

Emotional Intelligence and Academic Achievement: A Study at +2 Level

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ABSTRACT

The present Research aimed at studying the Emotional Intelligence and Academic Achievement of +2 students. The sample constitutes 400 +2 student studying in junior colleges located in Warangal district. Simple random sampling technique was used to select the sample. Descriptive, inferential and correlational statistics techniques were used for analyzing the data. The findings emerged out of the present study suggests that in choosing a career both men and women where Emotional intelligence. There is no significant correlation between emotional intelligence and academic achievement of +2 students.

Keywords: Emotional Intelligence, Academic Achievement, Multiple Intelligence, Emotional Quotient, Emotional hijacking, amygdala

All learning has an emotional base

— Plato

2,000 years ago Plato wrote “All learning has an emotional base”. Since, then a lot of efforts have been put on findings that may prove or disprove the role of emotions.

More often than not, educators, scientists, philosophers and psychologists focused on the cognitive aspects of intelligence such as memory, thinking, attention, perception and problem solving abilities. The oldest theory in origin, the unitary theory or Monarchic Theory proposed by Binet in the beginning of the 19th century stated that intelligence consists of one factor namely, a fund of intellectual competence, which is universal for all the activities of the individual and which could be measured by a single number (IQ).

Charles Spearman a British Psychologist advocating a theory of intelligence based on the factor analytical approach (1923), stated that each intellectual activity

involves a general factor ‘g’ which shares with all the intellectual activities. Spearman also viewed that ‘g’ is innate and is influenced by a number of factors like age, sex, heredity etc. In addition to this, every activity also involves something specific to it called the special factor’s, hence an individual’s performance in a particular aspect is partly due to his general factor ‘g’ and partly due to his specific factor ‘s’. However, there were a number of researchers who recognized early the non-cognitive aspects of intelligence. Edward Lee Thorndike (1930) stated that a Combination of abilities, some of which are motor and involve muscle operations, some involving the use of numbers, images, words, etc., further intelligence particularly at the human level, is reflected in our interaction with others also. Intelligent people get along better with others and are able to establish themselves in groups, this form of intelligence being called as ‘Social Intelligence’.

David Wechsler (1940) the originator of Wechsler Adult Intelligence Scale (WAIS), defined intelligence as the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment, the non-intellective elements, which included affective, personal, and social factors, he later hypothesized were essential for predicting one's ability to succeed in one's life.

Howard Gardner (1983) of graduate school of Education in his book "Frames of mind the theory of multiple intelligence", through his new theory challenged the notion of general intelligence 'g' and questioned how an individual's intellectual capacities could be measured in a single measure of intelligence. He asserted that human intelligence can be better described as a set of individual's multiple abilities, talents and mental skills related to multiple domains of knowledge in a particular setting. Elaborating his pluralistic view of intelligence further, he concluded that there are seven independent types of intelligences (later introduce 8th component) that grow and develop differ in different people, depending upon their hereditary characteristic or environmental experiences.

In 1985, an American psychologist Robert Sternberg Proposed a theory of intelligence by adopting information processing approach, which states that intelligence is made upon three major components, (1) Meta components (2) Performance components (3) Knowledge acquisition components. He concluded that success in life depends more on tacit knowledge than on the explicit knowledge obtained from academic pursuits.

It seems therefore, that until this concept was more seriously studied and elaborated in 1990's there was a long tradition of research and interest on the importance of the non-cognitive dimensions of intelligence and its influence on people's success in their life and work place.

In 1985, Wayne Payne a graduate student at an alternative liberal arts college in USA wrote a doctoral dissertation 'A Study of Emotion; Developing Emotional intelligence, Self-integration, relating to fear, pain and desire' included the term 'Emotional Intelligence' in the title. This seems to be the first academic use of the term emotional intelligence.

The first mention of the phrase 'Emotional Intelligence' was conceptualised in 1990 by two American University Professors. Mayer (University of New Hampshire) and Salovey (University of Yale), who tried to develop a way of scientifically measuring the difference between people's ability in the area of emotions. They found that some people were better than others at things like identifying their own feelings, identifying the feelings of others and solving problems involving emotional issues.

The person most commonly associated with the term emotional intelligence was actually a New York writer namely Daniel Goleman, who brought out a book in the year 1995 named 'Emotional Intelligence' which became very popular and the term became a matter of concern. Goleman stresses that success depends on intelligence and on the control of emotions. IQ alone is no more a measure for success, it only counts for 20% and the rest goes for emotional and social intelligences and luck (Goleman, 1995).

Another researcher Reuven Bar-on developed the first measures of emotional intelligence and used the term 'Emotional Quotient'. Bar-on (1977) tried to explain the concept of emotional intelligence as being concerned with effectively understanding oneself and others, relating well to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands.

Since 1990, emotional intelligence gained considerable attention from the academic community and mainstream of the society. Three competing models of emotional intelligence have merged along with their own corresponding measurement strategy. The pure model emphasizes cognitive ability and relies on an objective, performance based measure of emotional intelligence and the mixed model assesses both cognitive ability and personality traits using self-report measures. Interestingly, although Psychologist identified two emotional intelligence measures (one derived from pure model and other from mixed model) and even after a considerable debate regarding the legitimacy of the construct and the way of its measurement.

Emotional Intelligence – How it works

Individuals have two minds – one that thinks (rational mind) and one that feels (Emotional mind).

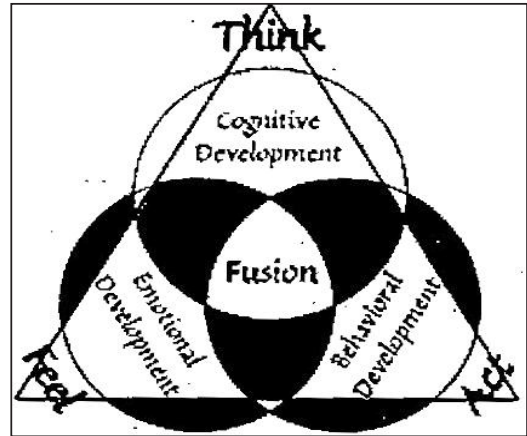
One acts according to their emotional and rational mind. The intellect is based solely on the working of the neo cortex, the more recently evolved layer at the top of the brain. The Emotional centres are lower in the brain in the more ancient sub cortex. Joseph LeDoux a Neuro-Scientist of the centre, 'Neural Science at New York University' made in recent years a land mark discovery about the relationship and interaction of the Emotional and thinking brains. He pinpointed the neural pathways bringing information to the brain through the senses and discovered that information entering through the eyes or ears goes first to the Thalamus, which acts as a mail sorter, deciding which parts of the brain to send the information to. If the incoming information, for instance, is Emotional, the Thalamus sends out two signals – the first to the amygdala – the centre of the Emotional mind, and the second to the neo cortex. Which means that Emotional brain has information first, and in the event of a crisis can react before the thinking brain has even received the information and had a chance to weigh the options. Goleman calls this an Emotional hijacking because it occurs so fast that the thinking brain has no opportunity to grasp what is occurring and decide on the best course of action. The amygdala and neo cortex may sound like perfect partners. They alert sentry signalling danger and the cool strategists selecting prudent courses of action, but the sentry can easily override and powerful emotions can disrupt the ability to think and reason. That's why one complains that we can't 'think straight' when we are upset.

The Relation between Emotional Quotient (E.Q) and Intelligence Quotient (I.Q)

One reason the EQ concept caught so quickly was the belief of Goleman and others that the EQ can be taught, whereas IQ is genetically fixed and less malleable. One of the great contributions of modern neuroscience is the radiations that emotion and cognition actually work together. People with high IQ and low EQ do not function well. However, the reverse is not true (Josh Freedman). It is very important to understand that Emotional intelligence is not the opposite of intelligence. It is not triumph of heart over head. It is the unique intersection of both.

Perhaps the importance of the interface between

cognition, emotion and action may be appreciated better by recalling the balance that has to be maintained between Ghana Yoga, Bakti Yoga and Karma Yoga respectively as mentioned in the ancient Indian scriptures, coming back to the modern academic and professional literature the three Educational Taxonomies involve cognitive, affective and psychomotor (CAP) domain.



To conclude it is worth recalling the four pillars of learning (i.e.) learning to know, learning to do, learning to be, and learning to live together as mentioned in UNESCO's historic report of the "International Commission on Education in 21st Century" – 'Learning the treasure with in'. The last two pillars clearly indicate the 'Emotions' to be evolved and strengthened among students through suitable learning strategies. In short, the formation of emotional skills is much easier in the formative years from birth to the late teens and schools in the Indian context would be the right place to introduce Emotional skills in children.

Academic Achievement

Academic performance is a very broad term, which indicates generally the learning outcome of pupils. Achievement of the learning outcomes requires a series of planned and organized experiences hence learning is called a process. Laudable efforts are being made to raise academic standards this new and troubling deficiency is not being addressed in the standard school curriculum. Teaching emotional and social skills is very important at school. It can affect academic achievement positively not only during the years they are taught, but also during the years that follow as well. Teaching these skills has a long term effect on their achievement.

There is a great need to include lessons to handle the emotions and settling their disagreements peacefully. A frequently faced situation is the loss of memory during the examination in spite of a deep understanding of the subjects. Just because their mood is overflowing with unwanted emotions, the general intelligence is unable to handle. Thus, arises the need to have higher emotional quotient also in order to be absolutely successful at the given task.

Modern era is full of competition. In every field people try to compete with others. The academic pursuit seems to engage as the most important and relevant aspect of life where people try to have an edge over others. All the school machinery, along with parents of school going children, strives to create such an academic environment where excellence is developed and nourished. Academic achievement plays an important role in the success of students in their career. In turn academic achievement of the students is being influenced by many factors such as their motivation, aspiration, mental health, ambition, intelligence etc.

Emotional Intelligence and Academic Achievement

The academic achievement of +2 students depends upon varied factors both subjective and objective (External). Subjective factors include the memory, reading ability, grasping power, the interest to learn etc., while the nature (content) of the course, availability of learning materials, time devoted for study, teachers and parents encouragement are some of the objective factors. More than these, what is mostly forgotten to understand as important is the psychological makeup of the students. This includes motivation, intelligence, learning methods, emotions, personality, attitude, aptitude etc., Among these the emotional intelligence is the important factor that helps students to have better academic achievement.

The skills associate with emotional intelligence develops throughout their life. Family and educational institutions play a vital role in developing emotional intelligence. Basic skills related to handling emotions, settling disagreements amicably and getting along can be improved upon. There is a greater need for systematically and continuously imparting and facilitating students to develop emotional competencies such as self-

awareness, self-context, self-confidence, empathy, hesitancy, resolving conflict and cooperation.

It is understood from different studies that individuals with high academic achievement have higher self-esteem and emotional intelligence. They are better liked by the group have more friends and are more active socially which predicts their future career also. +2 is a crucial stage of education ladder where the adolescent students pursue the programme. Adolescence is a stage of stress and strain which requires a lot of support from the parents, teachers and society at large. Any negligence at this stage will not only cost the future of the students, but also become a threat to the harmony in the society. Therefore it is felt that a study of this nature will throw light in understanding how the emotional intelligence, will pave the way for turbulence-free life of the students.

Need and Importance of the Study

The present study attains more importance in the States like Telangana and Andhra Pradesh wherein the +2 education is totally captured by corporate institutions. These corporate institutions always aim at scoring more marks without caring the psychological dimensions of the students pursuing +2 level Education. This type of over-emphasis on securing more marks ultimately leads to the development of lopsided personality. This can be perceived in terms of high rate suicides among the +2 students. Therefore, there is an urgent need to study the importance of psychological factors particularly at this stage of education which in turn prepares the youth for building a harmonious and well-organized society free from social contradictions and other social aberrations.

Statement of the Problem

In the light of the above discussion the problem for the present study has been specifically stated as '*Emotional Intelligence and Academic Achievement – A study at +2 level.*

Objectives of the Study

The present study has been taken up with the following objectives:

- ❑ To study the distribution of emotional intelligence among +2 students.

- ❑ To study the distribution of academic achievement among +2 students.
- ❑ To study the effect of Demographic variables of +2 students on their emotional intelligence, stress and academic achievement.
- ❑ To find out the relationship, if any, between the emotional intelligence scores and academic achievement scores of +2 students.

Hypotheses of the Study

Based on the objectives mentioned above the researcher formulated the following hypotheses:

- ❑ There is no statistically significant difference among different sub groups of +2 students in their emotional intelligence.
- ❑ There is no statistically significant difference among different sub groups of +2 students in their academic achievement.
- ❑ There is no statistically significant relationship between the emotional intelligence and academic achievement of +2 students.

Delimitations of the Study

Due to certain reasons, which were beyond the purview of the researcher, the present study was conducted with the following delimitations:

- ❑ The study was delimited to only few demographic variables related to the +2 students.
- ❑ The study was restricted to the +2 students those who have completed 1st year and entered into 2nd year.
- ❑ The sample was confined to +2 students from 8 Junior colleges (4 government and 4 private Junior colleges) located in Warangal district.

Methodology

The present study primarily aimed at studying the Emotional intelligence, academic achievement of +2 students. In order to obtain pertaining information from the selected sample it was decided in consultation with the academicians in the discipline of education, that the most suitable and appropriate method is 'Descriptive Survey'. Further this method is useful for researcher who preferred to observe and experience the operational aspects of the identified variables in their natural and realistic

perspective. Therefore, the researcher has chosen the survey method as a method of research for the present study.

Sample of the Study

A sample of 400 +2 students were selected from Junior colleges located in and around Warangal city of Telangana State. The selected sample includes 152 boys and 248 girls, out of which 150 students are from government junior colleges and 250 belong to private junior colleges. Among the sample selected 180 students belong to MPC stream, 175 belongs to BPC stream, 14 belongs to MEC and 31 students belong to CEC stream.

Development of the Tool

The researcher adopted a standardized scale prepared by Schutte *et al.* (1998) to measure the emotional intelligence of +2 students in American country. The Schutte Emotional Intelligence scale is standardized by Nutan Kumar Thingujam and UshaRam in Indian context. The norms and standards were fixed for Indian +2 students.

Reliability of the Emotional Intelligence Scale

The Emotional Intelligence Scale consisting of 33 items was administered on the selected sample. The scores of odd items (17 items) and the scores of the even items (16 items) were quantified by using appropriate statistical techniques.

The reliability of and Emotional Intelligence Scale are tested by employing various methods of reliability namely:

1. Split-Half method (odd – even)
2. Spearman Brown Prophecy formula

Table Showing the Reliability Coefficient of Emotional Intelligence Scale

Sl. No.	Reliability Method	N	Reliability coefficient
1	Split – Half method (Odd – Even)	100	0.71
2	Spearman Brown Prophecy	100	0.83

From the above table, the reliability coefficient is found to be 0.71 in the split half method and 0.83 in the Spearman Brown prophecy. The split half

reliability of Emotional Intelligence is 0.89 which was the original American scale developed by Schutte *et al.* The same scale was standardized in Indian context by Nutan Kumar and Usha Ram with an Alpha coefficient of 0.89. The obtained reliable coefficient for the Emotional Intelligence Scale used by the researcher is 0.83, also seems to be nearly equal indicating that the test is reliable enough.

Validity of Emotional Intelligence Scale

To establish the validity of the constructed tool one may use the formula i.e., square root of reliability. Guilford (1950) defined validity as “the degree to which a test measures what it intend to measure”. This can also be stated in terms of how well the obtained scores measures the test’s true score components.

$$\text{Validity of the test} = \sqrt{\text{Reliability}}$$

$$\text{Validity of Emotional Intelligence Scale} = \sqrt{0.71} = 0.84$$

Hence, it can be said that the tools on hand are fairly valid.

Data Collection Procedure

The researcher personally visited (8) Junior colleges located in and around Warangal city, Telangana State, with the research tools.

After obtaining permission from the Head of the Institution the investigator explained the purpose of each and every questionnaire to the subjects. The questionnaires were distributed to the +2 students and they were asked to complete all the biographical entries in the space given. The researcher clarified the doubts of the students while filling the questionnaires. The filled-in questionnaires were returned and the data for each question has been quantified and tabulated in order to test the hypothesis formulated for the study.

Statistical Techniques Applied for Data Analysis

For the purpose of data analysis, the researcher used SPSS (Statistical Package for Social Sciences) 12th Version. The following statistical techniques were used in the computation of the collected data.

- ❑ Descriptive statistical analysis like mean, median, mode, Quartile deviation, Standard deviation, Kurtosis and Skewness were used

to describe the distribution of Emotional Intelligence, Academic achievement among +2 students.

- ❑ Graphs such as frequency polygons and bar diagrams have been used to compare the performance of +2 students with respect to different variables.
- ❑ Inferential statistics, like the ‘t’ test and ANOVA (f-ratio) are applied to test whether there exists any significant difference among the sub groups of +2 students on the basis of their demographic variables.
- ❑ Correlational statistics like, the Pearson correlation, was used.

Analysis of +2 Students Scores on Emotional Intelligence Scale

- ❑ Based on the scores obtained in the emotional intelligence test, the researcher categorized the +2 students into five categories (i.e.) 103 subjects (25.75%) fall in below average category, 224 members (56%) fall under average category, 57 members (14.25%) are falling under above average category, 15 members (3.75%) under superior category. Only one member of (0.25%) is in superior category.
- ❑ Nearly half of the subjects (56%) fall under average category, so it can be concluded that the emotional intelligence of +2 students is average.
- ❑ The mean, median and mode scores of +2 students on emotional intelligence test are nearly equal. The distribution is negatively skewed. The Kurtosis of the distribution is 2.418, which is more than the normal distribution. Hence, the distribution is platykurtic.

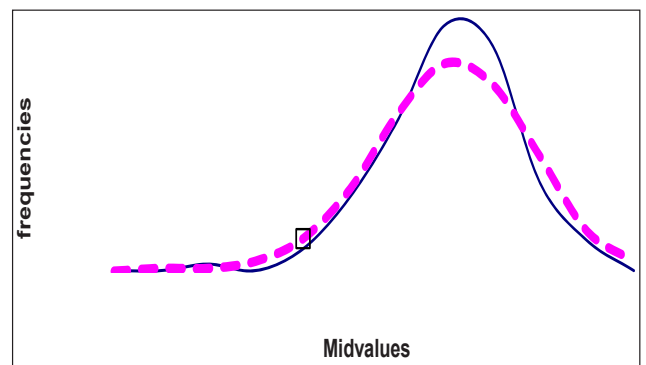


Fig. 1: Original and Smoothed frequency polygon — Original ----- Smoothed

Table 1: Distribution of Emotional Intelligence Scores of +2 Students

Variable	N	Mean	Median	Mode	SD	SE	Skew	Kurt	Range	Max. Score	Min. Score
Emotional Intelligence Scores	400	125.33	127	126	15.13	.757	-.933	2.418	109	51	160

Analysis of +2 Students’ Scores on Academic Achievement

The marks secured by the +2 students in their annual board examinations are considered as the academic achievement scores 146 (36.05%) of +2 students have secured above 80% of marks.176 (44%) of +2 students secured between 70 to 80% of marks. 74 (18.25%) of +2 students scored between 50 to 69% and 4 (1%) of +2 students secured below 45% of marks.

The mean, median and mode scores of +2 students on academic achievement are nearly equal. The distribution is negatively skewed, the kurtosis of the distribution is -.150, indicating that the distribution is leptokurtic.

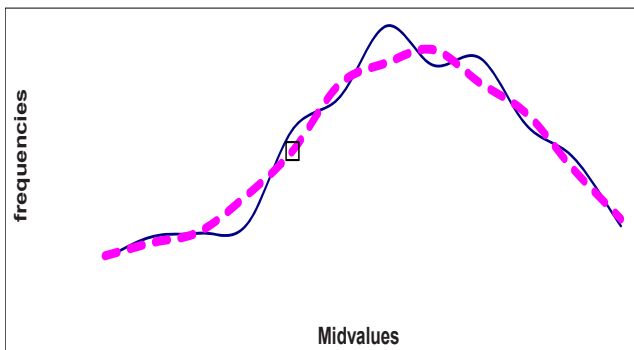


Fig. 2: Original and Smoothed frequency polygon
Original ----- Smoothed

Table 2: Distribution of Academic Achievement of +2 Students

Variable	N	Mean	Median	Mode	SD	SE	Skew	Kurt	Range	Max. Score	Min. Score
Academic Achievement	400	75.53	75.64	72.73	11.90	.595	-.343	-.150	57.39	40.96	98.30

Table 3: Mean, SD’s and Results of t-test on Emotional Intelligence of the Subjects with Respect to their Gender

Variable	N	Mean	SD	S.E	t-value	LOS
Boys	152	126.57	13.44	1.09	1.27	N.S (0.05)
Girls	248	124.58	16.05	1.02		

The Effect of Personal Variables of +2 Students on Emotional Intelligence

Hypothesis 1: There is no Significant Difference in the Emotional Intelligence of +2 Students on the Basis of their Gender

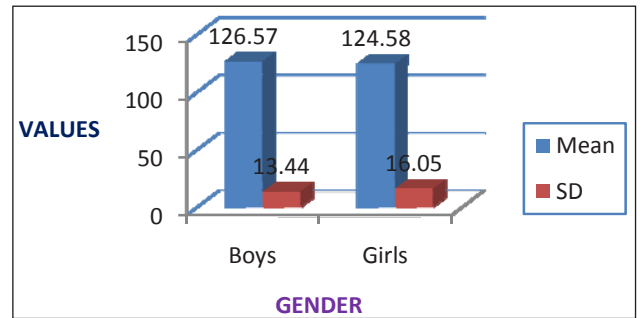


Fig. 3: Graphical Representation of Mean and Standard Deviation Scores Pertaining to Gender

The table 3 shows the distribution of Emotional intelligence test scores of +2 boys and girls. The size of the sample is 400 out of which 152 are boys and 248 are girls.

The mean scores of boys is 126.57. The standard deviation is 13.44 with a standard error of mean as 1.09. The mean scores of girls is 124.58. The standard deviation of the scores is 16.05 with a standard error of the mean being 1.02.

It is observed that the mean scores of boys and girls differ with regard to their Emotional intelligence. The standard deviation scores of boys is less than the girls, and the standard error of boys and girls are equally consistent. The calculated 't' value of +2 boys and girls is 1.27 which is less than the table value (1.97) at 0.05 level. Hence, the framed null hypothesis is accepted.

Therefore, it may be concluded that there is no significant difference in the Emotional intelligence scores of +2 students on the basis of their gender.

Hypothesis 2: There is no significant difference in the Emotional intelligence of +2 students vis-à-vis their branch of study (M.P.C., B.P.C., M.E.C and C.E.C).

Table 4: Mean, SD's and Results of t-test on Emotional Intelligence of the Subjects with Respect to their Branch of Study

Category	N	Mean	Median	SD	S.E
M.P.C	180	122.73	125.50	16.53	1.23
B.P.C	175	128.63	129.00	13.14	.994
M.E.C	14	126.57	127.50	16.42	4.39
C.E.C	31	121.26	122.00	13.12	2.35

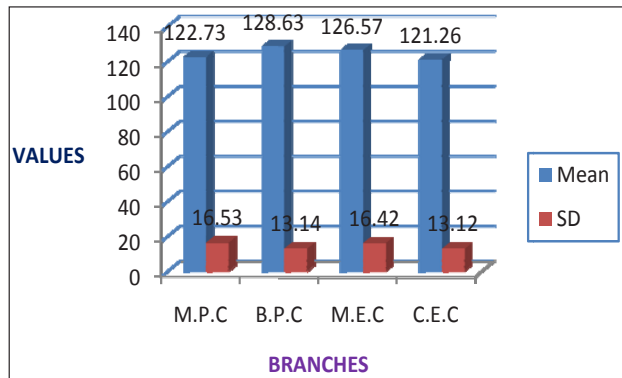


Fig. 4: Graphical Representation of Mean and Standard Deviation Scores Pertaining to their Branch of Study

The table 4 shows the distribution of the Emotional Intelligence test scores of +2 students on the basis of their branch of study. The mean and the median scores of students studying in MPC group are 122.73 and 125.50 respectively. There is slight difference between the mean and the median scores. The standard deviation of the score is 16.53 with a standard error of 1.23.

The mean and the median scores of B.P.C students are 128.63 and 129 respectively. The mean and the median scores are almost the same which shows that

the distribution is normal. The standard deviation of the score is 13.14 with a standard error of .994.

MEC students mean and the median scores are 126.57 and 127.50 respectively. The mean and the median scores are almost same which shows that the distribution is normal. The standard deviation of the score is 16.42 with a standard error being 4.39.

The mean and the median scores of CEC students are 121.26 and 122.00 respectively. The mean and the median scores are almost the same which shows that the distribution is normal. The standard deviation of the score is 13.12 with a standard error of 2.35.

The mean score of the BPC students is more than the mean score of the students studying MPC, MEC and CEC, which shows that the students studying biology are higher in emotional intelligence when compared with other students. The standard deviation of BPC and CEC students are low when compared with other students showing consistency in the distribution of the scores.

To see, whether the apparent differences in their mean scores of emotional intelligence test is statistically significant, the researcher would like to test the above stated hypothesis.

Table 5: Showing the Analysis of Variance Between and Within Groups

Sl. No.	Source of Variance	Sum of Squares	Degrees of freedom	Mean squares	F-ratio	LOS
1	Between Group	3665.158	3	1221.71	5.518	S**
2	Within Group	87681.619	396	221.418		

** (0.01) level

The table 5 shows the analysis of variance between and within four groups of study. The mean square values for both the source of variance are 1221.71 and 221.418 respectively. The calculated 'f' ratio is 5.518, which is greater than the table value (3.83) at 0.01 level. Hence, the framed null hypothesis is rejected.

Therefore, it may be concluded that there is a significant difference in the Emotional intelligence of +2 students vis-à-vis their branch of study.

Hypothesis 3: There is no Significant Difference in the Emotional Intelligence of +2 Students Studying Under Different Managements (Government and Private)

Table 6: Mean, SD's and Results of t-test on Emotional Intelligence of the Subjects Studying under Different Managements

Sl. No.	Variable	N	Mean	SD	S.E	t-value	LOS
1	Govt.	150	120.12	16.87	1.379	5.53	S**
2	Private	250	128.46	13.0	.826		

** (0.01) Level.

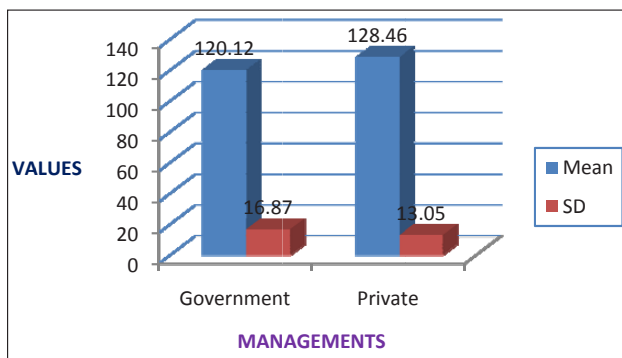


Fig. 5: Graphical Representation of Mean and Standard Deviation Scores Pertaining to Managements

The table 6 shows the distribution of Emotional intelligence test of +2 students studying in different colleges. The mean scores of students studying in government colleges is 120.12. The standard deviation of the score is 16.87 with a standard error of mean being 1.37.

The mean scores of students studying in private colleges is 128.46. The standard deviation of the score is 13.05 and the standard error of the score is .826.

The mean scores of students studying in private colleges is more than the students studying in government colleges. This shows that these students have high emotional intelligence. The standard deviation of private students is less when compared to the government students, which shows consistency in the scores.

The calculated 't' value is 5.53 which is greater than the table value (2.59) at 0.01 level. Hence, the framed null hypothesis is rejected.

Therefore, it may be concluded that there is a significant difference in the emotional intelligence of

+2 students studying under different managements.

The Effect of Personal Variables of +2 Students on their Academic Achievement

Hypothesis 4: There is no Significant Difference in the Academic Achievement of +2 Students on the Basis of Their Gender.

Table 7: Mean, SD's and Results of t-test on Academic Achievement of the +2 Students with Respect to their Gender

Variable	N	Mean	SD	S.E	t-value	LOS
Boys	152	75.52	13.26	1.07	.005	N.S (0.05)
Girls	248	75.5	11.01	.699		

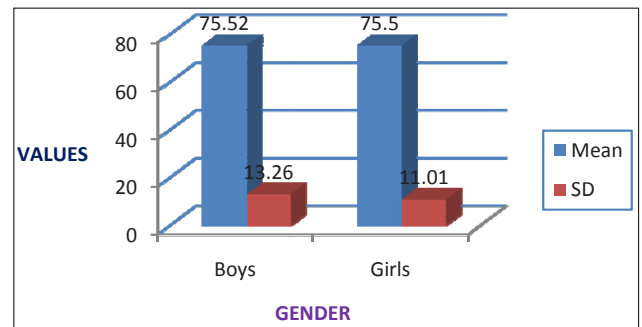


Fig. 6: Graphical Representations of Mean and Standard Deviation Scores Pertaining to Gender

The table 7 shows the distribution of academic achievement test scores of +2 boys and girls, the size of the sample is 400, out of which 152 are boys and 248 girls.

The mean scores of boys are 75.52. The standard deviation of the scores is 13.26 and the standard error of mean being 1.07.

The mean scores of girls are 75.5. The standard deviation of the score is 11.01 and the standard error of mean is 0.699.

It is observed that the mean scores of both boys and girls are almost equal, which shows that the distribution is normal. The standard deviation of boys is more than that of girls, which shows consistency in the scores.

The calculated 't' value of +2 boys and girls is .005 which is less than the table value (1.97) at 0.05 level. Hence, the framed null hypothesis is accepted.

Therefore, it may be concluded that there is no significant difference in the academic achievement of +2 students on the basis of their gender.

Hypothesis 5: There is no Significant Difference in the Academic Achievement of +2 Students vis-a-vis their Branch of Study (MPC, BPC, MEC and CEC)

Table 8: Mean, SD's and Results of t-test on Academic Achievement of +2 Students with Respect to their Branch of Study

Category	N	Mean	Median	SD	S.E
M.P.C	180	77.24	77.34	11.62	.866
B.P.C	174	74.21	74.32	12.24	.925
M.E.C	14	82.34	81.20	5.06	1.35
C.E.C	31	69.92	70.20	10.72	1.92

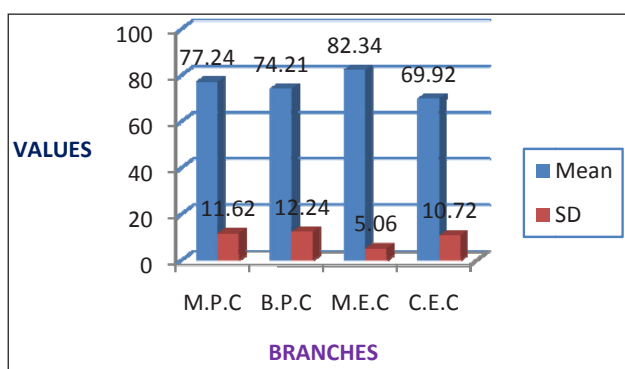


Fig. 7: Graphical representations of Mean and Standard deviation scores pertaining to their branch of study

The table 8 shows the distribution of the academic achievement scores of +2 students on the basis of their branch of study. The mean and the median scores of students studying in MPC group are 77.24 and 77.34 respectively. The scores are nearly equal indicating that the distribution is normal. The standard deviation of the score is 11.62 with a standard error of .866.

The mean and the median scores of B.P.C students are 74.21 and 74.32 respectively, the mean and the median scores are almost the same which shows that the distribution is normal. The standard deviation of the score is 12.24 with a standard error is .925.

The MEC students mean and the median scores are 82.34 and 81.20 respectively. The mean and the median scores are almost the same which shows that the distribution is normal. The standard deviation of the score is 5.06, with a standard error being 1.35.

The mean and the median scores of CEC students are 69.92 and 70.20 respectively. The mean and the

median scores are almost equal, which shows that the distribution is normal. The standard deviation of the score is 10.72, with a standard error of 1.92.

The mean and the median scores of MEC students are higher than the other branch students, which show that they are securing good marks when compared to the others. The standard deviation of these students is very low when compared with other students, showing consistency in the distribution of the scores.

To see whether the apparent differences in their mean on academic achievement is statistically significant, the researcher would like to test the above stated hypothesis.

Table 9: Showing the Analysis of Variance

Sl. No.	Source of Variance	Sum of Squares	Degrees of freedom	Mean squares	f-ratio	LOS
1	Between Group	2455.20	3	818.40	5.993	S**
2	Within Group	54074.187	396	136.55		

** (0.01) level.

The table 9 shows the analysis of variance between and within four groups of study. The mean squares for both the source of variance are 818.40 and 136.55 respectively. The calculated 'f' value is 5.99 which is greater than the table value (3.83) at 0.01 level. Hence, the framed null hypothesis is rejected.

Therefore, it may be concluded that there is a significant difference in the academic achievement of +2 students vis-à-vis their branch of study.

Hypothesis 6: There is no Significant Difference in the Academic Achievement of the Subjects Studying in Colleges Under Different Management (Government and Private)

Table 10: Mean, SD's and Results of t-test on Academic Achievement of +2 Students Studying under Different Management

Variable	N	Mean	SD	S.E	t-value	LOS
Govt.	150	76.65	11.70	.955	1.457	N.S (0.05)
Private	250	74.86	11.39	.758		

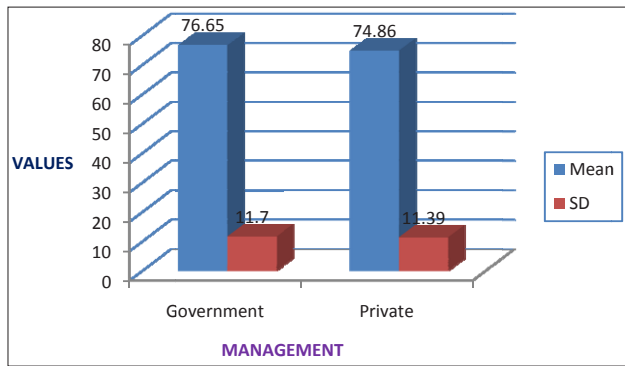


Fig. 8: Graphical Representation of Mean and Standard Deviation Scores Pertaining to Management

Table 10 shows the distribution of academic achievement of the subjects studying under different management. The mean scores of students studying in government colleges is 76.65. The standard deviation of the score is 11.70 and the standard error of mean is .955.

The mean scores of +2 students studying in private colleges is 74.86 the standard deviation of the scores is 11.39, the standard error of mean is .758.

The above table clearly shows that the mean scores of +2 students studying in government and private colleges are 76.65 and 74.86. The standard deviation scores are 11.70 and 11.99. The standard error of mean are .955 and .758 respectively.

The calculated 't' value is 1.457 which is less than the table value (1.97) at 0.05 level. Hence, the framed null hypothesis is accepted. Therefore, it may be concluded that there is no significant difference in the academic achievement of +2 students studying in colleges managed by both government and private.

Correlation Matrix

The relationship between the emotional intelligence scores, stress scores and academic achievement scores of +2 students are presented in the form of a correlation matrix.

It is observed from the table 11 that the corresponding of values between emotional intelligence and academic achievement scores of +2 students is -0.044 respectively. The corresponding values are less than the table value (0.098) at 0.05 level, which indicates that there is no significant correlation between emotional intelligence and academic achievement of +2 students.

Table 11: Showing the Correlation Between Emotional Intelligence and Academic Achievement Scores of +2 Students.

Variable	Emotional Intelligence	Academic Achievement
Emotional Intelligence	1.00	-0.044
Academic Achievement	—	1.00

Major Findings of the Study

- ❑ There is no significant difference in the mean scores of boys and girls on the emotional intelligence. This finding is consistent with earlier research. (Roberts (2002) wherein he noted that there was no gender difference on Emotional Intelligence. However, few studies were identified Saroj (2003) who differed with the above results stating that the males score higher than their counter parts.
- ❑ Schutte *et al.* (1998) reported that women scored significantly higher than the men. Golman (1995) reported that females are more skilled at Emotional Expression. Though females in general are trained to be more nurturing, understanding, cool and are in a better position to understand emotions and express it at appropriate time. The findings emerged out of the present study suggests that in choosing a career both men and women where Emotional intelligence is found to be more important.
- ❑ There exists a significant difference in the mean scores of MPC, BPC, MEC and CEC students. The mean scores of BPC students was more than the mean scores of students studying MPC, MEC and CEC, which shows that the students studying biology are emotionally intelligent when compared with students studying in other groups.
- ❑ It was observed that there is a significant difference in mean scores of the subjects studying in government and private managements. The mean scores of students studying in Private colleges are more than the students studying in Government colleges. That this shows these students are more emotionally intelligent. The obtained results are in tune with the study taken up by Darsana (2007). The findings are that there are significant difference between

government and private institutions with respect to emotional perception, emotional felicitation of thought and emotional intelligence.

- ❑ The mean scores of both boys and girls on academic achievement are almost equal. However, the study conducted by Jyothi Sardar (2015) on the level of aspiration and academic achievement motivation among adolescents concluded that the Goal Discrepancy Scores (GDS) of boys was higher than that of girls, assuming that some environmental determinants like Social Expectations, Parental Ambition, Peer Pressure, Social Values affect the level of aspiration.
- ❑ There exist a significant difference is the academic achievement of the subjects with reference to the branch of study. MEC students have secured highest marks when compared to the other branch students i.e., BPC, MPC and CEC students.
- ❑ The mean scores of students studying in colleges managed by both Government and Private are almost equal. However, the results obtained from the study conducted by Rekha Yadav (2015) revealed that there is a significant difference in the study habits and academic achievement of students where Government school students are having better study habits and achievement when compared to the students of Public schools.
- ❑ The coefficient of correlation between emotional intelligence and academic achievement of +2 students is -0.044 indicating indifferent or negligible relationship between emotional intelligence and academic achievement. The obtained results are in line with studies conducted by Vandana. V Jadhav (2010) and Suresh Kumar (2009) whose findings revealed that there is no significant relationship between emotional intelligence and academic achievement.
- ❑ The research findings of the studies conducted by James D.A. Parker (2004), Monica Mahayan (2011), Usha (2009) Abraham (2014) Meena Sehgal (1999), Naida Abisamra (2001), Anjum Sabia, K. Srivasthava (2005), Ajay Kumar Bhimrao (2006) Darsana (2007) revealed that there is a direct significant relationship

between emotional intelligence and academic achievement.

Educational Implications

+2 stage which is popularly called in the state of Telangana and Andhra Pradesh as intermediate education is crucial and sensitive phase in one's life and education. The achievement at this stage by a student will determine the future academic and social life. Hence, the parents, teachers and community at large lay an unprecedented emphasis on this stage of education. In a run to achieve better grades the young adolescent students fall a pray with several socio-psychological constraints. Such a situation leads to emotional outburst and unwarranted stress among the youth. Sometimes this type of complex situation may lead to withdrawal of hope on the future and may also drive them suicide. To avert such an unwarranted situation the present day educational researchers are focusing on identifying such specific psychological traits and other socio-economic factors which influence the achievement of the students. The present study is also in tune with the above mentioned pursuit. Therefore, the emergence of conclusions of the present study will be immensely useful for the planners and practitioners at +2 stages to achieve better academic results among the students.

The present study has clearly explored the fact that emotional intelligence and stress among +2 students do have a vital impact on their academic achievement. Therefore, the teachers and the parents should take both the emotional intelligence and stress into consideration and strive to create a congenial environment where in the students can make use of their emotional intelligence for their better upcoming and keeping the stress under control without allowing it to cause any damage to their academic pursuits and personality development.

In view of the above mentioned implications, the curriculum planners and practitioners at the +2 level should attend to the emotional intelligence and stress for academic achievement. The curricular and co-curricular activities are to be planned in such a way that the emotions of the students are properly addressed. Further, to create a stress-free mind and balanced emotions yoga should be integrated in all the activities of the institution at this level. One

should realize that the sound and sharp mind is the pre-requisite for better academic achievement. Therefore, the education at +2 should address along with the knowledge-based disciplines the physical, mental, vital, psychical and spiritual dimensions of education are to be made compulsory. This can be effectively realized by way of extensively practicing yoga and meditation. Not only the students perform better but also emerge themselves as the individual with integral personality.

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