

Relationship Between Emotional Intelligence and Math Abilities among Secondary School Students

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Abstract

The present study has an objective to study relationship between Emotional Intelligence and Math Abilities Secondary School Students. A total of 494 students of secondary school students are selected from Chikodi educational district. Emotional Intelligence scale developed by Ankool Hythe, Pithe & Dhar and Math Abilities Test prepared and standardized by Researcher were used for data collection. The data were systematically analyzed with according to the study objectives and study hypotheses by interms of descriptive analysis by using SPSS 20.0 statistical software and the results obtained there by have been interpreted. The total mean of emotional intelligence scores is 136.84 ± 11.59 , in which, the girl students (138.35 ± 10.60) of secondary schools have higher emotional intelligence as compared to boy students (135.33 ± 12.33) of secondary schools. The total mean of math abilities scores is 43.89 ± 15.43 , in which, the girl students (45.44 ± 14.64) of secondary schools have higher math abilities as compared to boy students (42.34 ± 16.06) of secondary schools.

Math Ability

Math ability is an instinctive tendency to approach a problem in different ways; even if a problem has been already solved; a child is keen to find an alternative solutions.

Ability to utilize analogies and make connections preparedness to link two or more elementary procedures to construct a solution to a multi-step problem. Ability to recognize what it means know for certain

Emotional Intelligence.

- Hatzes(1996) conceptualized emotional intelligence to include ability manage emotions, persistence, interpersonal skills, empathy, positive reframing, and explanatory style.
- Weisinger,(1998) through EI the intelligence use of emotions, you internationally make your emotions work for you by using them to help guide your behavior and thinking in ways that enhance your results..

Components of Emotional Intelligence

Based on extensive research, Goleman (1995, 1998) has proposed five dimensions of Emotional Intelligence consisting of 25 competencies namely.

1. Self-awareness; emotional self-awareness, accurate self-assessment and self-confidence. 2. Self-regulation; self-control, trustworthiness, conscientiousness, adaptability and innovation. 3. Self-motivation; Achievement drive, commitment, initiative and optimism. 4. Social-awareness; understanding others, developing others, service orientation, leveraging diversity and political awareness. 5. Social skills; influence, communication, conflict management, leadership, change catalyst, building bond, collaboration and team capabilities. Emotional intelligence and its components (i.e. self awareness, empathy, self motivation, emotional stability, managing relations, integrity, self development, value orientation, commitment and altruistic behavior).

Components of Math abilities:

Math abilities and its components i.e. knowledge abilities, comprehensive abilities, application abilities, analysis abilities, reasoning abilities and inductive & deductive abilities.

Objectives Of The Study:

The present study was designed with the following general objectives in view:

1. To study the relationship between boys & Girls Secondary School Students Emotional Intelligence factors and Math Abilities

2. To study the relationship between Urban & Rural Secondary School Students emotional intelligence factors and Math Abilities.
3. To study the relationship between Government & Private Secondary School Students Emotional Intelligence factors and Math Abilities.
4. 4.To the study the relationship between Kannada, English, Marathi and Urdu medium Secondary School Students Emotional Intelligence factors and Math Abilities.

Population, Sample And Sampling Technique :

The population for the present study was all those students who were studying mathematics subject at secondary schools in Chikodi Educational District. Sampling was done in order to get school representation and the student representation. 50 secondary schools were drawn randomly among the government and private schools. The students were drawn in such a way that the students studying mathematics subject alone could be included in the sample. Thus 494 students studying mathematics subject in secondary schools were drawn as the sample. Therefore the technique of sampling adopted was stratified random sampling technique in the case of students and random sampling technique in the case schools.

Variables:

Dependent variable: Math Abilities

Independent variable: Emotional Intelligence

Moderate variables: Gender, locality, type of management, mediums.

Hypothesis Of The Study:

The following hypothesis were used for the study:

1. There is a significant relationship between Emotional Intelligence factors and Math Abilities of Secondary School Students.
2. There is significant difference between Emotional Intelligence factors and Math Abilities of Urban & Rural Secondary School Students.
3. There is no significant difference between Emotional Intelligence factors and Math Abilities of Urban & Rural Secondary School Students..
4. There is a significant difference between Kannada, English, Marathi and Urdu medium Emotional Intelligence factors and Math Abilities of Government & Private Secondary School Students ..
5. There is no significant difference between Kannada, English, Marathi and Urdu medium Emotional Intelligence factors and Math Abilities of Private Secondary School Students .

Tools Used For The Data Collection :

The following tools were used for the following data.

1. Emotional intelligence scale developed by Ankool Hythe, Pithe and Dhar(2002)
2. Math Abilities Test constructed by investigator.

Statistical Techniques Used :

After the data had been collected, it was processed and tabulated using Microsoft Excel - 2007 Software.

Table: 1. Mean and SD of emotional intelligence and its components by boy and girl students of secondary schools

Variables	Summary	Boys	Girls	Total
	n		247	247
Emotional intelligence	Mean	135.33	138.35	136.84
	SD	12.33	10.60	11.59
Self awareness	Mean	16.55	16.93	16.74
	SD	2.07	1.82	1.96

Empathy	Mean	19.26	19.74	19.50
	SD	2.84	2.48	2.67
Self motivation	Mean	24.04	24.72	24.38
	SD	2.74	2.57	2.68
Emotional stability	Mean	15.76	16.18	15.97
	SD	3.23	2.51	2.90
Managing relations	Mean	15.49	15.69	15.59
	SD	2.81	2.61	2.71
Integrity	Mean	11.95	12.07	12.01
	SD	2.03	1.84	1.94
Self development	Mean	8.04	8.26	8.15
	SD	1.30	1.22	1.27
Value orientation	Mean	8.07	8.26	8.17
	SD	1.19	1.10	1.15
Commitment	Mean	8.11	8.34	8.23
	SD	1.13	1.10	1.12
Altruistic behavior	Mean	8.06	8.14	8.10
	SD	1.17	1.10	1.14

The above table represents the Mean and SD of emotional intelligence and its components by boy and girl students of secondary schools. It clearly shows the following:

- The total mean of emotional intelligence scores is 136.84 ± 11.59 , in which, the girl students (138.35 ± 10.60) of secondary schools have higher emotional intelligence as compared to boy students (135.33 ± 12.33) of secondary schools.
- The total mean of component of emotional intelligence i.e. self awareness scores is 16.74 ± 1.96 , in which, the girl students (16.93 ± 1.82) of secondary schools have higher self awareness scores as compared to boy students (16.55 ± 2.07) of secondary schools.
- The total mean of component of emotional intelligence i.e. empathy scores is 19.50 ± 2.67 , in which, the girl students (19.74 ± 2.48) of secondary schools have higher empathy scores as compared to boy students (19.26 ± 2.84) of secondary schools.
- The total mean of component of emotional intelligence i.e. self motivation scores is 24.38 ± 2.68 , in which, the girl students (24.72 ± 2.57) of secondary schools have higher self motivation scores as compared to boy students (24.04 ± 2.74) of secondary schools.
- The total mean of component of emotional intelligence i.e. emotional stability scores is 15.97 ± 2.90 , in which, the girl students (16.18 ± 2.51) of secondary schools have higher emotional stability scores as compared to boy students (15.76 ± 3.23) of secondary schools.
- The total mean of component of emotional intelligence i.e. managing relations scores is 15.59 ± 2.71 , in which, the girl students (15.69 ± 2.61) have higher managing relations scores as compared to boy students (15.49 ± 2.81) of secondary schools.
- The total mean of component of emotional intelligence i.e. integrity scores is 12.01 ± 1.94 , in which, the girl students (12.07 ± 1.84) of secondary schools have higher integrity scores as compared to boy students (11.95 ± 2.03) of secondary schools.
- The total mean of component of emotional intelligence i.e. self development scores is 8.15 ± 1.27 , in which, the girl students (8.26 ± 1.22) of secondary schools have higher self development scores as compared to boy students (8.04 ± 1.30) of secondary schools.

- The total mean of component of emotional intelligence i.e. value orientation scores is 8.17 ± 1.15 , in which, the girl students (8.26 ± 1.10) of secondary schools have higher value orientation scores as compared to boy students (8.07 ± 1.19) of secondary schools.
- The total mean of component of emotional intelligence i.e. commitment scores is 8.23 ± 1.12 , in which, the girl students (8.34 ± 1.10) of secondary schools have higher commitment scores as compared to boy students (8.11 ± 1.13) of secondary schools.
- The total mean of component of emotional intelligence i.e. altruistic behavior scores is 8.10 ± 1.14 , in which, the girl students (8.14 ± 1.10) of secondary schools have higher altruistic behavior scores as compared to boy students (8.06 ± 1.17) of secondary schools. The mean of emotional intelligence scores are also presented in the following figure.

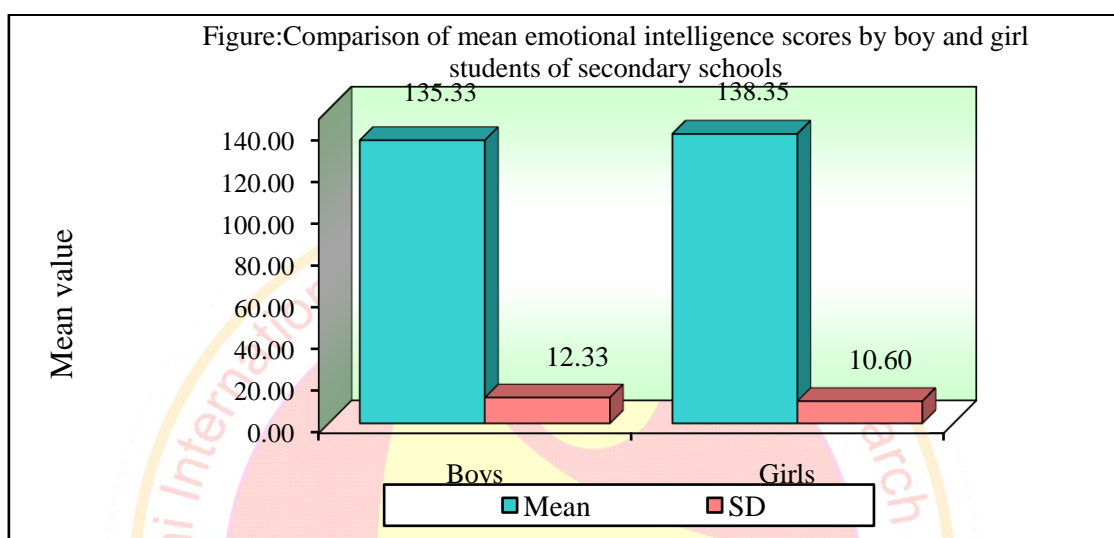


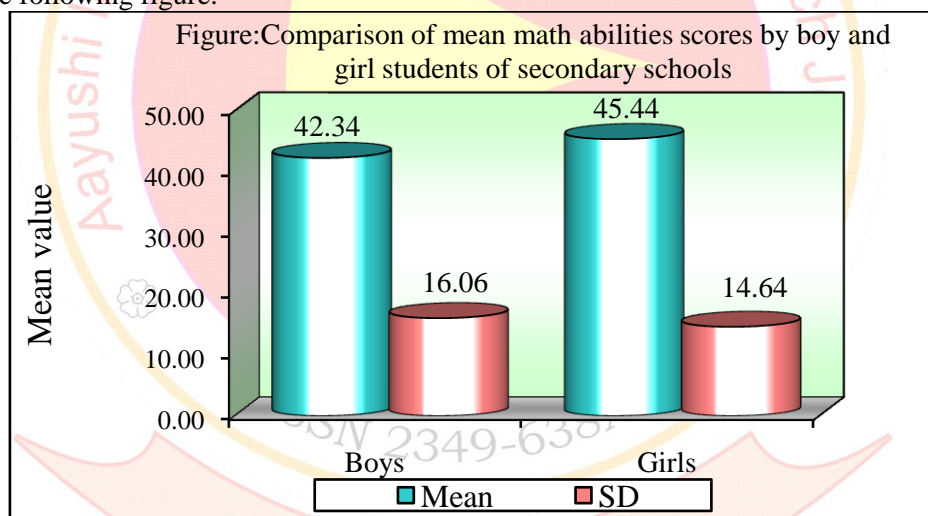
Table:2. Mean and SD of math abilities and its components by boy and girl students of secondary schools

Variables	Summary	Boys	Girls	Total
	n	247	247	494
Math abilities	Mean	42.34	45.44	43.89
	SD	16.06	14.64	15.43
Knowledge abilities	Mean	7.45	8.03	7.74
	SD	3.52	3.38	3.46
Comprehensive abilities	Mean	8.47	9.08	8.78
	SD	2.80	2.81	2.82
Application abilities	Mean	6.22	6.79	6.50
	SD	2.66	2.44	2.57
Analysis abilities	Mean	3.98	4.21	4.09
	SD	1.86	1.61	1.74
Reasoning abilities	Mean	8.83	9.58	9.21
	SD	4.09	3.88	4.00
Inductive & deductive abilities	Mean	7.40	7.75	7.57
	SD	3.35	3.25	3.30

The above table represents the Mean and SD of math abilities and its components by boy and girl students of secondary schools. It clearly shows the following:

- The total mean of math abilities scores is 43.89 ± 15.43 , in which, the girl students (45.44 ± 14.64) of secondary schools have higher math abilities as compared to boy students (42.34 ± 16.06) of secondary schools.
- The total mean of component of math abilities i.e. knowledge abilities scores is 7.74 ± 3.46 , in which, the girl students (8.03 ± 3.38) of secondary schools have higher knowledge abilities scores as compared to boy students (7.45 ± 3.52) of secondary schools.
- The total mean of component of math abilities i.e. comprehensive abilities scores is 8.78 ± 2.82 , in which, the girl students (9.08 ± 2.81) of secondary schools have higher comprehensive abilities scores as compared to boy students (8.47 ± 2.80) of secondary schools.
- The total mean of component of math abilities i.e. application abilities scores is 6.50 ± 2.57 , in which, the girl students (6.79 ± 2.44) of secondary schools have higher application abilities scores as compared to boy students (6.22 ± 2.66) of secondary schools.
- The total mean of component of math abilities i.e. analysis abilities scores is 4.09 ± 1.74 , in which, the girl students (4.21 ± 1.61) of secondary schools have higher analysis abilities scores as compared to boy students (3.98 ± 1.86) of secondary schools.
- The total mean of component of math abilities i.e. reasoning abilities scores is 9.21 ± 4.00 , in which, the girl students (9.58 ± 3.88) of secondary schools have higher reasoning abilities scores as compared to boy students (8.83 ± 4.09) of secondary schools.

The total mean of component of math abilities i.e. inductive & deductive abilities scores is 7.57 ± 3.30 , in which, the girl students (7.75 ± 3.25) of secondary schools have higher inductive & deductive abilities scores as compared to boy students (7.40 ± 3.35) of secondary schools. The mean of math abilities scores are also presented in the following figure.



Conclusion

Emotional intelligence allows us to think more creatively and use our emotions to solve problems. Daniel Goleman believes that Emotional Intelligence appears to be an important set of psychological abilities that relate to life and academic success. It is empathy and communication skills as well as social and leadership purports that it far better to have high E-IQ, emotional intelligence, if you want to be valued and a productive member to our society.

References:

1. Dandekar W. N., Foundations of Educational psychology Shri Vidya Prakashan , New Delhi.
2. Kundu & Tutto 1970, Educational psychology Sterling Publishers, New Delhi.
3. Umadevi M. R. 2009, Educational psychology satharuthi publication, Davanagere.
4. Usha Rao 2008, Advanced Educational psychology Himalaya Publishing House, Mumbai.