The Relationship between Emotional Intelligence and Academic Achievement among Intermediate Students

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Abstract : *The purpose of the present study was to investigate the level of Emotional Intelligence and also examine the relationship between emotional intelligence and academic performance of Intermediate students. The sample of the study consisted of 300 second year Intermediate girl students of Krishna district, Andhra Pradesh. To measure the emotional intelligence construct the researcher had employed Dr.S.K.Mangal and Mrs.Shubra Mangal's EI Inventory (2004) scale and academic achievement was tested taking into account the past 3 years and current year aggregated pass percentages. A random sampling technique was adopted in this descriptive survey research. The collected data were analyzed using statistical tools like mean, standard deviation, Coefficient of variation, ANOVA and Correlation. The Results indicated a positive correlation between Emotional Intelligence and Academic Achievement of students. The paper discusses the urgent need to integrate Emotional Intelligence as part of education curriculum.*
Keywords - *Academic Achievement, Emotional Intelligence, Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management and Interpersonal Management*

I.   Introduction

The age of instant gratification, zero-tolerance and smart technology draws the attention of the educational psychologists and researchers alike towards an in-depth study of human emotion among adolescents. In this fast pacing world of virtual reality, the traditional ways of living are phasing out quickly leaving the youngsters in great distress and confusion on how to handle their emotions. Their inability to deal with themselves in their emotional highs and lows is having serious repercussions on their personality, academic goals and life as a whole.

In this context, the concept of emotional intelligence plays a significant role. "Emotional intelligence is the ability to perceive emotion, use emotion to facilitate thought, understand emotions and manage emotions."[1].

Emotionally intelligent people "are generally optimistic, flexible, realistic, and successful at solving problems and coping with stress without losing control." [2]

Emotional intelligence impacts one's thoughts, feelings and relationships. The understanding of one's emotions and that of the others empowers persons to manage oneself and manage others irrespective of circumstances. This fact is evidenced by numerous researchers in the past. Yet the EI has been considered a latest phenomenon. "Emotional Intelligence is relatively new and growing area of behavioral investigation; having matured recently with aid of international media attention."[3].

The past century research in this regard has concentrated on the role of IQ in person's success and achievement neglecting the EQ, the non-cognitive process.

It is in the doctoral dissertation of Wayne Leon Payne [4] the word emotional intelligence appeared for the first time in 1985. Later in 1990 Mayer and Salovey developed a scientific way of measuring people's ability in the area of emotions.

[5] Daniel Goleman (1995) contended in his book "Emotional Intelligence, Why it can matter more than IQ," that contribution of IQ accounts only 20% to an individual's success in career and achievement. The rest is added by other factors and most important of them is emotional intelligence skills and faculties.

Emotional Intelligence, in itself, is inadequate to generate most favourable results for youth. However, the use of emotional intelligence by both youth and those who support demonstrates a powerful effect on their lives. Emotional Intelligence turns out to be a core ingredient that when developed and well employed, has long term benefits for learning, relationships and wellness [6]

High emotional intelligence can contribute to a student in the learning process [7] [8]Emotional and social competencies can accurately predict academic achievement [9]. The same understanding has been shared

by Low and Nelson, [10] "emotional intelligence abilities play a key role in academic achievement   and test performance of high school and college students respectively. Academic achievement and emotional intelligence are positively related. [11]

Considering the potential role and   importance of emotional intelligence for academic achievement of students the following previous studies have been reviewed.

II. Review of Literature

Some students easily make a transition from school to a next level while others are at a fix. Since students differ in their cognitive abilities, there is a need to understand better the contribution of EI towards academic achievement. This was examined by [12] Drago (2004) in his study which revealed that non-cognitive factors like EI enhance cognitive abilities of an individual. Hypothesis was tested using Bivariate and multivariate correlation and regression. A significant correlation was found between EI and student GPA, cognitive ability and the age.

In an exploratory study, [13] Bai (2011) examined anxiety proneness and emotional intelligence in relation to academic achievement of pre-university students. A stratified random sampling technique was adopted on a   sample of 500 pre-university students from urban and rural areas of Bangalore belonging to Arts, Science and Commerce. The study revealed that all three streams of students have significant differences in academic achievement, anxiety proneness and emotional intelligence.

In a relationship study, [14] Babli Roy et al. (2013) have examined the emotional intelligence and academic achievement motivation among adolescents.   The sample comprised 105 students (48 boys and 57 girls) from class XII in Patna. It was an attempt to study if   high, average and low academic achievement among the students   was influenced by the emotional intelligence. Product moment coefficients of correlation was used for the analysis. The results revealed that there was a positive relationship between emotional intelligence and academic achievement motivation.

The study of [15]Preeti (2013) was conducted on XI class students of Allahabad city. 156 students (78 boys and 78 girls) participated in the study. Emotional intelligence test tool developed by K.S.Misra and 'Academic Motivation Inventory' by J.P. Srivastava were administered on the sample. Product moment coefficients of correlation and ANOVA were used to analyse the data. Findings of this paper concluded that excellent academic performance does   not guarantee future success without emotional intelligence. An ability to build relations at work place and at college is highly important for quality education and a happy life.

ZeynepKaraman ¨Ozl¨ueta et.al. (2016) [16] attempted to determine and compare the emotional intelligence levels of students in health, social and natural education fields. The sample was drawn from 305 senior students at Atatt Urk University, Turkey. Data were analysed using ANOVA. The results determined a statistically significant difference in emotional intelligence levels of students of health, social and natural groups. Social Sciences appeared to be emotionally stronger than Natural Sciences while Health Sciences showed moderate EI abilities.

Bibi. S et. al. (2016) [17] in their explorative study proved a positive relationship between self-esteem and emotional intelligence among Pakistani university students. Using convenient sampling, the investigation was carried out on a sample size of 250 boys and girls of Islamabad universities. Self-esteem was measured with the help of Rosen berg self-esteem scale while Wong and Law scale employed to measure emotional intelligence. Female students emerged as emotionally intelligent compared to their male counterparts. On the aspect of self-esteem no gender wise significant statistical differences were found among the university students.

III. Objectives of the study

1. To study the level of Emotional Intelligence of Intermediate Students.
2. To study the difference between four domains of EI namely Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management and Interpersonal Management among the Intermediate Students.
3. To make a comparative study between EI scores of MPC and BiPC students.
4. To study the relationship between Emotional Intelligence and the Academic Achievement of Intermediate students.

IV. Hypothesis

H_{02}: There is no significant difference between the four domains of Emotional Intelligence of Intermediate Students.

H_{04}: There is no significant relation between Emotional Intelligence and the Academic Achievement of Intermediate students.

V. Materials and Methods

5.1 Methodology: Keeping in view the objective of the study, descriptive survey method was adopted by the researcher.

5.2 Sample and Sampling Technique**:** Using a random sampling technique the investigator selected a sample of 300 (class XII) second year Intermediate girls of Krishna District, Andhra Pradesh.

5.3 Tools used in the study: Mangal Emotional Intelligence Inventory (2004) was used to collect the data.

5.3.1 Mangal Emotional Intelligence Inventory (2004): For the assessment of Emotional Intelligence Mangal Emotional Intelligence Inventory (2004) developed by Dr.S.K Managal and Mrs.Shubral Mangal was employed. This instrument consists of 100 items. It contains four components each having 25 items. The participants were asked to answer either 'yes' or 'no'. A score of one mark is to be awarded for the response indicating presence of emotional intelligence and zero for the absence of EI. Reliability of inventory was examined through three different methods, namely; Split half method using Spearman – Brown prophecy formula, K-R formula (20), and Test-retest method. Reliability coefficients of the inventory were found to be .89, .90 and .92 respectively. The validity for the inventory has been established by adopting two different approaches, namely factorial and criterion related approach.

5.4 Procedure: The standardized questionnaire on emotional intelligence was distributed to the selected sample with preliminary instructions. The duly filled-in scripts were given scoring as per the directions in the manual. To test the academic achievement of the students their previous 3 years and current year pass percentages were considered.

5.5 Analysis of Data: Statistical tools such as Mean, S.D. Coefficient of variation, ANOVA and Correlation were   administered   to analyse the data.

VI. Results & Discussions

1. To study the level of Emotional Intelligence of Intermediate Students.
The Emotional Intelligence score for total sample was computed as per the scoring in the EI scale.
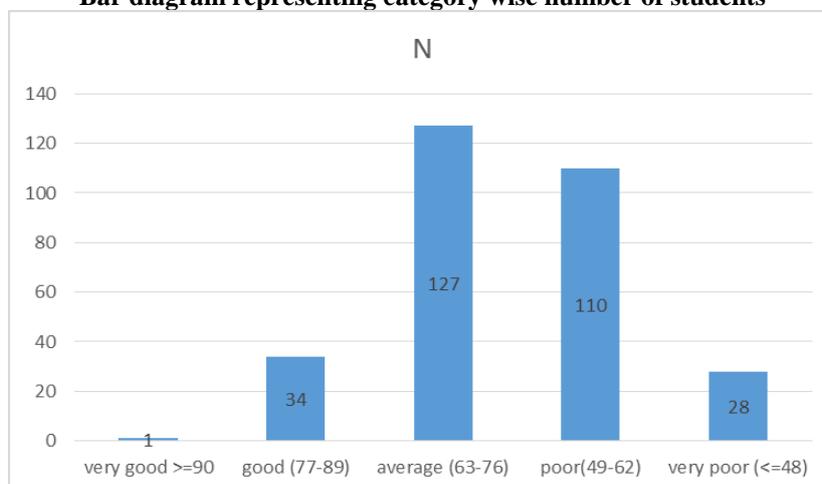
Table. 1

Sample Size	Emotional Intelligence Score
300	63.68

Table. 2
Category Wise Number of Students

Category	No. of Students	Percentage
Very Good (>=90)	1	3.3
Good (77-89)	34	11.33
Average (63-76)	127	42.33
Poor (49-62)	110	36.67
Very Poor (<=48)	28	9.33

Bar diagram representing category wise number of students

Figure. A

From Table.1 it can be observed that the emotional intelligence level of the selected sample is average. On the basis of the scoring given in the Emotional Intelligence scale, 3.3% students have very good emotional intelligence, 11.33% of the students are good in their emotional intelligence , 42.33% students have avearge emotional intelligence, 36.67% students are poor in emotional intelligence and 9.33% students have very poor emotional intelligence.

2. To study the difference between four domains of EI namely Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management and Interpersonal Management among the Intermediate Students.

Table .3

EI Domains	Mean	S.D	'F' Value	Level of Significance	Decision
Intrapersonal Awareness	16.24	6.39			
Interpersonal Awareness	16.42	6.13	3.18588	0.05	Reject Ho
Intrapersonal Management	17.60	5.59			
Interpersonal Management	12.68	7.50			

It is inferred from Table.3 that the respondents Intrapersonal Awareness mean score is 16.24 and S.D is 6.39, their Interpersonal Awareness mean score is 16.42 and S.D 6.13, their mean score in Intrapersonal Management is 17.60 and S.D is 5.59 and their Mean score in Interpersonal Management is 12.68 and S.D is 7.50.

The f-value of 3.18588 is observed for four domains to determine the relative effect of the all the domains on the emotional intelligence of a respondent and is tested at 5 percent level of significance. It is proved that null hypothesis is rejected and a significant difference is identified among four domains.

The selected sample mean score (17.60) in Intrapersonal Management is higher than the other domains and the standard deviation (5.58) is lower than the other domains. Therefore it can be concluded that Intrapersonal Management dimension has a great impact on the overall emotional intelligence of the respondents. It means that the students are knowledgeable about management and regulation of their inner feelings, are optimistic about themselves, have good self-regard, show assertiveness and manage stress in their lives.

This finding is in consonance with the result of the studies by [18] Gottfried (2004) and [19] Maraichelvi and Rajan (2013)

3: To make comparative study between the Emotional Intelligence scores of MPC and BiPC students.

Table .4

Sample Size	Emotional Intelligence Score
252	64.31349

Table .5

Group	N	Mean	S.D	Coefficient of Variation
MPC	195	63.53	10.84	17.05
BiPC	57	67	9.33	13.93

It can be observed from Table.4 that emotional intelligence level of MPC and BiPC students is average. As depicted in table.5 the EI mean score of MPC students is 63.53 and the EI mean score of BiPC students is 67. The Coefficient of variation of MPC group students is 17.05 and Coefficient of variation of BiPC group students is 13.93.

The Coefficient of variation of BiPC group is less than the Coefficient of variation of MPC students. From the findings it can be concluded that BiPC students possess higher emotional intelligence and better EI skills in relation to the MPC students.

These findings are consistent with the results of [20] Aggarwal and Saxena (2012) who reported that science students had better emotional intelligence mean scores compared to arts and commerce students. In another study by [21] Pratama and Corebima (2016) indicated a correlation between EQ and Biology cognitive learning results.

4. To study the relationship between Emotional Intelligence and the Academic Achievement of Intermediate students

Table.6

Relationship between total Emotional Intelligence score and Academic Achievement

Grade	N	EI Score	Academic Score	Correlation
Very Good (>=90)	1	93	91.25	
Good (77- 89)	34	80.67	82.66	0.728592
Average (63-76)	127	69.29	80.32	
Poor (49 - 62)	110	56.46	80.74	
Very Poor (<=48)	28	44.89	81.83	

It is observed from the above table that overall only one respondent is found to be very good in the emotional intelligence and her academic mean score is 91.25 Those who are good in their emotional intelligence have academic mean score of 82.66. The average performers with the academic mean score of 80.32 are also found to be average in their emotional intelligence. The respondents who are poor in emotional intelligence have academic mean score of 80.74. The very poor performers in emotional intelligence are found to have academic mean score of 81.83. The mean score of respondents is found to be decreasing gradually with regard to the level of emotional intelligence except with very poor category of students who have better score in academics.

Calculated 'r' value of 0.728592 suggests a positive correlation between emotional intelligence and academic achievement therefore the proposed null hypothesis is rejected.

The positive correlation indicates that emotional intelligence could significantly predict academic achievement of Intermediate students. As students gain understanding of emotions their performance in academics also increases. The similar results were reported in the study of Parker et al (2004) who investigated the relationship between emotional intelligence and academic achievement in the context of transition from high school to university. The present findings are also in line with the results of [11] Abisamra (2000) and [19] Maraichelvi and Rajan (2013) who found that emotional intelligence and academic achievement were positively correlated.

VII. Major Findings

- Majority of the respondents 42.33% were found to have average emotional intelligence.
- Among the four domains of emotional intelligence Intrapersonal Management domain showed greater impact on the total emotional intelligence of the selected sample.
- The science stream (BiPC) students were reported to have better emotional intelligence abilities in comparison with students of Maths orientation.
- A positive correlation was found between Emotional Intelligence and Academic Achievement of Intermediate students.

VIII. Conclusions

Individuals with high emotional intelligence are aware of their own emotions and that of others, are able to regulate their feelings and are able to use these emotions for the growth and development of their personality. The study on the relationship between emotional intelligence and academic achievement focuses on significance of EI skills in the academic settings of contemporary education system. Students with sound knowledge of emotions are more capable of concentrating on problem solving skills which increases their cognitive abilities. In the present study as the majority of the subjects are found to possess only average emotional intelligence there is a great need to incorporate emotional intelligence as a subject in academics. Giving due consideration even to non- cognitive aspects of an individual improves interpersonal relationships with peers, teachers and parents. Students with Mathematical background focus more on logical reasoning but they need to be given ample opportunities to develop emotional intelligence abilities so as to improve their overall performance. A positive correlation between emotional intelligence and academic achievement in the current investigation suggests to take serious steps to integrate emotional intelligence at all levels of education.

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