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Emotional Intelligence, Learning Styles and Academic Achievement of Science and Social Science Higher Secondary School Students

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ABSTRACT

The present study was conducted with the objective to examine the emotional intelligence, learning styles and academic achievement of science and social science higher secondary school students. A sample of 200 hundred higher secondary school students was randomly selected from different higher secondary schools of district Srinagar. The sample comprised of 100 science and 100 social science higher secondary school students. The age of the sample subjects were within the age range of 17-19 years. The tool used for the present study were Anukool Hyde, Sanjyot Pethe and Upinder Dhar's Emotional intelligence scale, and D, Venkataraman's style of Learning and Thinking Inventory. The data was analyzed by applying mean, S.D., t- test and Pearson's Product Moment Co- efficient of co-relation. The analysis and interpretation of data revealed that there is significant difference between science and social science higher secondary school students on self-awareness, managing relations, self-development and commitment factors of emotional intelligence, whereas the two groups do not differ on empathy, self-motivation, emotional stability, integrity, value orientation and altruistic behavior factors of emotional intelligence. It was also found that both the groups differ significantly on learning styles and academic achievement.

Key Words : Emotional intelligence, Learning styles, Academic achievement, Science, Social science students

INTRODUCTION

Generally emotions are connected with the pleasantness or unpleasantness of feeling. It is a complex psychological experience of an individual's state of mind with internal and external influences. Emotions are combination of our thoughts. Its arousal depends upon the situation that one may confront at a particular time. Emotions effect the achievements, including academic achievement and condition human behaviour and social relations. It influences an individual's adjustment with other individuals in society and determines his conduct towards them. Although man is a rational animal, much of his conduct is determined by emotions. Hence human development is considerably influenced by emotions. The success of man wholly depends on the art of managing his emotions which involves an ability to handle people termed as emotional intelligence. Emotional intelligence (EI) is an ability to manage and understand the meaning of emotions and their relationships, when it is matter of happiness or success in life and to relieve stress and to overcome challenges. It is an ability to perceive emotions. Hence emotional intelligence has become an increasingly new term and has generated a broad interest in the scientific fields and has become a popular concept in psychology and education.

The concept of emotional intelligence was originally developed by the writings of Peter Salovey and John Mayer. Emotional intelligence helps to monitor one's own and other people's emotions, to differentiate various emotions and to label them appropriately. It refers to the ability to receive, control and evaluate emotions. It is considered as the key to both personal and professional success. Emotional intelligence is used to guide one's

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thinking and actions. Emotional intelligence (EI) impacts different aspects of one's life – the way one behave and the way one interact with others.

The researchers like Farooq (2003) evaluated the impact of emotional intelligence on academic performance of adolescent students and found that, the higher the emotional intelligence the better would be the academic performance of the students. Wong (2005) believed that satisfaction with life was one important result of people's high emotional intelligence. Mishra and Ranjan (2008) found that boys and girls differ significantly on emotional intelligence. Katterkar (2010) found a positive relationship between emotional intelligence and academic achievement.

Learning styles occupies an important position in the lives of individuals. Learning styles are an approach by which an individual learner reacts to the overall learning environment. Technically speaking an individual's learning style refers to the ways and means through which a student absorbs, processes, comprehends and retains information. Learning style is a term generally assumed to refer to preferences and behaviors used by the student to learn under the classroom or environmental conditions. Their learning styles will be influenced by their previous learning experiences, their culture and the society in which they live. Learning styles appear to be biological and perhaps socialized differences that influence classroom learning in particular and life long learning in general. The way in which an individual characteristically receives, retains and collects information are termed as learning styles. When an individual knows his/her learning style he/she learns more easily and quickly, effectively solves his problems and achieves success. Learning style includes the cognitive, effective and psychological elements of an individual's ability to learn. Knowledge of learning style gives information to students about different ways of learning, helps them how to control the process of learning and also develops their confidence. Learning styles are the path by which each learner begins to concentrate and retain new and difficult information. The researchers Dunn (1984) defined learning styles as the ways in which a person gets information about a process and how it is different for each person. Malathi and Malini (2006) found there was no significant difference in the learning styles of higher secondary school students in terms their class and type of schooling. Shahid (2011) observed divergent style and the accommodating style of students as their most preferred learning styles. Sharma (2011) found that learning styles of secondary school students are positively and significantly related to each other however mean difference favours male students.

Academic achievement deals with student's success in his/her short or long term course of education. It refers to students performance in academic area. The main focus of all educational programmes is to see the learners achievement and achievement is considered as an end product of all educational Endeavours. Academic achievement is an ability to excel and is considered as an important aspect of student's success. The researches like Baljinder and Kuldip (2009) found a positive co-relation between emotional intelligence and academic achievement and also learning styles and academic achievement. Sood (1991) has found that there was no significant relationship between academic achievement of boys and girls.

Objectives of the study:

The following objectives were formulated for the purpose of present study.

(i) To assess the Emotional Intelligence, Learning Style and Academic Achievement of Science and Social Science higher secondary school students.

(ii) To compare Science and Social science higher secondary school students on various dimensions of Emotional intelligence.

(iii) To compare Science and Social science higher secondary school students on learning styles.

(iv) To compare Science and Social science higher secondary school students on Academic Achievement.

(v) To find out the relationship between Emotional intelligence and Learning Style of higher secondary school students.

(vi) To find out the relationship between Emotional intelligence and Academic Achievement of higher secondary school students.

(vii) To find out the relationship between Learning Style and Academic Achievement of higher secondary school students.

Hypotheses:

The following hypotheses have been formulated for the present investigation.

(i) Science and Social science higher secondary

school students differ significantly on various dimensions of Emotional intelligence.

(ii) Science and Social science higher secondary school students differ significantly on learning styles.

(iii) Science and Social science higher secondary school students differ significantly on Academic Achievement.

(iv) There is a positive relationship between Emotional Intelligence and Learning Styles of higher secondary school students.

(v) There is a positive relationship between Emotional Intelligence and Academic Achievement of higher secondary school students.

(vi) There is a positive relationship between Learning Styles and Academic Achievement of higher secondary school students.

Operational definitions of the variables:

Emotional intelligence:

Emotional intelligence is an aptitude, a capacity that affects all other abilities either positively or negatively. Emotional intelligence for the present study refers to the scores obtained by the sample subjects on Anukool Hyde, Sanjyot Pethe and Upinder Dhar's Emotional intelligence Scale on the following factors.

(a) Self-awareness, (b) Empathy, (c) Self- motivation (d) Emotional stability, (e) Managing relations, (f) Integrity, (g) Self- development, (h) Value orientation, (i) Commitment, (j) Altruistic behavior.

Learning styles:

Learning styles mean an individual's preferred or habitual ways of knowing and transforming knowledge. It involves cognitive, affective and psychological traits and depicts how learner interacts, perceives and responds to learning environment. Learning styles for the present study refer to the scores obtained by the sample subjects on D. Venkataraman's Style of Learning and Thinking Inventory.

Academic achievement:

Academic achievement means students knowledge attained and different skills developed in educational institutions. It means achievement of pupils in academic subjects and that achievement has been measured in terms of aggregate percentage of marks obtained by the subjects in previous two examinations (10^{th} and 11^{th}) conducted by the Board of School of Education.

Science student:

Science students were considered those students who have opted Physics, Chemistry, Biology as course of subjects in their 12^{th} Class.

Social science students:

Social science students were considered those students who have opted the Sociology, Political Science, and Economics as course of subjects in their 12^{th} class.

METHODOLOGY

Design of the sample:

The sample for the present study comprised of 200 higher secondary school students (100 science and 100 social science) randomly selected from various government higher secondary schools of district Srinagar.

Tools used:

The following tools have been used to collect the data.

1. Emotional Intelligence Scale constructed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar was used to measure the Emotional Intelligence of science and social science higher secondary school students.

2. Style of Learning and Thinking Inventory constructed by D. Venkataraman was used to measure learning styles of the science and social science higher secondary school students.

3. Academic Achievement for the present study comprises the aggregate percentage of marks obtained by the sample subjects in their previous two classes i.e. 10^{th} and 11^{th} class.

Statistical analysis:

The collected data were subjected to statistical analysis by computing Mean, S.D., test of significance and Pearson's Product Moment Co-efficient of Co-relation.

RESULTS AND DISCUSSION

Table 1 shows the mean comparison between science and social science higher secondary school students on various factors of Emotional Intelligence. A quick look at the Table 1 reveals that the two groups

Table 1 : Showing the Mean Comparison of Science and Social Science Higher Secondary School Students on Various factors of Emotional intelligence (N = 100 in each group)

Variables	Group	Mean	S.D	t-value	Level of Significance
(Factor A) Self- Awareness	Science Students	9.1	3.51	2.92	Significant at 0.01 level
	Social Science Students	7.58	3.84		
(Factor B) Empathy	Science Students	8.09	3.24	0.54	Insignificant
	Social Science Students	8.35	3.50		
(Factor C) Self Motivation	Science Students	8.63	3.74	1.89	Insignificant
	Social Science Students	7.61	3.87		
(Factor D) Emotion Stability	Science Students	7.74	2.73	0.98	Insignificant
	Social Science Students	8.17	3.45		
(Factor E) Managing relations	Science Students	8.04	3.29	2.07	Significant 0.01 level
	Social Science Students	7.13	2.94		
(Factor F) Integrity	Science Students	8.08	3.46	0.39	Insignificant
	Social Science Students	7.98	3.12		
(Factor G) Self Development	Science Students	7.23	1.99	3.01	Significant at 0.01 level
	Social Science Students	6.44	1.74		
(Factor H) Value orientation	Science Students	7.47	1.72	1.43	Insignificant
	Social Science Students	7.14	1.51		
(Factor I) Commitment	Science Students	5.62	2.65	2.94	Significant at 0.01 level
	Social Science Students	6.62	2.13		
(Factor J) Altruistic behavior	Science Students	6.52	2.55	0.63	Insignificant
	Social Science Students	6.9	5.52		

differ significantly at 0.01 level on the factors of self-awareness, managing relations, self- development, and commitment. This shows that science higher secondary school students are well aware about their self, recognize their feelings, better way manage their relations, make better improvement in one's own self, and are loyal, dedicated and faithful as compared to social science higher secondary school students. The table further indicates that two groups do not differ significantly and are similar on the factors of empathy, self- motivation, emotional- stability, integrity, value orientation and altruistic behaviours. Both the groups try to encourage others to work, intelligently take decisions, concentrate on their work, maintain standards of honesty and integrity and also focus on others' point of view.

Table 2 shows the mean comparison of science and social science higher secondary school students on learning styles. The calculated t- value (6.08) exceeds the tabulated t- value (2.60) at 0.01 level of significance which shows that there is significant difference between science and social science higher secondary school students on learning styles. The table further indicates that the science higher secondary school students have better verbal concepts, content preferences, class preferences, learning preferences, interests, creativity problem solving approach and imagination than social science higher secondary school students. Science higher secondary school students are good in memorizing, verbalizing, learning of facts, and discussion as compared to social science students.

Table 2 : Mean Comparison of science and social science higher secondary school students on Learning style (N = 100 in each Groups)

Group	Mean	S.D	t-value	Level of Significance
Science Students	32.21	5.83	6.08	Significant at
Social Science Students	26.35	5.15		0.01 level

Table 3 indicates the mean comparison of science and social science higher secondary school students on academic achievement. The calculated t-value (2.86) exceeds that tabulated t-value (2.60) at 0.01 level of significance which depicts that there is a significant difference between science and social science higher secondary students on academic achievement. The result of above table clarifies that science higher secondary school students have better academic achievement than

Table 3 : Mean Comparison of Science and Social Science Higher Secondary School Students on Academic Achievement (N = 100 in each group)

Group	Mean	S.D	t- value	Level of Significance
Science Students	65.50	17.52	2.86	Significant at 0.01
Social Science high secondary students	58.77	15.76		level

social science higher secondary school students.

Table 4 reveals the co- efficient of co-relation between emotional intelligence and learning styles. The table indicates that the relationship between emotional intelligence and learning styles among higher secondary school students is positive and co-efficient value is (r = 0.63) which is significant at 0.01 level. This reveals that higher the emotional intelligence the higher is the learning styles.

Table 4 : Showing the correlation between Emotional intelligence and learning styles of higher secondary school students

Variables	Correlation
Emotional intelligence vs Learning Styles	r = 0.63

Table 5 indicates the co-efficient of co-relation between emotional intelligence and academic achievement. The above table reveals that the relationship between emotional intelligence and academic achievement among higher secondary school students is positive and co-efficient of co-relation value is (r=0.55) which is significant at 0.01 level. This indicates that emotional intelligence has strong influence on academic achievement. It further means that emotional intelligence helps students in getting higher academic achievement.

Table 5 : Showing the correlation between Emotional intelligence and Academic Achievement of higher secondary school students

Variables	Correlation
Emotional intelligence vs Academic Achievement	r = 0.55

Table 6 reveals the co-efficient of co-relation between learning styles and academic achievement. The table reveals that the relationship between learning style and academic achievement among higher secondary school students is positive and co-efficient of co-relation value is (r = 0.69) which is significant at 0.01 level. This indicates that learning styles has positively enhanced the academic achievement of students.

Table 6 : Showing correlation between learning styles and academic achievement of higher secondary school students

Variables	Correlation
Learning Styles vs Academic Achievement	r = 0.69

Major conclusions:

On the basis of analysis of data, the following meaningful conclusion has been drawn.

(i) Science higher secondary school students as compared to social science higher secondary school students were found better on self-awareness, managing relations, self-development and commitment factors of emotional intelligence.

(ii) Science higher secondary school students are well aware about their self, handle better way their interpersonal relations, co-operative and democratic in dealing with others as compared to social science students.

(iii) Science and social science students are similar on empathy self- motivation, emotional stability, managing relations, integrity, value orientation and altruistic behavior.

(iv) Students of both the groups have control on their feelings, aware about their weakness, emotionally well stable, disciplined, self-assured, self sufficient, group oriented, good peer relations and are also helpful.

(v) Science higher secondary school students are better liked by their peers and are found to be able to handle a number of tasks than the social science higher secondary school students.

(vi) Science higher secondary school students have better learning styles than social science higher secondary school students.

(vii) Science higher secondary school students have better cognitive, effective psychological traits. They learn, perceive, interact and respond better way than social science higher secondary school students.

(viii) Science higher secondary school students have high academic achievement than social science higher secondary school students.

(ix) There was found a significant and positive relationship between emotional intelligence and learning styles.

(x) There was found a significant and positive relationship between emotional intelligence and academic achievement.

(xi) There was found a significant and positive relationship between learning style and academic achievement.

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