



INFLUENCE OF EMOTIONAL INTELLIGENCE ON ACADEMIC ACHIEVEMENT IN CHEMISTRY AMONG HIGHER SECONDARY STUDENTS

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ABSTRACT

This study was aimed at exploring the level of influence of emotional intelligence on academic achievement in chemistry among higher secondary students and to examine the prediction of emotional intelligence on social maturity of higher secondary students. The methodology adopts a normative survey study, nine hundred fifty students one district of Dharamapuri of Tamil Nadu, India. Both male and female higher secondary students and using by stratified random sampling technique. The data was analyzed with statistics, percentage and multiple regression. The findings of the study are the level of emotional intelligence and academic achievement in chemistry and of higher secondary students is moderate. The results also revealed that the emotional intelligence is dependent on the social maturity of higher secondary students. Emotional intelligence and is significant predictor of social maturity with the magnitude of 65% of variance.

KEYWORDS: Emotional Intelligence, Academic Achievement in Chemistry, Higher Secondary Students.

INTRODUCTION

Education is a way of increasing attractive behavior, skills and attitudes, which make help, build the personality character, and the behavior of the adolescent to achieve aims and goals of national life. Education has an important role in making the individual mentally healthy, so that he can adjust himself to the world around him exhibiting efficiency, developing satisfaction and socially considerable behavior required for his life. Student has the need to think for effective learning, which varies with the quality of his mental health. The positive or negative dimension of personality makes a big difference in student's accomplishments and delights. Mentally healthy students are considered to be productive, as they enjoy learning and good at self-expression, feel competent and feel esteemed, sustain their efficiency under stress, and find fulfillment in complementary efforts aim towards goals.

EMOTIONAL INTELLIGENCE

Emotional intelligence is the capacity to reason with emotions, to perceive emotion, to integrate it in through, to understand it and manage it. All men are born with some innate emotional intelligence potential in terms of one's level of emotional sensitivity, emotional memory, emotional processing and emotional learning ability. This potential is liable to be developed or damaged as a result of one's life experiences. Emotions are pleasant as well as unpleasant. Unpleasant

emotions like fear, anger, jealousy which are harmful to an individual's development are termed as negative emotions while pleasant emotions like affection (love), amusement, curiosity, joy and happiness which are very help full and essential in the normal development of an individual are termed as positive emotions. Emotional Intelligence can be defined as the abilities concerning the recognition and regulation of emotions in the self and others. It is all about effectively and rightly understanding the emotion of oneself and others. Very often it is viewed as a tool for achieving success in personal as well as in professional life.

ACADEMIC ACHIEVEMENT IN CHEMISTRY

Academic achievement is the important end-product of academic endeavors at all levels of education. The academic achievement of higher secondary students includes their achievement in all subjects such as languages, science, mathematics, social studies, etc. research studies on academic achievement indicate the influence of students' socio-personal factors, family and parental characteristics, nature and type of school or educational institution, cognitive aspects, affective factors, learning style, personality characteristics, etc. Adesokan (2002) asserted that in spite of realization of the recognition given to chemistry, among the science subjects, it is evident that the students still show negative interest, attitude and aptitude towards the subject, which leads to poor performance and low



enrolment. Those who have positive interest, attitude and aptitude toward Chemistry tend to perform well in the subject.

REVIEW OF RELATED LITERATURE

Christine Seebon (2021) compared emotional intelligence and resilience in asset managers during the global pandemic explored through chaos and intentional change theories. Emotional intelligence and resilience are two of the proposed skills applicable in this environment. A nonexperimental, correlational study quantitatively examined asset managers, gathering anonymous demographic, emotional intelligence, and resilience data. The results of the study There was no segregation regarding age, gender, experience, years in the role, or educational background. Hypotheses posed a positive relationship between emotional intelligence and resilience. Zhao, et.al. (2021) focused the mediating role of social support in the relationship between parenting stress and resilience among Chinese parents of children with disability. This study surveyed 486 parents of children with disability in China to understand the role of social support between parenting stress and parents' resilience. The results indicated that the resilience of Chinese parents of children with disabilities was at a high level. Additionally, parenting stress, social support and resilience were significantly associated, and the mediating effect of social support between parenting stress and parents' resilience were proved by mediation analyses.

OBJECTIVES

- ❖ To find out the level of emotional intelligence and academic achievement in chemistry of higher secondary students
- ❖ To examine the influence of emotional intelligence as significant predictor of academic achievement in chemistry of higher secondary students

RESULTS AND DISCUSSION

[a] Levels of Emotional intelligence of Higher Secondary Students

Table - 1

Variable	Low		Moderate		High	
	N	%	N	%	N	%
Emotional Intelligence	92	9.684%	671	70.63%	187	19.15%

- ❖ 92 (9.684%) higher secondary students have low level, 671 (70.63%) have moderate level and 187 (19.15%) have high level of emotional intelligence.

[b] Levels of Academic Achievement in Chemistry of Higher Secondary Students

Table - 2

Variable	Low		Moderate		High	
	N	%	N	%	N	%
Academic Achievement in Chemistry	113	11.89%	663	69.78%	174	18.31%

- ❖ 113 (11.89%) higher secondary students have low level, 663 (69.78%) have moderate level and 174 (18.31%) have high level of academic achievement in chemistry.

HYPOTHESES

- ❖ The level of emotional intelligence and academic achievement in chemistry of higher secondary students of the total sample is moderate
- ❖ Emotional intelligence is not significant predictor of academic achievement in chemistry among higher secondary students

METHODOLOGY

Subjects

The sample constitutes of the students of different higher secondary schools of Dharmapuri district, Tamil Nadu, India. The investigator adopted Normative Survey Method and employed Stratified Random Sampling Technique to recruit the respondents. The sample of the study was 950 higher secondary students from various Government, Government aided and Private schools in Dharmapuri District, Tamil Nadu.

Measures

The following Emotional Intelligence and academic achievement in chemistry tool was developed by the investigator.

Statistical Techniques

In order to analyze the data with suitable statistical techniques, the following statistical technique was adopted in present study.

- ❖ In order to find out the level of emotional intelligence and academic achievement in chemistry of higher secondary students - percentage was used.
- ❖ To examine the prediction of emotional intelligence on academic achievement in chemistry of the higher secondary students - multiple regression was used.



Table - 3

(a) Summary of Regression Analysis of Emotional Intelligence, School Climate and Study Habits of Higher Secondary Students

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.452	0.204	0.202	9.223

The above table - 4 showed the results of Multiple regression of Emotional Intelligence and Social Maturity on Achievement in Chemistry. Model reveals that R (multiple correlation coefficient) value was 0.452. It measures the degree of relationship between the preference of the subjects and the predicted value. R Square (Coefficient of Determination) value

was 0.204. It means that about 64.5% of the variation in preference of subjects is explained by the variation in the independent variables. Adjusted R-squared value was 0.202. It adjusts the statistic based on the number of independent variables in the model. That is the desired property of a goodness of fit statistic.

Table - 4

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2204.908	2	1102.454	17.215	0.01
Residual	247678.988	947	261.541		
Total	249883.896	949			

Durbin – waston (DW) statistics shows 1.939 indicate no auto correction. F- value was 17.215 and p value was significant at 0.01% level.

Table - 5

Co efficient

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	23.633	2.244		10.532	.000	19.226	28.039
Emotional Intelligence	.499	.043	.418	11.480	.000	.414	.585
	-.037	.011	-.119	-3.262	.001	-.059	-.015

From the above table shows that the research variable emotional intelligence had a significant predicting influence on the social maturity of higher secondary students at 0.05% level of significance. It is inferred that among the predictor's emotional intelligence the highest significant standardized beta coefficient, which indicates that it was the most important factor contributing to the social maturity of higher secondary students and followed by other variables respectively. In the raw score form, the equation is

The emotional intelligence is dependent on the social maturity of higher secondary students.

MAJOR FINDINGS OF THE STUDY

- ❖ 92 (9.684%) higher secondary students have low level, 671 (70.63%) have moderate level and 187 (19.15%) have high level of emotional intelligence.
- ❖ 113 (11.89%) higher secondary students have low level, 663 (69.78%) have moderate level and 174 (18.31%) have high level of academic achievement in chemistry.

- ❖ Emotional intelligence and is significant predictor of social maturity with the magnitude of 65% of variance.

EDUCATIONAL IMPLICATION

- ❖ Teachers will be helpful in understanding the level of development of social behaviour among the higher secondary students.
- ❖ It will be helpful for school managers to develop activities for students to develop social responsibility.
- ❖ It will help parents to develop insights to solve the social needs and problems of adolescents.
- ❖ In the study, students should be a very important job of higher secondary school level students for the development of the moral values of healthy life and the strengthening of social maturity, which will help the students.

CONCLUSION

The main aim of the study is to find out the significant difference between influence of emotional intelligence on academic achievement in chemistry among higher secondary



students. The major findings of the study are the level of emotional intelligence and academic achievement in chemistry and of higher secondary students is moderate. The results also revealed that the emotional intelligence is dependent on the social maturity of higher secondary students. Emotional Intelligence is certainly a necessity in today's competitive working environment as long as we are working with humans in every role. Social maturity trend must be maintained and strengthened further for which healthy competitions may be arranged among the higher secondary students in a different social situation. Higher secondary students may be oriented to highlight the day to day incidence being published in the newspapers in the classroom interaction within the students to reinforce Social Maturity.

REFERENCES

1. Adesokan, C. O. (2002). *Students attitude and gender as determinants of performance in JSS Integrated Science*. Unpublished B. Ed Project Chemistry of Nigeria.
2. Ahad, R., Mustafa, M. Z., Mohamad, S., Abdullah, N. H. S., & Nordin, M. N. (2021). *Work attitude, organizational commitment and emotional intelligence of Malaysian vocational college teachers*. *Journal of Technical Education and Training*, 13(1), 15-21.
3. Fathirezaie, Z., Abbaspour, K., Badicu, G., Zamani Sani, S. H., & Nobari, H. (2021). *The effect of environmental contexts on motor proficiency and social maturity of children: An ecological perspective*. *Children*, 8(2), 157.
4. Huang, C., Huang, L., Wang, Y., Li, X., Ren, L., Gu, X., ... & Cao, B. (2021). *6-month consequences of COVID-19 in patients discharged from hospital: a cohort study*. *The Lancet*, 397(10270), 220-232.
5. Malini, K., & Rajkumar, R. (2022). *Different innovative instructional designs for teacher education students*. In A. Muthumanickam & B. Kannan (eds). *Essentials of Techno-Pedagogy* (pp. 60-70). Madurai: Shanlax Publications.
6. Malini, K., (2016) *Innovative Strategies in English Language Teaching*. *Edu Search*, 7, 50-54.
7. Pramono, S. E., Yanto, H., Melati, I. S., Kurniawan, E., & Mahat, H. (2022). *Investigating Young Indonesian Lecturers: The Role of Money, Social Maturity and Stress in Reflecting Teaching Performance*. *Journal of Educational and Social Research*, 12(3), 110-110.
8. Rajkumar, R., & Hema, G. (2016). *Modern mathematics classrooms facilitating innovative teaching methods and learning strategies for 21st century learners*. *Edusearch*, 7, 70-74.
9. Rajkumar, R., & Hema, G. (2018). *Does Mathematical intelligence influence the learning styles of mathematics postgraduate?*. *Frontiers in Education and Research*, 7(2), 31-37.
10. Rajkumar, R., & Hema, G. (2019). *Factors affecting mathematical problem solving competence of undergraduate students in facing competitive examinations*. *IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL)*, 7(2), 319-328.
11. Seebon, C. L. (2022). *A Correlational Study of Emotional Intelligence and Resilience in Asset Managers During the Global Pandemic Explored Through Chaos and Intentional Change Theories* (Doctoral dissertation, Franklin University).
12. Walker, S. A., Double, K. S., Kunst, H., Zhang, M., & MacCann, C. (2022). *Emotional intelligence and attachment in adulthood: A meta-analysis*. *Personality and Individual Differences*, 184, 111174.
13. Zhang, J., Wang, Y., Wu, C., & He, J. (2022). *The relationship between emotional intelligence and eating disorders or disordered eating behaviors: A meta-analysis*. *Personality and Individual Differences*, 185, 111239.