Appropriate programs are planned for intervention based on their assessed risks and needs. The programs include family services, skill-building courses, and religious activities. Penitentiary programs based on psychological principles are also included. Persons Deprived of Liberty (PDLs) will also participate in various programs before their release that will get them equipped for community reintegration and development (Wormith & Truswell, 2022).

Singapore conducts regular program assessments and evaluations to make sure its approaches to rehabilitation is still appropriate and effective. Assessment studies showed that a particular category of offenders who underwent comprehensive rehabilitation programs had lower two-year rates of recidivism than those who did not. Moreover, these prisoners shown improvements in psychological and social functioning, a decline in criminal behaviors, a reduction in belief systems that supported substance abuse, and a higher likelihood of successfully reintegrating into society (Singapore Prison Service, 2022).

The Philippine setting is no different from other Asian correctional systems. The world's overcrowded penitentiary system is situated in the Philippines. The correctional facilities and penal institutions run by the Bureau of Corrections (BuCor)



have an average overcrowding rate of about 500% compared to the correctional facilities run by the National Police, the jail facilities supervised by the Bureau of Jail Management and Penology and the provincial governments, and the detention facilities (Jones & Narag, 2019). Therefore, Persons Deprived of Liberty (PDLs) are compelled to compete for access to the most basic necessities, using bribery and other legal loopholes as a last option.

The percentage of women in correctional facility in the Philippines ranges from 2 to 9 percent. However, the number of women imprisoned is rising more quickly than the number of men (Alvarez, 2018). Due to the geographical location of women's prisons, women may experience fewer face-to-face interactions with their family members, mental health problems resulting from previous abuse and trauma, exposure to sexual violence by staff and other Persons Deprived of Liberty (PDLs), needs for reproductive health care, and the situations of having to separate from their children despite being their primary caregivers of you (Nieva, 2021).

Additionally, the Persons Deprived of Liberty (PDLs)' grievances about their health are also increasing as a consequence of overcrowding in correctional facilities. Since the Philippines "has the highest jail occupancy in the world," it is extremely difficult and possibly psychologically risky to evaluate this issue (Nieva, 2021). The HIV prevalence in the Philippines is already among the fastest-growing around the world, and the prevalence of HIV among Persons Deprived of Liberty (PDLs) has been expanding across all penal institutions (Yarcia, 2018).

The rising HIV/AIDS outbreak in prisons has recently brought unprotected sexual intercourse between Persons Deprived of Liberty (PDLs) to light. Unprotected same-sex activities among prison Persons Deprived of Liberty (PDLs) along the complex spectrum from sexual activities to sexual assault have been commonly observed across regions of the world, despite varying incidence (Center for Gender Equality and Women's Rights, 2022). The following important issues, however, are not addressed in any explicit policies: the mitigation of rape and sexual assault; drug addiction rehabilitation, including opioid substitution medication and counseling services; and the prevention of HIV transmission through dental and medical treatment methods; prevention of HIV transmission from mother to child; treatment of sexually transmitted diseases; vaccination and treatment against viral hepatitis; in addition to tuberculosis prevention, diagnosis, and treatment (Yarcia & Bernadas, 2021)

Meanwhile, prison gangs are a common sight in Philippine correctional facilities. To protect themselves and to guarantee their survival, PDLs join pangkats or prison gangs. However, those who choose to stay unattached do so because they have a negative opinion of the pangkat, have access access to adequate social protection, and want to preserve their pre-prison identity (Lee & Narag, 2018). For the majority of prisoners, forming

gangs is the realistic way to avoid exploitative Persons Deprived of Liberty (PDLs) and violent prison staff. The gang leaders themselves, however, may abuse Persons Deprived of Liberty (PDLs) once they are inside the groups (Narag & Lee, 2017).

Persons Deprived of Liberty (PDLs) are explicitly forbidden by the existing jail management systems from participating in prison administration or governance. In wealthy nations where the government can offer sufficient resources, infrastructure, and staff, this is possible. However, in emerging economies like the Philippines, where incarceration facilities are underfunded and marked by widespread poverty and corruption, it is not applicable (Lee & Narag, 2018). In these situations, inmate leaders frequently work collaboratively with prison officers on prison governance.

Despite advancements, there are still certain problems with classification scheme for detention facilities in the Philippines. Particularly, decisions that govern accommodation, program, and work assignments at the organizational or internal department must be as well-organized and disciplined as those established at the broader system or external level (Alipoyo, 2022). Internal categorization decisions become more important when prison systems are more overcrowded. Making decisions on accommodation and other related services, particularly for prisoners serving extremely long prison terms, will become more challenging as the prison population increases (Alipoyo, 2022).

There is mounting evidence that, in some situations, imprisonment can benefit Persons Deprived of Liberty (PDLs) in reintegrating into society. However, it is still completely unknown how jail might result in successful recovery (Abbott et al., 2018). Although there is compelling evidence in this emerging literature that favorable jail circumstances may lower recidivism, it is still questionable which specific characteristics are actually beneficial. Rehabilitation initiatives that emphasize education, improving professional skills, or providing specific psychosocial counseling are frequently put out as potential explanations for these findings (Arbour et al., 2021).

Despite inconsistent results across various analyses, some studies have demonstrated the value of instructional, restorative, occupational, and work programs in prison facilities, as evidenced by higher post-release workforce participation, increased employability, improved decision-making skills, better cognitive performance, pro-social reasoning, and lower rates of recidivism (Edwards, 2021). According to research, there are three aspects of criminal justice settings that characterize the potential for rehabilitation of jail systems: (a) demonstrated inmate security; (b) support given by community corrections staff and Persons Deprived of Liberty (PDLs); and (c) the inmate's perception of the environment as supportive of therapeutic intervention (Day, 2020).



Therefore, from the perspective of the PDLs, a constructive prison environment is one that is encouraging, secure, and upholds possibilities for Persons Deprived of Liberty (PDLs)' individual development (Edwards, 2021). Consequently, the degree to which Persons Deprived of Liberty (PDLs) feel safe has the capability to have a significant influence on the outcomes of rehabilitation services and programs.

Since offenders violate the law for a broad range of reasons, there are many distinctive kinds or qualities of recidivists. Assessment and treatment programs can help some individuals, particularly those who commit criminal acts as a result coming from external influences such financial hardships, social conditioning, ignorance, etc (Arbour et al., 2021). Appropriate therapeutic interventions and rehabilitation services should be used with the relevant categories of Persons Deprived of Liberty (PDLs) in order to address the specific requirements of each individual. Typically, therapy initiatives performed in some countries are considered as initiatives enhancing offenders' socioeconomic capabilities, such as employment in jail, vocational training, and education (Arbour et al., 2021).

Each and every human being has the basic right to health free from any type of discrimination. It is the duty of the governments to ensure its citizens, including those who are detained, equitable access to healthcare and medical assistance and services (Chuenurah et al., 2021). Persons Deprived of Liberty (PDLs) may develop a variety of illnesses, addictions, or other health problems due to their restricted access to high-quality healthcare and medical treatments, poor diet, potential substance abuse, and susceptibility to contagious diseases. Moreover, overcrowding in prison environments can result in inadequate medical treatment, a lack of manpower, poor personal hygiene practices, and unclean environments, all of which could worsen Persons Deprived of Liberty (PDLs)' health (Yarcia & Bernadas, 2021).

Persons Deprived of Liberty (PDLs), especially those who were previously unable to access community health care facilities, may benefit from improved health care as a result of their confinement. Several of them may have their first experience for a thorough medical evaluation during the prison medical assessment, which includes the identification, prognosis, and treatment of psychological and/or physical health problems (Pont & Harding, 2019). There is a strong need to manage the complicated medical requirements of correctional facilities since diminishing healthcare disparities is a fundamental tenet of worldwide public health policy (Stürup-Toft et al., 2018). The concurrent and interrelated purposes of ensuring equitable care and promoting health are thus obligatory for a correctional facility, which provides a chance to enhance the health of marginalized populations (Macleod et al., 2020).

When compared to regular Persons Deprived of Liberty (PDLs), sexual harassment among sexual and gender minority convicts in jails and correctional facilities occurs at incredibly high rates

(Donohue et al., 2021). The prejudice, exclusion, and violence LGBT individuals encounter in society at large are frequently reflected and exacerbated in the correctional facility. Males who identify as gay or homosexual are 11 times more likely than heterosexual men to report being sexually molested by an inmate, while males who identify as bisexual are 10 times more likely. Lesbian and bisexual Persons Deprived of Liberty (PDLs) reported increased rates of sexual abuse by prison staff, while bisexual Persons Deprived of Liberty (PDLs) are more likely to report sexual abuse by another inmate than heterosexual or lesbian Persons Deprived of Liberty (PDLs) (The Fenway Institute, 2018). Prisoners who identify as transgender are especially at risk. According to New York inmate statements, the environment for transgender, gender nonconforming, and intersex Persons Deprived of Liberty (PDLs) is particularly dangerous due to verbal harassment, physical violence, molestation, and coercion (Brown & Jenness, 2020).

Additionally, a disproportionate number of Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) individuals reside in prisons. When it comes to regulations, standards, and compliance, the prison environment is rigorous, constrictive, heterosexist, and overly macho for the LGBTQ+ people there (Donohue et al., 2021). Many of the medical requirements of LGBTQ+ persons are unrecognized and unfulfilled while they are imprisoned, which may have a catastrophic impact on their health and well-being (Brown & Jenness, 2020). Although there are encouraging initiatives to enhance the prison environment, there are still both personal and institutional impediments that make it difficult to be LGBTQ+ in jail (Brown & Jenness, 2020).

On the other hand, Persons Deprived of Liberty (PDLs) frequently feel unprepared for release and reintegration. They find it difficult to reintegrate back into society. The obstacles of daily existence outside of prison are difficult to navigate with since there is inadequate human and social resources available and accessible to them (Andvig et al., 2020). Persons Deprived of Liberty (PDLs) claimed that they were treated with humanity in the prison's social landscape, which was a significant positive factor, however, they are faced with difficulties upon release (Arbour et al., 2021). Mutual respect and trust between prisoners and prison staff appeared to increase their sense of fairness and equality. The social environment served as a learning opportunity for establishing independence and individuality. Prisoners pick up teamwork, social skills, and social capital (Andvig et al., 2020).

The majority of offenders struggle with social reintegration challenges that can include stigmatization and exclusion from their families and communities. This makes it difficult for them to find employment or residence, go back to school, or develop and restore their personal and social capital. Without support to address these concerns, they run the danger of succumbing to a cycle of ineffective social integration, committing crimes, recidivism, and social ostracization. The successful social rehabilitation and reintegration of Persons Deprived of Liberty



(PDLs) into society and their recovery should consequently be among the fundamental objectives of criminal justice systems.

To provide a clearer understanding of the contents of this paper, an operational definition of the terms used in this study is presented: Case Study is defined as the detailed and investigative analysis of the lived experiences of the individuals involved in the conduct of a research study. It provides a framework on how complex issues are evaluated and analyzed. It aims to generate a multi-faceted evaluation of complex issues among societies or across various situations; In-Prison refers to the type of confinement found in jails, where individuals are detained. It also refers to institutions where persons are confined as a form of punishment by a judicial authority while they await their trial or are sentenced to conviction. These institutions are usually operated by the state; Persons Deprived of Liberty refers to individuals who are confined in an institution or facility and detained in custody.

In this research study, this term refer to individuals who are jailed in lawful custody while undergoing trial or awaiting a lawful sentence; and lastly, Treatment is used in this study to refer to the practices, initiatives, and strategies used by jails to meet Persons Deprived of Liberty (PDLs)' basic needs and provide services that protect their inherent dignity as humans. This phase is considered essential in the reintegration of Persons Deprived of Liberty (PDLs) to societies in the purpose of developing to become responsible citizens.

The treatment of prisoners in Western countries' correctional facilities has been the focus of numerous research studies. However, limited studies were published on the assessment of current jail situation trends in Asia, particularly among developing countries like the Philippines. A practical approach to reduce inequalities among prisons and optimize the management of correctional facilities in the Philippines is strongly recommended in the struggle to improve living conditions in these infrastructures. The research will focus on certain sub-themes on how Persons Deprived of Liberty (PDLs) are cared for through the Persons Deprived of Liberty (PDLs) Welfare and Development Programs, including livelihood programs, educational development, health care services, recreation, and spiritual activities. As a result, the results of this study can contribute in the formulation of relevant policy suggestions for the Prison and Penal Farm Persons Deprived of Liberty (PDLs) Welfare and Development Program. Furthermore, a better understanding of society will be established through the analysis of the perspectives presented in this study, thereby paving the way for human development programs for PDLs.

This study investigated the lived experiences of selected Persons Deprived of Liberty (PDLs) in Iwahig Prison and Penal Farm using a qualitative- descriptive research design. The procedures for data collection approach are the most appropriate for the study since it explicitly analyzes how prison Persons Deprived of

Liberty (PDLs) are treated inside of correctional facilities, how their grievances are addressed by the authorities, and what needs they have that should be met by the management.

Further, the research study is guided by the following research questions: How are PDLs treated at Iwahig Prison and Penal Farm?; How do PDLs cope with the challenges they have encountered in the correctional facility?; and What insights can they share to other PDLs and to the community as well?

Prison can be environments where violence proliferates, or they can be channels for reform. Prison sentence is the standard sentences for crimes, but part of the rehabilitation process requires finding a delicate balance between enforcing punishment and effectively addressing the reasons of criminal conduct.

Research on global incarceration rates has previously been reported in a large number of studies. Studies have been carried out on a global scale to identify and assess the existence of several jail types internationally as well as the social environments that these institutions provide for Persons Deprived of Liberty (PDLs). Limited research, however, has concentrated on the circumstances of Persons Deprived of Liberty (PDLs)' daily everyday lives and their personal experiences. The results of this study will fill a gap in the studies on correctional facilities in Asia, especially among developing nations.

This study aims to investigate the experiences and perspectives of prison Persons Deprived of Liberty (PDLs) on their treatment in Iwahig Prison and penal Farm. The findings are aimed at providing national government officials necessary data they can use to allocate resources for strengthening the management systems of the correctional facilities and jails, which will contribute to improve the social conditions of the Persons Deprived of Liberty (PDLs).

By conducting this research, it will be possible to identify the best approaches and shed some light on the treatment of Persons Deprived of Liberty (PDLs) in IPPF. These results can therefore influence policy changes and enhance living conditions and treatment interventions for Persons Deprived of Liberty (PDLs). The research can also be beneficial for the following: Iwahig Prison and Penal farm Management. The study will help the primary government agency in charge of supervising correctional facilities in the Philippines develop practical strategies and approaches for the rehabilitation of Persons Deprived of Liberty (PDLs).

The study can also enable the BuCor to review and assess the programs and initiatives that are already in place using the direct experiences of Persons Deprived of Liberty (PDLs); Social Workers. This study is expected to be helpful to social workers who provide assessment and intervention programs to prisoners. They provide treatment assessments for appropriate interventions, conduct individual counseling, plan group



activities, and identify at-risk Persons Deprived of Liberty (PDLs) in order to enhance and support rehabilitation and reintegration. As such, the study will provide empirical evidence on how in-prison treatments are viewed by Persons Deprived of Liberty (PDLs); and to the Future Researchers, the findings reported in this study can be utilized as a reference for future research or to verify the validity of other studies. This research will also act as a cross-reference, providing future researchers with a background or understanding of the variables used for in-prison treatment of Persons Deprived of Liberty (PDLs).

The primary focus of this study was on real life experiences on how Persons Deprived of Liberty (PDLs) are treated in Iwahig Prison and Penal Farm. The purpose of this research is to evaluate and assess the basic needs and other essential services that prison systems in the IPPF provide to Persons Deprived of Liberty (PDLs)— or the lack thereof.

METHOD

This chapter describes the several approaches that were taken in order to collect and analyze data that was pertinent to the study. The study's participants, research design, ethical consideration, and data gathering methods are only a few of the topics covered by the techniques.

Study Participants

Using a purposive sampling method, seven (7) PDL from Iwahig Prison and penal farm are selected for this study. This research study employs qualitative research using a multiple case study research design. The participants are selected using a non-probability sampling approach, more specifically the purposive sampling method. Case studies often focus on small samples and are designed to investigate a real-world experience rather than make statistical inferences about the general populace (Gill, 2020).

Although a sample of participants or cases needed not be random or representative, there were good reason to favor particular situations or people over others. In addition, this study employed coding type of analysis, in order to identify particular themes and concept to better understand the result of the study. Thus, coding is a qualitative data analysis strategy in which some aspect of the data is assigned a descriptive label that allows the researcher to identify related content across the data (Saldana, 2016).

For inclusion criteria, seven (7) Persons Deprived of Liberty (PDLs) from the research locations participated in the study as participants. They were purposefully selected by considering regardless of their age but their capacity to interact/speak with people and psychographic characteristics based on their personality and their attitude towards others and how they behave inside the facility, with the help of the prison supervisor. The primary criteria in choosing participants in this research study are whether they have at least twelve (12) years of prison experience, are under minimal security supervision, and had demonstrated a

good behavior as per their prison records inside the correctional facilities. Only willing PDL's are considered as the respondents of the study. In addition, respondents that are in medium and maximum security supervision are excluded from the study for security purposes since maximum security confines PDLs who commits heinous, although PDLs inside medium security poses lesser danger than maximum, yet they are more danger than PDLs in minimum security.

Moreover, those questionnaires that was not answered by the respondents are excluded. Further, those respondents who decided or wished to withdraw during the course of the study due to some reasons are let off.

The National Capital Region and other major cities in the country are the focus of much of the writing on prison and jail conditions. However, there has been minimal research done to evaluate prison and jail facilities among Philippine provinces. Additionally, MIMAROPA's booming economy is fueled by a multitude of relevant industries. The assessment of the facility in the province and how these facilities treat Persons Deprived of Liberty (PDLs) can also determine how local governments prioritize and resolve issues and common grievances among prison management, or the absence of such response.

Materials and Instrument

The instrument used in the study is an interview guide. The instrument as validated by experts with an external validator. The expert summary rating and comments garnered an overall rating of 10 with a descriptive rating of very good. The interview guide were administered to the identified participants of the study.

An interview guide is a document that enables the researcher to structure the way she conduct their candidate interviews. It helps researcher to know what to ask about and in what order and it ensures a candidate experience that is the same for all participants.

Design and Procedure

In this study, the same dynamics were examined across the cases by use of a multiple case study method. This approach is selected so that individual case studies can (a) forecast findings that are literally replicated or (b) predict results that are different, but for the expected reasons (Yin, 2017).

The study utilized an interview guide with open-ended questions. The expertise of research experts will also be requested to properly validate it. The research instrument is organized into three subtopics: the first examines perceptions of how they are treated in Iwahig Prison and Penal Farm; the second examines the informants' examines the issues or difficulties they encountered while in custody; and the third examines their learned lesson in regards with their life-long experiences.



The permission to conduct this study will be secured from the Bureau of Corrections through the Superintendent of Iwahig prison and Penal Farm. The purposes of the study will be presented to the informants and the prison administrators prior to the conduct of this research. The informants will then be requested to sign a consent form affirming their willingness to participate in the research study. Furthermore, the informants will be informed that their identities will be kept private.

This study was approved by the University of Mindanao Ethics Review Committee with protocol number 2023-235. All ethical issues and concerns were taken into account when accomplishing the research. Informed consent was also signed to guarantee full permission for data collection. The participants were also informed by the researcher that their participation would be kept private and that the data collected would only be used for study. Their answers will be kept private to protect their welfare. The study's sources were accurately credited and paraphrased to provide information free of plagiarism. This is to recognize the supporters of the sources that this study used.

RESULTS AND DISCUSSION

This section is all about the result and discussion of the study. It specifically presents the descriptive tables outlining the answers of the themes on each qualitative questions and also presents the narratives for each theme supported by different literature from reliable sources. Thus, it specifically discusses the lived experiences of the Persons Deprived of Liberty (PDLs) in Iwahig Prison and Penal Farm (IPPF) including the challenges they have experienced, how they were treated inside IPPF, their coping mechanism as well as their realizations and lessons that they may share to the community. The main objective of this case study is to discover and investigate the lived experiences that lie behind the PDLs. Seven Person Deprived of Liberty from Iwahig Prison and Penal Farm participated in this study. Thus, they were coded as PDL1, PDL2, PDL3, PDL4, PDL5, PDL6 and PDL7 to maintain their confidentiality. This case study revealed evidences about the informant's experiences, challenges, coping mechanisms, how they treated as well as their lessons that they can share to the community.

Moreover, the objective of this study is to explicitly analyze how they were treated inside the correctional facility, how their grievances were addressed by the authorities and the needs that they have that should be met by the management. Additionally, its sole purpose was to delve even farther into the meat of the matter and bring to the fore the perspectives, thoughts, and emotions of the Person Deprived of Liberty.

Furthermore, the researcher made a table that shows the data classified and grouped to create major themes from the core ideas/statements. Three main themes were yielded from the Person Deprived of Liberty concerning their experiences, these are their description of their experiences with the treatment of Bureau of

Corrections, challenges and coping mechanisms, and insights or realizations.

Table 1. The Participants' Description on their Lived Experiences inside the Correctional

Major Themes	Core Ideas/Statements
Experiences are varied and a case-to-case basis situation	Experiences inside the correctional is not easy but not hard enough Life inside the correctional is hard because of lack of family support Life inside the correctional is balanced Life inside the correctional is like normal community but guided by rules and regulations
Person Deprive of Liberty experienced Just and Humane Treatment	Person Deprived of Liberty were guided Properly by the jail officers Person Deprived of Liberty were treated fairly in the correctional Person Deprived of Liberty were treated with respect Person Deprived of Liberty were treated humane and just
Person Deprived of Liberty were provided by meaningful and useful activities and programs	Recreational Activities Livelihood Programs Spiritual Activities Educational Programs

Experiences are Varied and a Case-to-Case Basis Situation

It is just okay, since we are treated like normal people outside, however, we are guided by rules and regulations, like the there is a time for sleep, and we need to follow that (PDL1 Line 40-57).

Sometimes life here is happy but sometimes it is sad (PDL2 Line 510).

My life here inside also went well because it seems that if you were on the loose, like the life outside ma'am, you have many friends, troops, whatnot. Here you I experience the real camaraderie with others, you will also get along with the employees who can teach you the right thing (PDL 3 Line 925).



Life inside ma'am is a bit hard since we do not have support from our family (PDL 5 Line 1712-1717).

Our life here is okay, sometimes they were strict in management, sometimes loose. It is balanced (PDL 7 Line 2422-2426).

The first theme arose on the description of the participants with regards to their lived experiences as Person Deprived of Liberty is "Experiences are Varied and a Case-to-Case Basis Situation", this shows that Person Deprived of Liberty have different views and descriptions on their life inside the correctional. It is revealed that their life inside was mostly described as a normal life since they were living as if they were a normal people living outside, however, participants added that they were bounded by rules and regulation wherein they need to follow it accordingly. Thus, some of the participants also mentioned that although life inside is easy, there are times that they experienced difficulties and sadness especially if they think of their family outside.

This result can be aligned to the study conducted by Gales et. al (2023) wherein the results of their in-depth analysis revealed that PDL who went through change faced difficulties and challenges inside the jail. Thus, it involves negative and positive experiences; negative because they experienced longing for their family and loneliness and positive because they experienced change inside the jail and learned from their mistakes in the past through the help and guidance by the rules and regulations imposed inside.

Person Deprived of Liberty description on their life experiences varies depending on how they view their life inside the correctional. It is based on their perception and coping mechanisms on how they handled the consequences they have as punishments for the crime they have committed. Moreover, they sounded optimistic as they view their life experiences positively since they feel that they were living inside the correctional as a normal people although they limitations. In addition, they describe life inside positively as they have gained strong camaraderie among each other and that they were properly guided by the rules and regulations employed by the jail officers.

Further, PDL also mentioned that acceptance is their key to view experiences inside positively. However, along with these positive experiences are some negative experiences. PDL sometimes feel loneliness and hardships especially when they feel that have lack of support from their family.

Also based on the result, overall description of the PDL in their experiences may imply that their life inside is balanced since they are experiencing both positive and negative experiences. Thus, Pulangco et.al (2019) mentioned that the informal PDL social system is the primary inter-relational support system being operationalized by the PDLs to meet their basic needs and that the

"brigada" is their highest social network and it plays an important role in the overall experiences of the PDL in the facility since it helps them build strong support for each other.

Person Deprive of Liberty experienced Just and Humane Treatment

Their treatment is humane (PDL 1 Line 47). How they treat us helps us in our daily life here inside, we have some sort of enjoyment when they tell us to do this and that. Aside from that, they will give us token ("pang-kape") if they have want us to do side jobs for them (PDL 1 Line 230-250).

The jail officers are treating us nicely, they are respecting us as normal people even if we are prisoners, like normal people who have worthy of respect (PDL 3 Line 1107-1116).

The jail officers are guiding us on what needs to be done inside the correctional especially during the brigade like cleaning. They always tell us to treat the correctional as our own house by taking care of it and to maintain its cleanliness. They are also nice, they are a good person (PDL 4 Line 1344-1355).

We were treated like we are a normal people, not prisoners (PDL 7 Line 2434-2438).

The second theme emerged on the description of the participants regarding their experiences inside the correctional is "Person Deprived of Liberty Experienced Just and Humane Treatment", this means that the participants have experienced fair and just treatment inside the correctional facility. PDL were treated humanely and with respect, participants described clearly how they were respected and valued by the officers of the correctional. Person Deprived of Liberty were properly managed inside the correctional and they mentioned that it helped them in some way to cope up and adjust in their life inside.

This result was supported by the Commission on Human Rights (CHR) of the Philippines wherein it is stressed out that preserving the human rights and dignity of all persons, including PDLs, is a fundamental human rights guarantee.

Thus, the Republic of the Philippines has its obligations under the International Covenant on Civil and Political Rights and the Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (OPCAT), and has since enacted Republic Act No. 9745 or "An Act Penalizing Torture and Other Cruel, Inhuman, and Degrading Treatment or Punishment" in 2009 to clearly articulate the State's policy of respecting the dignity and guaranteeing the rights of PDLs.

In addition, according to CHR the Republic of the Philippines is also following the UN Standard Minimum Rules for the Treatment of Prisoners, also known as Nelson Mandela Rules,



further provides that the “safety and security of prisoners, staff, and service providers and visitors shall be ensured at all times” and that “[n]o prisoner shall be subjected to, all prisoners shall be protected from, torture and other cruel, inhuman, or degrading treatment or punishment, for which no circumstances whatsoever may be invoked as a justification.” Moreover, to strengthen this, Senator Raffy Tulfo authored the Senate Bill 2031 also known as “Jails and Prisons Monitoring Act of 2023,” this bill reiterates the commitments of human rights commitments by the State improving transparency in jails and places of detention, it will also act as reinforcement to strengthen the accountability of duty-bearer in cases of human rights violations.

It can be seen in the result of the study that the PDL was protected by law and that the jail officers were strictly following it in order to protect and serve the PDL according to what is right and what is humane, this was also to make PDL safe and secure and at the same time, in order to make them feel valued and worthy of second chance despite crimes they have committed in their past.

Person Deprived of Liberty were Provided by Meaningful and Useful Activities and Programs

We have provided programs and activities here inside the correctional because every night we have prayer and devotions, we are also encouraged to attend holy mass, every Saturdays for the Adventist and every Sundays for Catholics and Born Again. There are priest/pastors who comes here and we are allowed to choose what religion we want to attend to. Aside from spiritual activities, we also have livelihood programs, we are creating handicrafts, in terms of handicrafts, it is like our projects wherein we can showcase our talent and creativity. Aside from this, we also have physical activities, we are allowed to join and choose what activities we want, such as basketball, table tennis, and tennis. These programs helped us, it helped us to condition our mind (PDL 3 Line 971-1024).

I joined electrical conducted by TESDA and martial arts. It good they have given us the opportunity to join in this kind of program, they taught us and they showed us how it is done and until today, it is still on my mind and I can use it someday if I would be given the chance get my freedom, I can use it outside (PDL 7 Line2447-2467).

The third theme emerged on the description of the participants in their description on their experiences in their life inside is “Person Deprived of Liberty were Provided by Meaningful and Useful Activities and Programs”. This means that the participants were experienced joining and engaging in the activities and programs provided by the Bureau of Corrections. According to the results, these experiences helped the PDL to have a meaningful experience inside the correctional. These programs helped them to become more physical and mentally active and at the same time it helped to develop their faith. Aside from these, the experiences gained and learned by the PDL with the said activities and programs helped them in their every living, it helped by means of

having an extra income, conditioning their physique and mind and also strengthening their faith by letting them experience that there is Divine Being up there.

This notion was supported by Murcia (2022) wherein he stated that the Bureau of Jail Management and Penology were implementing educational and livelihood programs for the Persons Deprived of Liberty. It is furtherly mentioned that there is Jail-based ALS classes who were taught by BJMP staff who are certified educators familiar with the ALS instructional methods. He also mentioned that livelihood programs offered for the PDLs are income generating activities, so that they can sustain their needs inside and their family.

In addition, livelihood projects, including the making of paintings, bagmaking, bead products, baking, hair styling, cooking tutorials, pedicure and manicure, sewing, tailoring and weaving, masonry, mask making, rugmaking, carpentry, urban gardening, and diamond painting/rhinestone making, are popular livelihood projects among PDL. Moreover, Susbilla (2023), added that aside from this educational and livelihood programs, PDLs were also provided spiritual programs which is committed to providing PDLs a self-development and transformation before their eventual release and reintegration into society.

The results showed that the programs given to the PDLs are committed to provide a meaningful experiences and engagement that helps them grow and learn inside the correctional facility. These programs help them to transform and have a holistically self-improvement as their preparation for their release in the community outside the correctional.

Table 2. Participants’ Challenges and Coping Mechanisms

Major Themes	Core Ideas/Statements
Challenges are Triggered by Different Factors	Major problem is the scarcity in hygienic needs such as soap, toothpaste etc. Inadequate foods and water supply Frequent Power Interruptions Family Support and Assistance
Coping Mechanisms are Varied and Important for Survival	Enduring the situation in order to adapt and adjust Engaging in programs and activities provided by BuCor Spending leisure time or spare time to forget the life we have inside Faith in the Divine Being above



Challenges are Triggered by Different Factors

One of the problems here inside the correctional is the scarcity of personal hygiene specifically the bath soap (*PDL 1 Line 209-213*).

The hardest situation that I had experienced was getting sick while far away from my parents (*PDL 7 Line 2524-2525*).

Sometimes water supply, sometimes interruptions on water supply are caused by interruptions of power supply, it is too here (*PDL 3 1053-1054*).

The hardest situation I experienced was when I heard the news my father died and my wife re-married another man at the same time, it was really hard for me (*PDL 5 Line 1776-1778*).

One of the major problems of the PDLs, I think, sometimes when the soap runs out, it is really hard for us (*PDL 2 Line 718-722*).

Inadequate water and soap, it's not always the same, especially when it is brownout especially after the typhoon Odette, it is super-hot in the brigade (*PDL 3 Line 1032-1033*).

The problem that we always encounter is for our personal needs like hygienic soap (*PDL 6 Line 2129, Line 2157*).

Problems in our pocket, this is my main problem since we do not have money to buy our personal hygienic needs like colgate, at the same time our food like coffee, if we do not have money, we cannot buy our basic needs (*PDL 7 Line 2473-2482*).

The first theme arose for the challenges and coping mechanisms of the Persons Deprived of Liberty in their lived experiences inside the correctional is “*Challenges are Triggered by Different Factors*”, this means that informants who represented thousands of PDLs in Iwahig Prison and Penal Farm have something in common in terms the challenges that they have experienced inside the correctional, thus, informants stated that one of the major and common problems that the PDLs experienced and still experiencing inside the correctional is the inadequate supplies of their basic and personal needs such as food and personal hygienic needs especially their bath soap, inadequate food and water supply, frequent power interruptions and assistance and support from their family.

The result was supported by Chokprajakchat & Techagaisyavanit (2019) to which they mentioned that the Thai jails are still plagued by inadequate access to healthcare and other basic medical services, an insufficient supply of food and water, and poor sanitation facilities. Hence, Gales et.al. (2023) addressed in their study that one of the major problems encountered by the inmates

inside was insufficient supply food and personal hygiene kits since it was budgeted for thousands of inmates.

The findings demonstrated that even though the government met PDLs' basic needs, they still felt inadequate and insufficient because there were a large number of them inside. In addition, family issues have a significant impact on PDLs' lives, particularly if they believe they are receiving insufficient support and assistance. Learning tragic news from their relatives outside also has an impact on PDLs. The PDLs have indicated that these challenges impact them, primarily on a physical and emotional level. However, they have managed to overcome these challenges by using various strategies to modify and adjust.

Coping Mechanisms are Varied and Vital for Survival

I was wondering why this has to happen, but by the mercy of the Lord God, I also have accepted everything, ma'am (*PDL 5 Line 1800-1801*). When I pray at night, my mind seems to lighten, ma'am, even though it's heavy, it seems like someone is telling you that able to do it (*Line 1807-1808*). Our brotherhood in the church also helped me, they keep on telling me not to think of it so much and just say my prayers to the Lord (*Line 1822-1823*).

I have adjusted and cope up with my life inside through the help of the BuCO community, they provided for the things I needed in my painting since painting helped me to enjoy my spare time and it helped me condition my mind every time I have hard times here inside (*PDL 5 Line 1848-1849*).

I have to endure the challenges inside especially when times I cannot buy my personal needs since I do not have the financial capacity (*PDL 7 Line 2516-2517*).

I have adjusted and cope up here through engaging in the programs of BuCor, I personally joined martial arts, I also make my own dumbbells for exercising. Practicing my dumbbells really helped me to adjust here and I also follow what they are teaching us so that I can continue my life and I don't really think of my situation here, I just my mind that this is my life now (*PDL 7 Line 2640- 2644, Line 2662-2665*).

The second theme emerged from the description of the participants in their challenges and coping mechanism inside the correctional facility is, “*Coping Mechanisms are varied and Important for Survival*”, this theme emerged since most of the informants have mentioned variety of coping mechanism in order to cope up adjust on their life inside. Coping mechanism are varied depending on how the PDLs handle their experiences and life inside. Thus, it can be seen in the results that most of them are engaging on programs and activities offered by Bureau of Corrections, strengthening their faith in the Divine Being,



enduring and accepting their life inside as coping mechanism in order to survive.

This notion was supported by Barolo & Vicente (2019) to which they stated that difficulties in adjusting in prison life have effects on the life of the Persons Deprived of Liberty, thus, the effects of these difficulties vary among individuals because they have their own ways of adapting to the prison environment. Moreover, some PDLs would have thought of self-destruction, while majority developed adaptive behavior towards incarceration. Other repercussions of challenges are self- reflection and self- renewal, faith in God, prison as a haven and positive outlooks in life. Coping up with the prison environment the PDLs chose to become submissive, bear the consequences of their act, keeps themselves busy, and, remained active in religious activities.

Furthermore, because they have endured these experiences in order to survive, Persons Deprived of Liberty have unique perspectives on how they manage and adapt to the surroundings inside the correctional facility. It is beneficial that they have their own internal community, which has not only helped them cope but also heal and grow from the mistakes they have made in the past. It's encouraging to learn that PDLs are receiving excellent support and guidance from the Bureau of Corrections as a whole, which will help them adjust to life inside.

Table 3. Participants' Insights as Person Deprived of Liberty

Major Themes	Core Ideas/Statements
Lessons Discovered through Individual Liberty Deprivation	Respect for each other's life
	Thinking multiple times before doing wrong things
	Discipline is the key for righteous life
	Being hot tempered will not bring good to your life

Lessons Discovered through Individual Liberty Deprivation

First, respect and then be courteous in that way you will have good thoughts in your mind (PDL 2 Line 844-848).

My advice is that, I hope that they (co-PDLs) will always do the right thing so that if they will be given a chance to finally get back their freedom, their lives will be better. And for the people outside this community, also think carefully before they anything that will cause other people harm, in that way, they will not end up like us (PDL 2 Line 862-877).

To my co-PDLs here inside, always have discipline, learn to have discipline and that always follow on the rules and regulations, so that they will not get into trouble even if it is against their will, there is nothing wrong in following the rules. (PDL 1 405-419).

The lesson that I may share is to humble ones' self and to respect other people and also, to pray and seek for the Lord's guidance and put the Lord in your heart and (PDL 3 Line 1232-1238). And to the people outside this community, do not be hot tempered, do not engage on evil deeds (Line 1256).

The first theme emerged on the participants' insights as Person Deprived of Liberty is, "Lessons Discovered through Individual Liberty Deprivation", theme talks about the lessons that the Persons Deprived of Liberty have learned based on their lived experiences inside the correctional facility. Results showed that the major lesson that they have learned and wanted to share to their co-PDLs and to the people outside the correctional facility to be mindful before doing actions that they regret later on in life. Aside from this, they also learned about respect and discipline and they wanted to tell everyone how it changed their life and perspectives. Further, they also wanted to share that asking for the Lord's guidance in everything that an individual do will help them in doing righteous things.

This concept was supported by Santos (2022) wherein he stated that during his interviews on inmates, they have mentioned that prior to entering prison, their priorities and thinking were out of order, their selfish wants stood above everything else and none of the things they do was aligned with their values. However, on prison, they have learned and practices restructuring their priorities based on moral compass and goals for personal growth and learned that being in a confined area with so many different people around allowed them to see their choices in actions and that they realized and recognized that their actions spoke louder than words, that is why they practiced doing right thing every day even when nobody is watching them.

Implication for Practice

The public is greatly impacted by the personal experiences of those who are Deprived of Liberty. Their combined experiences have opened our eyes to both great and negative aspects of the Bureau of Corrections, their family, and the community. Their experiences living inside the prison have a significant impact on their personal development. This research lauded the Bureau of Corrections' Jail Officers for their excellent supervision and fair and compassionate treatment of PDLs. Nonetheless, it is advised that the government, working with the Bureau of Corrections, provide answers to the issues raised by this study, particularly those pertaining to the PDLs' access to basic necessities and personal needs, such as food, water, a comfortable place to live, and sanitary supplies.

Furthermore, it is advised that PDLs' families make more visits and offer their support to the members of their family who are incarcerated. They will feel less of the weight they are carrying inside of them, which will inspire and push them to work hard and hold out hope that they may one day be released from prison.



The study may also present a way for the Bureau of Corrections to hire additional professional counselors, increasing the number of outlets available to PDLs for sharing and releasing internal burdens, particularly those related to emotional and mental health issues. This may also seek help to the public to visit more and support the Iwahig Prison and Penal Farm so that they can generate more income for the benefit of the PDLs.

Because they stand to benefit from the research, the Bureau of Corrections may also choose to use the study's findings to inform the development of social service interventions meant to address the issues and difficulties raised during the interview.

Implication for Future Research

In my capacity as a researcher, I hope that the findings of this study will inspire other researchers to carry out similar research and carry on developing a program that will help those who are denied of their freedom. Future scholars may also carry out investigations connected to the current research and broaden their comprehension of the daily experiences of Persons Deprived of Liberty.

Concluding Remark

Similar to other types of confinement, being imprisoned causes a person a great deal of stress. Even though people may adjust and cope with life, situations like these have the power to alter a person's biophysical balance to the point where the recollection of a specific traumatic incident overwhelms all other experiences and impairs one's capacity to deal with reality. Thus, there are various factors that influence how inmates adjust to life behind bars. These include their personality, specifically their hope and optimism dispositional position; their ability to create a routine that gives their lives meaning and purpose; their ability to comply with prison rules while maintaining a sense of autonomy and control over their lives; the level of family contact they have; and the opportunities they have to pursue employment and education once they are freed from the life they have right now.

Deprived individuals are human beings who should be given another chance. The Persons Deprived of Liberty can gain more positive insights and realizations from their lived experiences. It is encouraging to learn that the Philippine government has devised methods for applying arbitrary punishment to inmates, even in the face of pervasive dehumanization of those who commit crimes. The PDLs' lived experiences at Penal Farm and Iwahig Prison demonstrate that even those who have committed horrible crimes have a right to a normal life as long as it is one that is governed by laws and regulations to promote self-realization and personal development. How they were treated and valued inside the correctional make them feel that they are worthy of another chance to prove that they can change.

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CATEGORIES OF OPPOSITION AND CONTRAST AS OBJECTS OF LINGUISTIC ANALYSIS

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ANNOTATION

The article is devoted to the study of the actualisation of the categories of opposition and contrast as a universal linguistic category. It considers the ways of expressing contrast and opposition, and also gives a justification for the application of opposition and opposition from the point of view of cognitive science.

KEYWORDS: *opposition, grammatical opposition, contrast, contrarian relations, contradictory relations, contrastive, contrastivity*

Firstly, let us consider the concept of «opposition», which includes both linguistic and logical aspects. From the point of view of logic, «opposition is a category expressing the relation of incompatibility between concepts that deny each other because of the ability to express something positive rather than negative in incompatible concepts» [3, p. 594]. Logic divides oppositions into the concepts of contradictory (excluding each other) and contrarian (concepts that not only negate each other, but carry something positive instead of the negated one). We are more interested in the notion of opposition from the point of view of linguistics, where linguistic opposition is a linguistically essential (performing semiological function) difference between the units of the expression plan, to which corresponds a difference between the units of the content plan, and vice versa. From the point of view of modern linguistics, opposition is a paradigmatic category, which is considered at different levels of the linguistic system. In this sense, we speak of phonological (phonemes [k] and [r] - the words "cat" and "rat" differ not only in sound but also in meaning), grammatical (singular - plural) and semantic oppositions.

With regard to phonology, linguistics owes the doctrine of opposition to the outstanding Russian philologist N.S. Trubetskoy, who was one of the founders of the Prague Linguistic School [6].

Let us briefly enumerate those provisions of the theory that underlie the method. He argues that opposition is possible only when its members have not only differences but also common signs. These latter are called the basis of comparison, and the distinguishing sign is commonly called the differential sign. Opposition can be defined as a semantically relevant difference in one feature while the others are similar.

N.S. Trubetskoy distinguishes between oppositions in relation to the system and oppositions between members of the opposition. Oppositions between members of the opposition are divided into privative, or binary, gradial, or stepwise, and equipollent, or equivalent. He contrasted oppositions between

members of an opposition with oppositions in relation to the system, distinguishing between proportional, isolated and multidimensional oppositions.

Both Troubetzkoy himself and later researchers outlined ways of using this method to distinguish classes of linguistic units and their sets, over which various operations are possible. An appeal to the theory of oppositions is especially promising for the discovery of systematicity in language and for the compilation of all kinds of classifications. Phonetic and grammatical oppositions form the internal space of the linguistic system and allow us to identify the integral structure of language at these levels. However, it is possible to speak about oppositional structures in the semantics of a language, even though the semantic structure is more vague. The study of semantic oppositions seems to be a very effective way of revealing the essence of language changes under the influence of various social processes. The study of the semantics of words at the level of their semantic correlations with other lexical units allows us to trace the dynamics and nature of semantic transformations of the lexicon.

Oppositions in semantics are formed on the basis of semantic features in the meaning, they can be relatively stable when organised on the basis of conceptual features, which are usually closely connected with ethno-sociocultural tradition, and they can be occasional - when arising in speech depending on the situation. Oppositions can be stable or unstable both at the denotative and connotative level of meaning. The situational conditionality of semantic oppositions can also be manifested at two levels: on the one hand, when comparing really existing objects, and on the other hand, when realising a pragmatic function in a particular communicative situation (when there is a divergence of points of view). Oppositions reflecting the realities of social life that are subject to changes, as a rule, are not stable, because they are transformed in accordance with social and historical changes. The stability of semantic oppositions is determined, as a rule, by the nature of the denotation, which has a strong evaluative potential,



independent of external processes. As a rule, stable character lexical relations of antonymy and synonymy (in terms of content) and homonymy and paronymy (in terms of form).

Opposition as a specific type of paradigmatic relations (correlations) is sometimes opposed to contrast as a special type of syntagmatic relations (relations). In the most general understanding contrast in linguistics is one of the types of nomination organised by the principle of convergence and on the basis of equivalence, the essence of which consists in contrasting characters, phenomena, objects and their properties for a more vivid representation of reality. The unambiguous interpretation of the concept of contrast is of great importance for the systematisation of syntactic and stylistic techniques, but meanwhile in studies on stylistics this concept is qualified in different ways. In one of the reference editions contrast is considered as «a principle of linear-syntagmatic organisation of a speech work, which consists in a sharp contrast of different elements of the text in order to create a certain stylistic effect» [4].

Researchers have different approaches to understanding the essence of contrast. In order to avoid terminological confusion, it is advisable to call contrast a generic concept - a general principle of organisation of various syntactic and stylistic techniques, and to name their private principles of organisation as contradiction and opposition. another reason for distinguishing these groups of techniques is the difference in their functions. Thus, contradiction techniques, being a kind of alogism, are most often used in the function of creating the effect of surprise, paradoxicality, which is not characteristic of opposing techniques, which serve, in particular, to clarify the opposing concepts, judgements, features, etc.

The first row of figures is organised on the basis of the principle of contradiction. In its turn, contradiction can act as a principle of organisation of a group of stylistic devices consisting in a motivated violation of the formal-logical law of non-contradiction, such as oxymoron, paralepsis, paradox, antiphrasis, etc. The first row of figures is organised on the basis of the principle of contradiction. The second series of figures is organised on the basis of the principle of opposition, on which the technique of antithesis and its varieties such as acrothesis, amphithesis, diathesis, alloyosa, syncrisis, paradiastole are based.

Thus, the techniques of the first group are based on the contradiction of the semantics of the connected speech units, and the techniques of the second group are based on the opposition of the divorced concepts, judgements, attributes. And it is the latter that are of particular interest for our research, the main task of which is to study the principles of construction of contrastive syntactic models in the pragmatic aspect at the level of a statement in a con- textual environment and the whole number.

At the morphological level, the contrast is realised through artikles, personal pronouns, and verb temporal forms. In particular, the contrast is realised through the opposition with

the help of personal pronouns (he - she, I - they, I - you), which can also be strengthened by the temporal contrast of predicate clauses.

As for contrast at the lexical level, the research of G.V. Andreeva, who made an attempt to classify the contrast-capable units involved in the representation of contrast at the lexical level of the whole text, is of undoubted interest. The author understands the contrastability of lexical units as «the property of a word to enter into a larger or smaller set of paradigmatic oppositions, one of which is realised in a given text» [2, p. 136]. The researcher divides contrastive units into the following groups: 1) real contrasts, which include antonyms capable of forming autonomous lexical oppositions; 2) potential contrasts - units capable of expressing contrast only depending on the specific speech use and closely related to the context of situations described in the text or even to the context of the whole text.

G.V. Andreeva divides contrastive units into actual and potential types on the basis of Trubetskoy's method of oppositions, which makes it possible to establish relations between different groups of contrastives. All the contrastives are grouped by the researcher in the order of decreasing explicitness of the opposition, which seems to us to be successful, since this arrangement makes clear the important role of context in providing contrast.

At the syntactic level, according to the observations of scholars, contrast is provided by some forms of transposition, or reinterpretation, which are understood as cases of using syntactic structures in non-denotative meanings and with additional connotations. Examples of this are exclamatory in form and narrative in content. This form of transposition can be used to depict restraint, doubt, and sometimes hidden condemnation of the actions of some characters by others, and thus their opposition. Inversion, parallel constructions, repetitions with antonymic amplification, polysyndeton, negation, asyndeton, and parcellation also contribute to the realisation of contrast at the syntactic level of the text.

Contrast, which permeates all levels of the text and forms its structure, is often not limited to the text, but goes beyond it, interacting with the whole culture. The context of culture, the totality of all extra-textual factors involved in the generation of contrast in the text, constitute the «extra-textual context of contrast» [5, p. 11]. We consider this specification to be fair, since the texts of artistic works can relate to culture, epoch, based on associations both by contrast and by analogy.

Contrast can appear in a text both in terms of expression and content. Thus, V.M. Avrasin singles out the following most common directions of contrast typologisation. The researcher considers contrast at the following levels:

- 1) words and word combinations;
- 2) text;
- 3) compositional and syntactic organisation of the text

(contrast in terms of sentence volume within a paragraph or other supra-phrase unity; contrast in terms of the type of



sentences for the purpose of utterance; contrast in terms of the degree of strictness / looseness of sentences);

4) variation of different grammatical forms [1, p. 130].

So, the phenomenon of contrast is a frequent phenomenon of the text, penetrating all its levels, which indicates that the phenomenon under consideration contains text-forming potential and provides structural and semantic unity of the text space.

In the course of this work it was found out that contrast and opposition can reinforce, be a part of each other and penetrate into each other. The analysis of theoretical material confirms the fact of manifestation of the above-mentioned principles at all linguistic levels of the text: phonetic, morphological, lexical, syntactic, stylistic, graphic. Contrast and opposition are also present in the content of the text, in its figurative system, composition and symbolism, which is also important, because the study of structural-semantic organisation of the whole text is possible only if the content and formal-linguistic ways of its expression are taken into account simultaneously. In the course of further research we will try to analyse the factual material on the basis of the obtained theoretical data and highlight the main principles of functioning of contrastive syntactic models in the pragmatics of language and speech.

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A PHENOMENOLOGICAL STUDY OF RESILIENT STUDENTS AMIDST PANDEMIC

Rowena A. Baloyo, Joriza Lou Trillanes

ABSTRACT

This study explored the lived experiences of seven students to delved their issues and concerns during the pandemic and their coping mechanisms they adopted during the online classes. The researcher used in depth interview with the use of semi-structured interview questions of student's real life during the pandemic.. The key informants were purposively selected students from North Eastern Mindanao State University with the following inclusion criteria: a) they must be a student who is currently enrolled in the semester and b) the modality of teaching in the current semester is through the use of online classes. The data were gathered through the use of recorded interviews which were analyzed through Thematic Analysis. Findings revealed the following issues associated with resiliency : 1) internet connectivity 2) flexibility to new learning modality 4) financial problems. As to their coping mechanisms, the following themes were revealed: 1) positive outlook 2) strong motivation 4) support from teachers

Base on the findings, necessary steps should be undertaken in order to the students to cope up with the new learning modality. Since the mental health of the students also were affected likewise be conducted. Through this undertaking, students will be able to adjust or become resilient to cope up with adversities that affected their learning.

KEYWORDS: *resiliency, lived experiences, covid-19, phenomenological study method*

INTRODUCTION

The spreading and menacing effects of Coronavirus disease (COVID-19) pandemic has created a crisis with a severe effect on the masses. Education in particular had been affected across the world. Education was jeopardized and students were affected by such unprecedented phenomena. According to Singh et. al (2020), it is critical for the students to take steps in building their resilient characters and coping with its damaging consequences that is brought forth by the COVID – 19 pandemic.

From the global perspective, a whopping number of 1.54 billion students worldwide, including those in higher education, are reported by UNESCO to be jeopardized by the closing of the institutions (Giannini & Albrectsen, 2020). Hence, the lockdown has profound repercussions for the students (Sahu, 2020). In this current situation conventional methods that are unsuited being set aside, the mass transition to the online medium of learning have exerted an unprecedented effect on the students (Baloran, 2020). The students are pushed with this ordeal and have to embrace the change for continual and unhampered academic growth (Corbera et al., 2020). There is, therefore, a need to integrate being resilient together with the pedagogical approach of the instructors.

According to Guillasper et al. (2021), resilience is a vital psychological factor and personal resource that makes students less susceptible to the negative impact of the COVID-19 outbreak and helps lessen the adverse impact of the pandemic on the quality of life (QoL) of students. Furthermore, understanding the factors and developing strategies that build the resilience of students in a focal point of action for them. Failure to recognize the negative

effect of COVID-19 pandemic and other major life events on the QoL of students may result in detrimental consequences. Similarly, the study of Guillasper et al. (2021) highlighted the protective and cushioning role of resilient characters of Filipino students in the context of the COVID-19. With this, different alternative learning modes are offered by different learning institutions, including state universities.

Just like any other schools across the globe, the students from Surigao Del Sur State University has experienced inconvenience and disruptions in academic activities due to the menacing effects of COVID - 19. However, despite of displacement and economic drawbacks that brought by the pandemic, education must never stop. The students found it hard especially everything happened abruptly. One of the ways to handle the current situation is to instill the positive virtue of resilience among the learners so that they will not give up with their dreams and at the same time be safe. Thus this study is conducted to know and understand how the students should address their adjustment the new modality of learning during pandemic.

METHODS

This study employed qualitative design of research using the phenomenological method. The key informants of this study were seven college students who were chosen through purposive sampling. Fictitious names were given to them in order to them in order to adhere to ethical considerations. Data were collected through in depth interview with the use of semi-structured questionnaire. The key informants were college students from North Eastern Mindanao State University. The said research



design was appropriate for this kind of study since according to Groenewald (2004). Using phenomenological method of qualitative research would be practical in understanding the observable characteristics of a phenomenon or exploring the lived experiences of the subjects. In relation to the current study, the phenomenological method was used in giving meaning to the experiences of the students during the pandemic that are relevant to academic resiliency.

PURPOSE OF THE STUDY

This study was conducted in order to understand the lived experiences of the students of on their academic resilience on the new mode of learning during pandemic.

Specifically, it aims to answer the following questions:

1. What are the lived experiences encountered by the college students that pertains to academic resilience during the new normal delivery mode due to COVID – 19 pandemic?
2. What are the challenge that the college students met during the new modality of learning during pandemic?
3. What are the coping mechanisms of students in order to be resilient in their learning during pandemic?
4. What is the implication of this study in teaching social science?

REVIEW OF RELATED LITERATURE

The world is currently facing COVID-19 pandemic and is widely-spreading across various countries. A number of initiatives are introduced by the government to limit the spread since the beginning of the pandemic. The citizens are encouraged to implement social and physical distancing to ensure the safety between individuals and to reduce unnecessary activities outside the home (Widyaningrum et al., 2020). The education sector was affected by the pandemic, pursuant to the Circular Letter of the Directorate of Higher Education of the Ministry of Education and Culture Number 1 of 2020 on COVID-19 Prevention in Higher Institutions. It mandated the higher institution to alter the learning activities into online learning system or distance learning and suggests the student to study from their home. To the reason that, this policy was promulgated, all levels of education especially universities, started to implement distance or online learning in order learning activities can be conducted as usual. In connection to this matter, Purwanto et al. (2020) that this paradigm is considered new which means that not all students are accustomed to online learning activities. In this case, the students face a number of challenges and difficulties, especially in regards adaptation to the new learning method that is less effective than face-to-face learning.

Educational institution are having closures due to the outbreak of COVID-19 lead to an unprecedented impact on education. During the lockdown, the teachers are instructed to teach via online learning platforms (Abidah et al. 2020). Another study of Raju (2020) it was revealed in his study that it is necessary to adopt innovative teaching for the continuation of education and to win against mental stress and anxieties during the lockdown,

specifically for the students. The threat of COVID-19 results in the digital revolution in the higher education via online lectures, teleconferencing, digital open books, online examination, and interaction at virtual environments (Strielkowski, 2020; Kumar, 2020). Another study of (Gonzalez et al. 2020) revealed that there is a significant positive impact of the current pandemic learning efficiency and performances by adopting online learning strategies. The online mode of the teaching-learning process is often discriminatory to poor and marginalized students (Manzoor, 2020).

Vansteenkiste (2006, 2007) claimed that SDT proved the usefulness for understanding diversity in student learning approaches, success and persistence. In addition to the concepts of autonomous versus controlled motivation for learning-related behaviors, SDT researchers (Kasser & Ryan, 1996) had increasingly put more attention to the individual targets that students concentrate on. Students are said to have a natural propensity to give focus on the intrinsic and growth-oriented goals rather than extrinsic and out-of-the-box goals for them to find interesting on the new mode of learning amidst COVID-19 pandemic. The intrinsic goals are theorized to be more specifically related to the fulfillment of the essential psychological need of the students for competence, partnership and autonomy. The distinction between intrinsic and extrinsic purposes was originally used to assess psychological health and well being of the students.

On the other hand, in the initial study of Rahiem (2020), students were found out to be able to complete one semester of study and obtained good grades so it means that even the pandemic can't be a hindrance for them to fulfill all the school works they had. By understanding students motivation, teachers or the instructors can learn what helps the students learn despite the varying limitations amidst this pandemic COVID-19. Also, by learning more about student motivation, it can help and prepare students to be more resilient in challenging times in the future. Additionally, information involved will contribute to the teachers to understand the learning process better from a student's perspective, which may positively influence their strategies on teaching amidst COVID-19 pandemic.

Another study of Amelasasih et al. (2019), resilience is the ability of a person to adapt and overcome difficult times at hand, particularly during today's pandemic. More so, the ability to adapt from risks, difficulties, and some monumental adverse events constructively and positively (Compton & Hoffman, 2013). On the other hand, Hendriani (2018), stated that is an individual's ability to cope with stress and learn from negative emotional experiences. In the context of higher education, students are expected to be resilient in facing academic challenges, also known as academic resilience (Gizir as cited in Sari & Indrawati, 2017).



Universities educate vast majority of decision-makers in the workforce, whether employed in academia, government, health, education, arts, business or other field. Increasingly, the university leaders, governments, industries and donors are using ranking in universities to assess the success or failure of higher education institutions (Esposito and Stark 2019; Hazelkorn 2017; Yudkevich et al. 2016). However, these rankings tells nothing in regards how the universities are challenging or amplifying structures, policies and practices that are pivotal to global responses to the COVID-19 pandemic.

The COVID-19 pandemic is reconfiguring the entire field of higher education in which many face-to-face classes are now online, and while some institutions have adjusted easily but others without the same resources have struggled or failed completely. Additionally, many students are lacking personal resources (such as internet capacity) to participate in their online classes. Hence, the people need to understand the impact of the pandemic on the higher education as a field of power. Above all, rankings do not measure the ability of universities to respond to crises in ways that serve their particular communities. Many countries are advance in terms of technology already had e-learning and online education programs in place when the pandemic first began. In the developing countries, where internet service and technological equipment availability is often limited resulted learning adaptation more complicated (Farooq et al., 2020).

One of the essential factors in achieving subjective well-being is through having resilient characters (Erniati & Sari, 2018). Resilience per se is a student's process in surviving in the face of adversity or other conditions that cause to feel depressed, miserable, or traumatized. (Reivich and Shatte 2015, as cited in Saputra, 2020) supported the idea that resilience is the capacity of giving healthy and productive responses in facing challenging events to control the pressure. It can be defined as a concept that describes a student's capabilities in overcoming and adapting to difficult times which means that resilience might determine one's success and failure in life (Mufidah, 2017). For students, academic resilience is of paramount importance and according to Wang and Gordon (2016) as cited by Utami (2020), learners with academic resilience can change a challenging environment into a source of motivation by maintaining hopes, orienting themselves with goals, and having problem-solving skills. Ergo, based on various reviews explained above that students who have the

capacity to become resilient might also have high subjective well-being in facing online learning challenges during the outbreak of COVID-19 pandemic.

According to Sari & Indrawati, (2017), academic resilience is the ability of a student to get on its feet, survive, or adapt to the pressure and challenging conditions in the academic field. Students who carry out academic resilience are students who can face four conditions, namely setbacks, challenges, adversity, and pressure in the academic context. Based on this explanation, academic resilience is very useful in facing the challenges of learning during the COVID-19 pandemic.

Student has the ability to rise, survive, or adapt in the face of pressure and challenging conditions in the academic field through possessing academic resilience (Sari & Indrawati, 2017). This allows students to overcome adversity or negative emotions to adapt to online learning during the pandemic of COVID-19, which also leads to improved mental health. Academic resilience has the ability to change stressful events into opportunities for growth and allows students to obtain personal benefits (Oyoo, Mwaura, & Kinai, 2018).

In education, the government has encouraged studying to be done from home to prevent transmission of the virus (Mendikbud," 2020). Study from Home (SFH) is meant to be learning that is done online and at home. According to Putranti (2013), online learning is a form of distance learning using internet facilities to communicate online. According to Setiawan (2020), the online learnings advantages include: being able to expand access to education for the general public and business because a flexible scheduling structure can lessen the affect of many time and place constraints. Handing over some activities outside the location reduces institutional capacity constraints arising from the need for infrastructure buildings.it has a potential to increase access to more flare-ups from diverse geographic, social, cultural, economic and experiential backgrounds. On the other hand, distance learning also has its own disadvantages, including barriers to effective learning such as new environment distractions and unreliable technology, inadequate interaction between students and teachers, and the need for more experience. On account of these shortcomings, students can experience stress (Novitasari, Kurniawan, & Kanita, 2020).



RESULTS AND DISCUSSIONS

Themes	Codes
Internet Connectivity Issues	<ul style="list-style-type: none"> • Hard time connecting • Absence of internet connection • Absence of mobile data • Weak internet signal
Flexibility to new learning modality	<ul style="list-style-type: none"> • Adjust to the new modality of learning • Adjust to virtual classes • Learning new mode of learning such as using new platforms • Struggle to adjust to new learning • Looking for an area for strong connection
New study environment	<ul style="list-style-type: none"> • Inconvenient study environment • No comfortable study area • Doing multiple tasks while studying • No concentration in studying • Finding for a place to study
Financial Problem	<ul style="list-style-type: none"> • No enough budget to buy gadgets • No laptop or cellphone needed for studying
Coping Mechanisms	Codes
Positive Outlook	<ul style="list-style-type: none"> • Believing in oneself • Adjust to the new learning set up • Trying one’s best to cope • Dedication to study
Strong Motivation	<ul style="list-style-type: none"> • Strong determination to finish schooling • Pursue studies during this pandemic • Take the situation as challenge
Support from teachers	<ul style="list-style-type: none"> • Teachers leniency • Reaching out to teachers • Having an open communication with teachers

DISCUSSION

The concept of students’ resiliency was examined from a phenomenological interview based on the lived experiences of students amidst the pandemic. The most significant shared themes characterizing the ten key informants’ lived experiences were: **internet connectivity issues, flexibility to new learning modality, new study environment, and financial problem.** According to the Resilience Theory, a person can bounce back in life after experiencing an adverse situation in a strength-focused approach. Also stated in the Educational Productivity Theory, during the COVID – 19 pandemic, the learner’s affective, physiological, and cognitive learning are negatively affected. The results of this study are consistent with these findings.

The key informants primarily experienced **internet connectivity issues**. They expressed how difficult it was to maintain the connection and be stressed at the same time. According to Purwanto et al. (2020), this paradigm is considered new which means that not all students are accustomed to online learning activities. In this case, the students face a number of challenges and difficulties, especially in regards to adaptation to the new learning method that is less effective than face-to-face learning. Moreover, one informant struggled with online learning because of a lack of gadgets. In developing countries, where internet service and technological equipment availability is often limited resulted learning adaptation is more complicated (Farooq et al., 2020).

Some key informants thought that the new normal learning setup is quite difficult and challenging. According to (Novitasari,



Kurniawan, & Kanita, 2020), distance learning also has its own disadvantages, including barriers to effective learning such as new environment distractions and unreliable technology, inadequate interaction between students and teachers, and the need for more experience. On account of these shortcomings, students can experience stress. In consonance with Mubin, & Basthomi (2020), some college students were stressed during the COVID-19 pandemic due to the online learning process related to the competitive academic pressures overwhelmed them with more lessons content and less leisure time.

One key informant struggled from the inconvenient study environment. According to Kapasia et al. (2020), those from remote areas and disadvantaged parts, were confronted with various problems related to depression, poor network connectivity, and an unfavourable home study environment. Another issue or concern of the key informant was the financial problem.

To get an account of students' lived experiences their parents and teachers were also being interviewed. Parents' observations on students were the following: financial problem, less motivation in studying, internet connection issues/signal problem, and some positive traits during the pandemic. On the other hand, this study also revealed the teachers' observations of students such as their behaviour during class, their motivation in doing their tasks at home, problems/difficulties encountered in the new normal learning, and personal problem / financial problem. Both parties were asked about their opinion and thoughts about the students' resiliency and their observation of how these students coped with their issues and concerns during the pandemic. To some extent, both the parents and teachers verified the issues and concerns that the key informants experienced.

As per observation on how their children/students coped with the issues and concerns, similarly, they thought that one must be being strategic. One parent emphasized the positive effects of a strong support system. In line with this, open communication and having some thoughtful teachers helped the students. On the other hand, two teachers expressed their observations. They believed that their students were passionate learners and that they were not easily swayed by the situation. Another teacher also expressed and highlighted the value of reaching out.

The students in this study also expressed how they coped with the issues and concerns they have encountered. Their ways of coping included positive thinking, strong motivation and being strategic. Three of the Key Informants instilled the habit of positive thinking for the sake of their family and for the future. Two of the Key Informants used these circumstances as a strong motivation to stay on track despite the drastic changes that Covid19 brought to their lives. One informant thought of reaching out as a way of coping and the other informant conveyed the idea of being strategic. They thought that being strategic could help them achieve their goals. According to Bonanno (2004), strong

individuals have positive characteristics in an optimistic attitude, self-improvement, and resilience, have the right coping strategies, and has a lesser chance to experience psychological problems. Thus, students need to demonstrate resilience during online learning in this pandemic, which is called academic resilience.

Throughout the lived experiences of the students in this pandemic, they have consciously found ways how to cope and address the issues they have encountered. According to Dhawan (2020), the students need to overcome all of the unexpected learning changes as quickly as possible in order for them to achieve their goals. Lack of certainty, insecurity, volatility and reduced autonomy and self-directedness are typical feelings encountered by students during the pandemic crisis (Germani et al., 2020). In addition the students staying at home, worrying about the safety, changing their usual school routine, and not being able to interact face-to-face with friends affect their mental well-being (Husky et al., 2020).

CONCLUSIONS

The result of this study revealed that the factors which affect the lived experiences of the students during the new delivery mode of learning during pandemic included internet connectivity issues, new learning modalities, new study environment and financial difficulties. According to Dhawan (2020), the students need to overcome all of the unexpected learning changes as quickly as possible in order for them to achieve their goals. One of the elements needed for the students in achieving subjective well-being is resilience by Erniati & Sari (2018). It is the ability to constructively and positively adapt to risks, difficulties, and several monumental adverse events (Compton & Hoffman, 2013).

According to Cooper et al. (2020), increasing students' resilience has been shown to be an important strategy to help them bounce back from adversity when faced with various stressors and stress-inducing events and traumatic situations (Cooper et al., 2020). With the coping skills of the students, it improves class attendance, participation, persistence even when faced with setbacks or failure in general, and arm them with stronger resilient self who can lead to a much more positive learning experience. Most students are struggling in their academic performance because of the problems brought by pandemic. College is the most challenging stage in a student's journey towards success because this will prepare them as they step out of school and enter the real world. However, because of these unexpected times, the students are experiencing a stressful time in the going through the process of shifting from face-to-face learning approach to new educational and social environment.

However, it is believed that certain factors may allow some students to succeed academically as a matter of fact that they have different strategies to cope up with the problems and happening in life, such as stress coping skills. When college students are facing stressful life events, they typically use many kinds of



coping strategies to deal with them because teenager nowadays have different strategies to cope up with their emotional problems. They use different coping strategies to overcome the problems.

Based on the findings of this study, it is concluded first of all that much of the lived experiences of the students in the new normal has to do with internet connectivity issues due to unstable networks or no signal because of their location. This primarily led to reliability and performance issues that can result to students getting distracted, falling behind, or having limited access to the classroom resources they need. According to Dagdag et al. (2019), the students have their own unique emotional needs and it should not be ignored if students are expected to maximize their potential in learning specially amidst this pandemic. Hence, the school should be oriented in coping up with learning adversaries and know the strategies that will help the students to be interested in the new mode of learning as well as practical ways to support the learning system and school environment.

Increasing students' resilience has been shown to be an important strategy to help them bounce back from adversity when faced with various stressors and stress-inducing events and traumatic situations (Cooper et al., 2020).

The family and parents have an important role on the students' resilient character development. Their support is vital to the students' success such as creating a regular routine and encourage good study habits. Also help them to set up an environment and space conducive for online learning.

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12. CASE STUDY: Socio-educational implications of technology use during COVID-19: A case study in General Santos City, Philippines Cathy Mae D. Toquero1 | Karen Joy B. Talidong2 Received: 26 April 2020 Revised: 14 July 2020 Accepted: 15 July 2020 DOI: 10.1002/hbe2.214
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REPORT CASE: CADASIL SYNDROME, A QUICK EVALUATIVE CASE IN ICU

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ABSTRACT

CADASIL is an arteriopathy that is due to NOTCH3 mutation that is mainly underestimated and misdiagnosed.

We will report a case of a 59-year-old female that was admitted to the ICU due to rapid evolution of the neurological symptoms, which is unusual for this particular pathology within tachycardia that's not usually found

The exact mechanism of the rapid evolution, still a mystery and could be related to either a new mutation that led to a quicker evolution or another mutation that emphasized the NOTCH3 mutation

Category: Neurology, emergency medicine. Genetic pathology.

KEYWORDS: *Intensive care, rare illness, stroke, microangiopathy, dementia, CADASIL, notch3, genetic*

INTRODUCTION

CADASIL (cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy) is a micro vessel pathology that led to multiple strokes. This arteriopathy is due to a mutation in the NOTCH3 gene.

Analysis of several large, well-characterized CADASIL families demonstrated genetic linkage to a single disease locus on chromosome 19q12. (1)

The most common symptoms of CADASIL are small ischemic strokes, transient ischemic attacks, encephalopathy, epilepsy, depression, apathy and cognitive impairment, appearing in middle age, that may progress to frank vascular dementia(2)

Although CADASIL is thought to be a rare disease with a prevalence in the United Kingdom of 4 in, 100000 (3) and the estimated prevalence of the disease is 1 in 25,000–50,000 (4).

Actually, there is no estimation of CADASIL mortality.

The main source of concern is the cardiovascular risk secondary to it (5) it's frequently misdiagnosed due to its polymorphous clinical features (6).

Now, today, there are no guidelines and no treatment for micro vessel injuries secondary to NOTCH3 mutations. (7)

Reported Case

A 59-year-old female patient with a familial history of strokes at a young age and a personal history of transitory strokes since 2017.

She was presented to the emergency department following an abolition of swallowing reflex, dementia and tachycardia.

All deep tendon reflexes were symmetrically exaggerated. She didn't present cranial nerve palsies or cerebellar signs.

A CT scan was performed describing multiples lacunar images in thalamic and nucleus areas hypodense referring to squelers repetitive ischemic strokes (Fig 1)

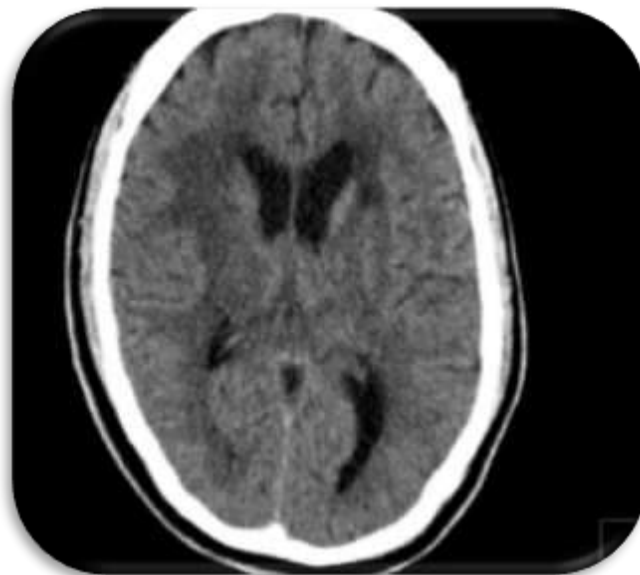


Fig 1: CT Scan of the PATIENT



An initial biological exploration was performed (tab)

HB	14
WC	8x10*3
gly	1
urea	2
crea	12
CRP	20
asat	38
alat	54
K+	3.5
Na+	139
Ca2+	86
VIH	negative
HBV	negative
HCV	negative

Tab : Biological Exams Undertook

CSF direct exam showed leukocyte <5 a Glycemic =0.5 protein at 300.

A PCR of CSF liquid didn't find any trace of herpes The EKG interpretation was sinus tachycardia with a frequency of 125.

An MRI was performed reveals areas of T1 hypo intensity and hyperintensity on T2 and FLAIR on thalamic and nucleus areas associated with small lacunar infarcts. Extensive white matter abnormalities that are reattached to a CADASIL syndrome.

As for the therapy approach, we treated it as a ischemic stroke that was not t.so, we administrated aspirin100mg and worked on preventing secondary brain insults of systemic origin (SBISOs). The patient was transferred to the neurological ward for further explorations

DISCUSSION

CADASIL is a dominant autonomic illness that's pretty challenging to diagnose and for the majority of cases is undiagnosed. Secondary to the NOTCH 3 gene, which encodes a transmembrane receptor. Mutations are highly stereotyped and occur in the extracellular portion of the protein, and add or remove a cysteine residue resulting in disruption of a disulfide bond in one of the epidermal growth factors like (EGF) repeats (8).

Usually, patients manifest the condition before the age of 60 years(9), which is the case for our patient.

We excluded different differential diagnoses such as infectious encephalitis and meningitis with CSF, MRI and biological exam, a metabolic encephalitis secondary to perturbation of urea by biological exam. We left out hepatitis encephalopathy

possibility according to biological exam and clinical exam. Furthermore, we also excluded an ionic disorder as a reason for her consciousness status.

in our case , our patient's MRI lesions were concurring with the literal MRI (10). In literature many methods for diagnosing CADASIL have been suggested. The (MRI) (10), the presence of Granular Osmiophilic Material (GOM) in capillary blood vessels of the skin and muscle on biopsy (11). Finally, genetic of NOTCH3 gene studies play a key diagnostic role (7).

However, the genetic study and skin biopsy were not available in our case.

As mentioned before, there is no guidelines proper to CADASIL. as it generates small ischemic strokes it was treated as an acute ischemic stroke. That was none thrombolized we used aspirin as recommended in guidelines (13,14)

Hypnotically, we can suppose that the tachycardia is secondary to the NOTCH 3 mutation since it impacts the EGF sequence, which plays an important role in revascularization. That leads us to think that CADASIL syndrome may be a multisystemic syndrome with a neurological predominant clinical, especially there is a study that concluded to a potential cardiac risk (12).

CONCLUSION

CADASIL is an atypical pathology and specially in the ICU that is secondary to a mutation of transmembrane receptor that affects EGF repeats, mainly the hypothesis of a systemic effects of CADASIL is a path to explore.

The exact mechanism of the rapid evolution still a mystery and could be related to either a new mutation that led to a quicker evolution or and another mutation that emphasized the NOTCH3 mutation.

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