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A STUDY OF EMOTIONAL INTELLIGENCE AND PROBLEM-SOLVING ABILITIES AMONG XI STANDARD STUDENTS IN THEIR GENDER AND LOCALITY

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Abstract

The primary objective of this study was to investigate the relationship between emotional intelligence and problem-solving abilities among XI Standard students in their Gender and Locality. The pilot study sample consisted of 100 students from the Coimbatore District, including both males and females. This study utilized the emotional intelligence scale and the problem-solving ability scale to collect data in order to address the research topics. No significant gender or geographical differences were found in any of the categories, and the findings indicated a positive correlation between problem-solving skills and emotional intelligence. The results revealed significant differences in the students' abilities to solve problems and exhibit emotional intelligence.

Key Words: *Emotional Intelligence, Problem Solving, Rural Students, XI Standard Students*

INDRODUCTION

Since the concept of emotional intelligence encompasses a wide range of skills and abilities that fall outside traditional intelligence capabilities—primarily the awareness of emotions and their impact on cognitive aspects of learning—it has been shown that general intelligence alone does not guarantee individual success and excellence. Recently, it has garnered increased attention due to the spirit of the new era, which embraces non-traditional views of intelligence and the belief among many sectors that emotional intelligence holds the promise of solving many pressing societal problems.

According to Gupta et al. (2015), problem-solving skills significantly impacted high school students' academic performance, with female students outperforming their male counterparts. Additionally, no interaction between gender and problem-solving skills was observed in relation to high school students' academic performance. Emotional intelligence (EQ) is defined as the ability to recognize, assess, regulate, and effectively express emotions (Kishore Kunal et al., 2022). According to Wang et al. (2022), emotional intelligence is also the ability to recognize, assess, regulate, and successfully

solve problems. The investigator defined emotional intelligence as the individual's ability to recognize emotions and feelings of self and emotions and the feelings of others and be aware of it, organize and control and direct it, and the use of emotional knowledge to increase self-motivation and improving communication skills and develop positive relationships that meet the individual and others success in various spheres of life.

THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND THE ABILITY TO SOLVE PROBLEMS

Since a person's emotional condition can affect how they think, emotional intelligence influences how successful we are at utilizing our abilities. According to Goleman (1995), a person has two minds: the logical mind and the emotional mind. There is also a remarkable coordination in which thinking is required for feelings and sensations, and emotions are necessary for thinking (Al Khader, 2002). This indicates that emotional events can influence intellectual processes by affecting the cognitive system and altering knowledge, as they can be applied to cognitive processes such as reasoning, problem-solving, decision-making, and creative endeavors.

OPERATIONAL DEFINITIONS

Problem Solving - refers to Problem solving is the act of defining a problem; determining the cause of the problem; identifying, prioritizing, and selecting alternatives for a solution.

Emotional Intelligence -refers to capacity to be aware of, control, and express one's emotions, and to handle interpersonal relationships judiciously and empathetically.

THE STUDY METHODOLOGY

To achieve the objectives of the study descriptive method Correlative was used. The Study Population and its Sample The study population consisted of higher secondary school students at the Comibatore District, Tamilnadu, India.

The pilot study sample consisted of 100 Boys and Girls students from the higher secondary schools at Coimbatore district were chosen randomly using cluster sampling because the unit here is the section, four schools were chosen randomly.

EMOTIONAL INTELLIGENCE

The primary objective of the present study is to assess the emotional intelligence of higher secondary students studying in various schools in Coimbatore District, Tamil Nadu. The investigator reviewed all available tools for measuring the emotional intelligence of higher secondary students and determined that the Emotional Scale standardized by Ramkrishna (2019) is the most suitable for this research. Experts also agreed that this tool is appropriate for the study. Therefore, the emotional intelligence scale standardized by Ramkrishna (2019) has been validated by the investigator using a sample of 100 higher secondary students from Coimbatore District. The validated tool has been adapted for the present study to measure the emotional intelligence of higher

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secondary students. The emotional intelligence scale comprises four dimensions, with each dimension containing 12 items, resulting in a total of 48 items. The dimension-wise distribution of the items is provided in Table 1.

Table 1.Dimension-Wise Distribution of Items of Intelligence Scale

S.NO	Dimensions	Number of Items	Number of Items	Total No. of items	Total
1	**READING PEOPLES**	Positive	1, 2, 4,5, 7,8,10,11	08	12
		Negative	3, 6, 9, 12	04	
2	**USING EMOTIONAL**	Positive	13, 14, 16, 17, 19, 20, 22, 23	08	12
		Negative	15, 18, 21, 24	04	
3	**UNDERSTANDING EMOTIONS**	Positive	25, 26, 28,29,31,32, 34, 35	08	12
		Negative	27, 30, 33, 36	04	
4	**MANAGEING PROBLEMS**	Positive	37,38, 40, 41, 43, 44, 46, 47	08	12
		Negative	39, 42 , 45, 48	04	
Total					48

SCORING PROCEDURE

The subjects were asked to respond to the statement on a five point scale. The response strongly agree, Agree, Neutral, and Disagree and strongly disagree. These items I scored as given below.

Table 2 Scoring Procedure

POSITIVE ITEMS		NEGATIVE ITEMS
5	Strongly agree	1
4	Agree	2
3	Neutral	3
2	Disagree	4
1	Strongly disagree	5

RELIABILITY

Reliability refers to the accuracy (Consistency and Stability) of measurement by a test. In the present study the reliability coefficient of internal consistency for emotional intelligence scale was determined by split-half method and it is found to be 0.82. The splitting of sample was done on odd-even basis to calculate reliability by split half method.

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The co-efficient of stability was determined by test-retest method and it is found to be 0.89. The test-retest reliability was determined by administering the retest after two weeks time from the first test.

The result of reliability coefficient determined by above two methods is presented in Table-3. Thus, the result indicates that the emotional intelligence scale was found to be highly reliable.

Table 3 Reliability Coefficient of Emotional Intelligence Scale

Method	**Number of Sample**			**Reliability Coefficient**
	Male	Female	Total	
Split- Half	50	50	100	0.91
Test-Retest	50	50	10	0.79

VALIDITY

According to Anastasi (1958), "Face validity refers not to what the test necessarily measures, but to what it appears to measure." The Emotional Intelligence scale was presented to experts to ascertain its face validity. The experts agreed that the items in the Emotional Intelligence scale are relevant, confirming that this scale possesses face validity.

The items on the scale cover all nine dimensions of emotional intelligence for higher secondary students. It is noteworthy that the scale consists of 12 items for each dimension, resulting in a total of 48 items that encompass all factors of intelligence. The experts also opined that the tool has content validity. Therefore, it can be concluded that the Emotional Intelligence scale has content validity.

Table 4 The Relationship between Emotional Intelligence and the Ability to Solve Problems with Gender

Variable	**Gender**	**Number**	**Mean**	**Standard deviation**	**The value of the correlation coefficient**	**Level of Significance**
Emotional Intelligence and Problem Solving Ability	Boys	41	102.42	17.61	0.529	0.01
	Girls	59	103.31	19.33		

Note ** Significant at .001 level

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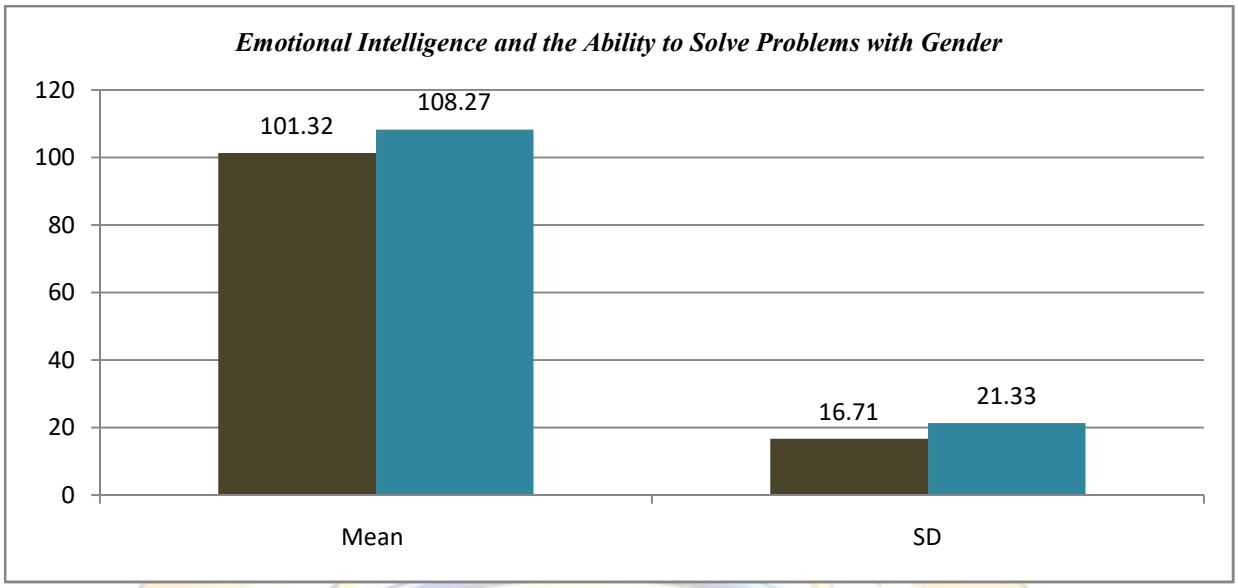
Figure 1 Emotional Intelligence and the Ability to Solve Problems with Gender



There is a relational positive statistically significant relationship at the level of 0.01 between the total score of emotional intelligence and its sub-dimensions, and the total score of the ability to solve problems among higher secondary students, where the correlation between the total score of emotional intelligence and the total score to measure the power factor to solve problems reached (0.529) and this value is statistically significant at the level of significance 0.01, There is also a relational positive statistically significant relationship at the level of 0.01.

Table 5 The Relationship between Emotional Intelligence and the Ability to Solve Problems with Locality

Variable	Locality	Number	Mean	Standard deviation	The value of the correlation coefficient	Level of Significance
Emotional Intelligence and Problem Solving Ability	Rural	39	101.32	16.71	0.534	0.01
	Urban	61	108.27	21.33		

Note ** Significant at .001 level

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PROBLEM SOLVING SKILLS

The other important objective of the present study is to find out the problem solving skills of higher secondary students studying in various schools of Coimbatore District, Tamil Nadu. The investigator referred all the tools available to measure emotional intelligence of higher secondary students. The investigator found that the Problem Solving Skill Scale Standardized by Anna Raja (2018) is more suitable for the present research. The experts also opined that the tool is more suitable for the present research. Hence, Problem Solving Skills scale standardized by Anna Raja (2018) has been validated by the investigator with a 100 sample of higher secondary students studying in Coimbatore District. The validated tool has been adapted for the present study to measure the Problem Solving Skills of higher secondary students .The Problem Solving Skills scale has four dimensions such as, Each dimension has 8 items. Thus in total the tool includes 32 items. The dimension-wise distribution of the item is given in Table 5.

ITEMS AND SCORING PROCEDURE

Out of 32 items of the scale 20 are positive and 12 are negative statement the positive and negative statement for each other dimension are given below.

Table 6 Dimension-Wise Distribution of Items of Problem Solving Skill

S.NO	**Dimensions**	**Number of Items**	**Number of Items**	**Total No. of items**	**Total**
1	**Sensing**	Positive	1, 2, 3, 5, 7	05	08
		Negative	4, 6, 8	03	
2	**Intuitive**	Positive	9.10,11, 13,14	05	08
		Negative	12, 15, 16	03	
3	**Feeling**	Positive	17, 18,19, 20, 22	05	08
		Negative	21, 23, 24	03	
4	**Thinking**	Positive	25, 26,27 29, 31	05	08
		Negative	28, 30, 32	03	
Total					**32**

SCORING PROCEDURE

The subjects were asked to respond to the statement on a five point scale. The response strongly agree, Agree, Neutral, and Disagree and strongly disagree. These items I scored as given below given in Table 7.

Table 7 Scoring Procedure

POSITIVE ITEMS		**NEGATIVE ITEMS**
5	Strongly agree	**1**
4	Agree	2

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3	Neutral	3
2	Disagree	4
1	Strongly disagree	5

RELIABILITY

Reliability refers to the accuracy (Consistency and Stability) of measurement by a test. In the present study the reliability coefficient of internal consistency for Problem Solving Skills scale was determined by split-half method and it is found to be 0.82. The splitting of sample was done on odd-even basis to calculate reliability by split half method.

The co-efficient of stability was determined by test-retest method and it is found to be 0.89. The test-retest reliability was determined by administering the retest after two weeks time from the first test.

The result of reliability coefficient determined by above two methods is presented in table-7. Thus, the result indicates that the Problem Solving Skills scale was found to be highly reliable.

Table 8 Reliability Coefficient of Problem Solving Skills Scale

Method	**Number of Sample**			**Reliability Coefficient**
	Male	Female	Total	
Split- Half	50	50	100	0.93
Test-Retest	50	50	100	0.79

VALIDITY

According to Anastasi (1958), "The face validity refers not to what the test necessarily measures, but to what it appears to measure". The Problem Solving Skills scale was given to the experts in order to ascertain its face validity. The experts agreed that the items in the Problem Solving Skills scale are relevant. Hence, this scale has face validity.

The items of scale cover all the nine dimensions of emotional intelligence of higher secondary students. It may be recalled that the scale consisted of 08 items in each dimension. Thus, in total it has 32 items covering all the factors of Problem Solving Skills. The experts also opined that the tool has content validity. Hence, it can be inferred that the Problem Solving Skills scale has content validity.

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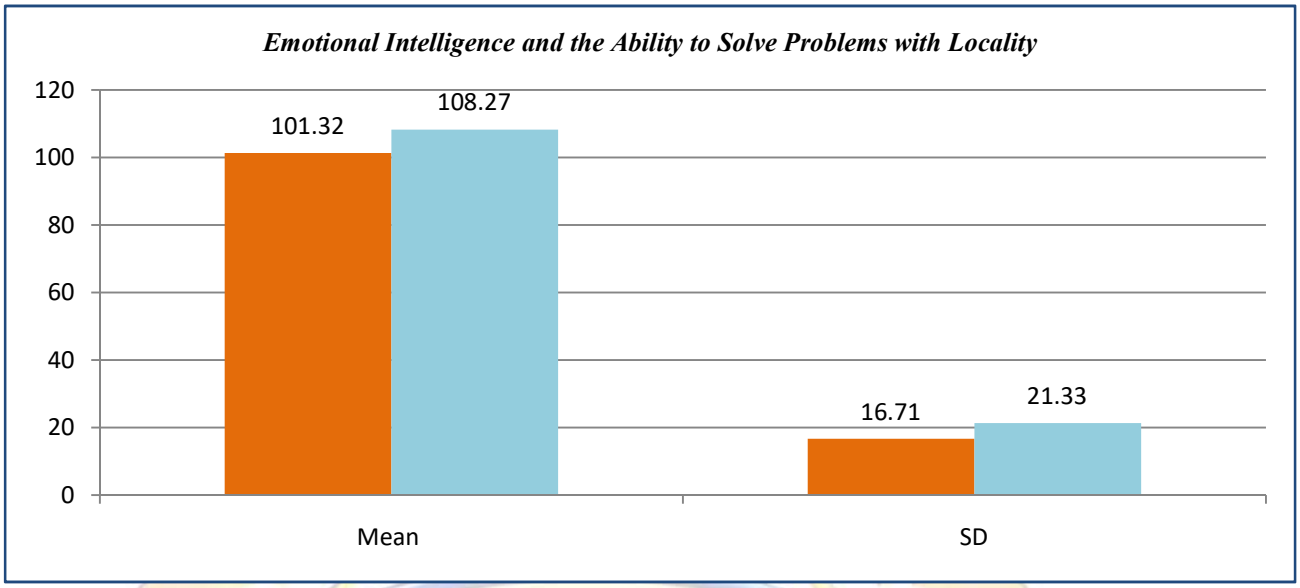
Figure 2 *Emotional Intelligence and the Ability to Solve Problems with Locality*



There is a relational positive statistically significant relationship at the level of 0.01 between the total score of emotional intelligence and problem solving skills of its sub-dimensions, and the total score of the ability to solve problems among higher secondary students, where the correlation between the total score of emotional intelligence and the total score to measure the power factor to solve problems reached (0. 0.534) and this value is statistically significant at the level of significance 0.01, There is also a relational positive statistically significant relationship at the level of 0.01.

Emotional Intelligence also helps to combine logic and emotions in solving problems, and increase the ability to sound positive thinking, planning and follow-up implementation to achieve goals no matter how difficult by choosing between alternatives and treatment of emotional events and employ it so it helps in the intellectual processing that facilitates the steps of the solution to the problem and that of by understanding the subjective feelings and understand other people's feelings and to express them, set goals and alternative ways to solve the problem,

CONCLUSION

Many of the situations we encounter in everyday life essentially require problem-solving skills. Problem-solving is a complex and important aspect of human behavior, and because life is dynamic and not fixed, it has become crucial for students to develop skills that will help them adapt to constant changes and make informed decisions and the ability to solve the problems they face, whatever the degree of complexity in Gender and locality. Emotional intelligence is the capacity to identify, evaluate, and control emotions, which plays a significant role in effective problem-solving and contributes to the academic achievement of higher secondary students.

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