

A Study of Emotional Intelligence among Secondary School Students in Relation to Academic Anxiety and Adjustment

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Abstract

The aim of the present paper is to probe emotional intelligence, academic anxiety and adjustment among students at the secondary school level. Random sampling was exercised in the selection of sample, which comprised 100 boys and 100 girls of Class IX in two government schools in Delhi state. Emotional Intelligence scale (Singh and Narain, 2014), Academic Anxiety Scale (Singh and Sen Gupta, 2013) and Adjustment Inventory for School Students (Sinha and Singh, 2013) were used as tools for data collection. The collected data was analysed by t-test and Karl Pearson's Coefficient of correlation (r). It was found that girls had higher emotional intelligence scores than boys but in adjustment, boys significantly outperformed girls. There was no statistically significant difference between both the genders with respect to academic anxiety. Further, emotional intelligence and academic anxiety were not significantly related. However, a statistically significant positive correlation was found between emotional intelligence and adjustment of students. Also, academic anxiety was negatively co-related to adjustment of secondary school students.

INTRODUCTION

Emotional Intelligence (EI) is the ability of a person to monitor one's own as well as others' feelings. This

also comprises an individual's ability to discriminate among these feelings or emotions and on that basis guide one's own thinking and actions

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(Salovey and Mayer, 1990). The term emotional intelligence was first coined by Salovey and Mayer (1990). According to them, there exists a bond between cognition and emotion. Emotional intelligence comprises qualities such as positive attitude, empathy, conscientiousness, social competence, motivation, etc.

An individual equipped with profound emotional intelligence base is more optimistic, ongoing, motivated, empathetic and happier and is likely to be skilled in personal and social competence. Personal competence implies self-awareness and self-regulation. Social competence comprises empathy and social skills like tendency to nurture desired responses from others (Kierstead, 1999; Bhalla and Nauriyal, 2004).

For Bar-On (1997), emotional intelligence is related to understanding oneself and others and it is concerned with people and, thus, helps in adapting to and coping with the immediate environment. Students with low emotional intelligence may experience difficulty in dealing with peers and teachers, which may undermine their academic motivation (Drago, 2004). Emotional intelligence helps in controlling emotional impulses such as anxiety, stress, fear, strain, etc. It also facilitates in explaining the role of emotions in advancing life goals as it acts as an adaptive capability for an individual which helps in his/her social life.

There are five characteristics of emotional intelligence, namely

(a) Self-awareness: being aware of one's emotions, recognising feelings and ability to discriminate between them; (b) Self-motivation: gearing up one's own feelings or emotions and channelising towards the goal despite obstructions; (c) Mood management: handling emotions so that there is compatibility between emotions on one side and response on the other; (d) Empathy: recognising others' emotions or feelings; (e) Managing relations: managing conflicts, negotiations, inter-personal interactions, etc.

Emotional intelligence, as a concept, focuses on the deliberate use of feelings and emotions thus, harnessing messages coded in these emotions in decision-making (Ciarrochi and Mayer, 2007). Schools may also act as catalytic agents in promoting emotional intelligence among students (Tiwari and Shrivastava, 2004; Svetlana, 2007). Even Goleman (1998) visualised school as an agency that can minimise students' deficiencies in social and emotional competence. It also helps to successfully predict scholastic performance. Besides intelligence discussed here as emotional, anxiety as a feature of personality must be deliberated upon as it is a common phenomenon of life. It can be related to either trait or state. The former is known as trait anxiety and the latter as state anxiety. Trait anxiety is a comparatively stable feature of an individual concerned but state anxiety is aroused by some kind(s) of temporary aspects

of surroundings that is something adverse like accident, penalty, etc. By nature, academic anxiety is a kind of state anxiety related to the impending dangers from scenario of educational institutes, which may include examination, certain subjects and teachers, etc. It may also arise because of some other factors such as poor time management on the part of students, parents' over-expectation, enhanced perception of academic load, poor performance in the past, etc.

Academic anxiety is a normal response to academic stress, but it is problematic when a student is unable to work productively as it generates an inhibitive tendency in him, which is reflected in examination, teaching-learning situations, peer group interactions, etc. It has symptoms of common anxiety such as sleep loss, increased heartbeat, sweating, uncertainty, loss of appetite, etc. The higher level of academic anxiety obstructs the performance of students because during learning it can affect information acquisition, processing, retrieval, etc., (Tobias, 1983), attention span and may even lead to poor recall or forgetfulness (Hashempour and Mehrad, 2014). But a moderate level of academic anxiety proves somewhat motivational for students to work and may enhance their learning ability thus, improving their academic performance (Kaplon and Saddok, 2000; Neelam and Attri, 2013).

Another feature besides intelligence and anxiety, discussed

here as emotional intelligence and academic anxiety, respectively, is adjustment because the factor that students are unable to adjust in academic institutions is a common problem. Generally, students suffer from stress, strain, anxiety, depression, insecurity, etc., which disturb them in delivering their best to achieve academically. Adjustment means a psychological tendency, which as a process helps to cope, manage disturbances, challenges, tasks and daily life requirements (Halonen and Santrok, 1997). So, facilitating students in exercising their emotional intelligence in facilitating adjustment and minimising anxiety are the prime concerns for professionals. Thus, the need was felt by the investigator to probe the profound role of emotional intelligence among boys and girls with respect to adjustment and anxiety.

REVIEW OF RELATED LITERATURE

Studies have explored that emotional intelligence competencies are instrumental in promoting dynamic leadership styles (Goleman 1998, 2000; Goleman, Boyatzis and Mckee, 2002; Emmerling and Goleman, 2005; Rosete and Ciarrochi, 2005) and satisfactory personal life experiences and, hence, leading to adjustment (Goleman, 1995; Marques, 2006; Wing, Schutte and Byrne, 2006). Even at workplace, the significance of emotional intelligence as an imperative personality trait has been explored (Kirch, Tucker and Kirch, 2001; Rozell, Pettijohn and Parker,

2002). Researches (Svetlana, 2007; Ogundokun and Adeyemo, 2010) have suggested that emotional intelligence training should be introduced in the secondary school curriculum as such skills enrich students and facilitate their academic achievement (Low and Nelson, 2005). With respect to emotional intelligence, academic anxiety and academic achievement, some gender studies have also been conducted and it was found that girls had more emotional intelligence scores than boys (Hasson, Sulaiman and Ishak, 2009), girls were more academically anxious than boys (Das, 2014; Joshi, 2013; Neelam and Attri, 2013), had better attention (Bastian, 2005) and academic achievement at the secondary school level (Neelam and Attri, 2013). However, a few studies found hardly any significant difference among high school boys and girls with respect to emotional intelligence (Rani and Manita, 2015), academic anxiety (Banga, 2014; Rani and Manita, 2015) and social and academic adjustment of university students (Malek, Ishak, Taamneh, Gharaibeh and Rababah, 2011).

Besides these, correlational studies have been conducted where emotional intelligence was explored in relation to academic anxiety, academic adjustment, academic performance, academic achievement, motivation, etc., and it was found that emotional intelligence is significantly positively related to academic achievement (Farooq, 2003; Drago, 2004; Parker,

Duffy, Wood, Bond and Hogan, 2005; Kattekar, 2010; Ogundokun and Adeyemo, 2010; Tamannaifar, Sedighi and Salami, 2010; Chamundeswari, 2013). Academic achievement motivation (Roy, Sinha and Suman, 2013) is significantly negatively correlated to anxiety (Joshi, 2013) and not correlated to academic anxiety (Rani and Manita, 2015). Emotional intelligence training programmes for university-level students improved the levels of emotional intelligence, excluding adjustment on their part in academics and social areas (Malek et al, 2011). Emotional intervention training programmes have also been found to improve emotional intelligence of students (Kaur and Kaur, 2008; Lone, 2014). Similarly, cognitive-effective course, in foreign language context, improved emotional intelligence scores and decreased anxiety scores of university students (Rouhani, Tabatabaai and Shahrekord, 2008). Correlational studies between anxiety and overall adjustment showed that high achievers had high intensity of anxiety, which significantly improved with respect to the levels of achievement (Singh, 2013). Anxiety is one among several factors affecting students' performance (Afolayan, Donald, Onasoga, Babafemi and Juan, 2013). Baker and Siryk (1999) identified and divided adjustment into different categories such as social, academic, personal, emotional, etc.

OBJECTIVES OF THE STUDY

1. To study gender differences among secondary school-level students with respect to emotional intelligence.
2. To study gender differences among secondary school-level students with respect to academic anxiety.
3. To study gender differences among secondary school-level students with respect to adjustment.
4. To study the correlation between emotional intelligence and academic anxiety among secondary school students.
5. To study the correlation between emotional intelligence and adjustment among secondary school students.
6. To study the correlation between academic anxiety and adjustment among secondary school students.

HYPOTHESES

Following null hypotheses were formulated to explore the above objectives —

H₀₁: There is no statistically significant difference between emotional intelligence scores of girls and boys at the secondary school level.

H₀₂: There is no statistically significant difference between the academic anxiety scores of girls and boys at the secondary school level.

H₀₃: There is no statistically significant difference between the adjustment scores of girls and boys at the secondary school level.

H₀₄: There is no statistically significant correlation between emotional intelligence and academic anxiety scores of secondary school students.

H₀₅: There is no statistically significant correlation between emotional intelligence and adjustment scores of secondary school students.

H₀₆: There is no statistically significant correlation between academic anxiety and adjustment scores of secondary school students.

DELIMITATION

The following delimitation, with respect to the present study, were taken into account —

1. The study was conducted at the secondary school level.
2. It was conducted at Class IX level.

METHODOLOGY

Research Design

A descriptive survey research design was adopted in the present study, in which the investigator attempted to find the difference between emotional intelligence, academic anxiety and adjustment levels of secondary school students (boys and girls) studying in Class IX of two senior secondary schools in Delhi. The relationship between emotional intelligence, academic anxiety and adjustment levels of these students were also explored.

Sample

There are 13 districts in the Directorate of Education, Delhi. Of these districts,

one was randomly selected. In that district, there were three zones and of these, two were randomly selected. In one zone, there were seven government boys' schools out of total 18. One such school was randomly selected. In the other zone, there were nine government girls' schools out of total 19. One government girls' school was randomly selected. Now, 100 boys in government boys school and 100 girls in government girls school were randomly selected for the study. So, in total, a random sampling was exercised in the selection of the final sample for the study. All students were of Class IX aged 13+ years as it generally marks the beginning of adolescence stage in the Indian society. Since, teenage ranges from 13-19 years, the thirteenth year is the first year in that continuum, so that was also the rationale for the selection of Class IX students.

Variables

1. Independent variable: It was gender and had two levels, namely boys and girls.
2. Dependent variable: These were emotional intelligence, academic anxiety and academic adjustment.
3. Intervening variables like motivational levels, previous achievements, fatigue, boredom, family background, etc., as intervening variables were assumed to be present in boys and girls at the secondary school level.

Tools

Following standardised tools were used for data collection —

1. Emotional Intelligence Scale (2014) by Arun Kumar Singh and Shruti Narain. This scale consists of 31 items in total and all items are divided into four areas, namely (a) understanding emotions, (b) understanding motivation, (c) empathy, and (d) handling relations. The scale can be administered on students aged 12+ years. The reliability, by test-retest method, and concurrent validity of the scale is 0.86 (both) and it is significant at 0.01 level. The concurrent validity of the scale is 0.86, which is significant at 0.01 level.
2. Academic Anxiety Scale for Children (2013) by A.K. Singh and A. Sen Gupta: There are 20 items and the items, nature-wise, are either positive or negative. This scale can be administered on students the age group of 13-16 years. The reliability was found by test-retest as well as split half method and corresponding values of coefficient of co-relation were 0.60 and 0.65, respectively, which were significant beyond 0.01 level of significance. The test was validated against Sinha-Anxiety test and Neuroticism scale and the values of correlation coefficient were found to be 0.41 and 0.31, respectively, and these values were significant at 0.01 level.
3. Adjustment Inventory for School Students by A.K.P. Sinha and R.P. Singh (2013): There are 60

items in this inventory and the items pertain to three adjustment areas, namely (a) emotional, (b) social, and (c) educational. The reliability of the total test was calculated by test-retest method, split half method and K-S formula 20 and the values of the reliability coefficients were 0.95, 0.93 and 0.94, respectively, and these were significant at 0.01 level. The item analysis validity coefficients were determined by biserial correlation method and only those items were retained in the final test which had biserial correlation with both the criteria that is area score and total score and the level of significance was 0.001.

PROCEDURE

As per their manual, the above tests were administered on the selected sample. Scoring of response sheets was also done as per guidelines in the manual. Then, skewness of emotional intelligence, academic anxiety and

adjustment inventory scores of boys and girls were calculated and the skewness value for emotional intelligence score was -0.23 , for academic anxiety, it was -0.12 and for adjustment inventory, the score was 0.02 , which indicates that the selected sample is approximately symmetrical hence, the collected data can be treated through parametric tests, namely 't' test, which was applied to find out the significance of difference with respect to the variables under study among boys and girls at the secondary school level and Karl Pearson's Product Moment Coefficient of Correlation (r) was computed to check statistical significance of correlation between two variables under study for secondary school students.

RESULTS AND DISCUSSION

With respect to gender, Table 1 shows the obtained t-test values for the scores of dependent variables, namely emotional intelligence, academic anxiety and adjustment scores.

Table 1
t-test for emotional intelligence, academic anxiety and adjustment scores of boys and girls at secondary school level

S.N.	Dependent Variable	Gender	Mean	S.D.	od	D	t-value
1	Emotional Intelligence	Boys	19.025	3.37	0.44	3.685	8.375*
		Girls	22.71	2.83			
2	Academic Anxiety	Boys	10.81	2.62	0.402	0.62	1.55
		Girls	11.43	3.01			
3	Adjustment Scores	Boys	16.35	5.2	0.702	3.43	4.88*
		Girls	12.92	4.64			

.01 level of significance

* .05 level of significance

(σ_d is the standard error of difference between the means and D is the difference between the means).

With reference to Table 1, the following sub-section discusses the testing of hypotheses framed with respect to the scores of dependent variables involved in the present study.

H₀₁: There is no statistically significant difference between the emotional intelligence scores of boys and girls at the secondary school level.

The obtained t-value 8.375 is significant at 0.05 and 0.01 levels of significance in favour of girls at the secondary school level. So, the null hypothesis is rejected. This finding is in accordance with Hasson et. al. (2009) but it differs from the research work by Rani and Manita (2015). The plausible reason for the above finding may be the fact that cognition is individual-centred and because of their experiences at home, school, etc., girls could score better than boys.

H₀₂: There is no statistically significant difference between the academic anxiety scores of boys and girls at the secondary school level.

The obtained t-value 1.55 is not significant at either level of significance so, this null hypothesis is not rejected. Studies by Afolyan et. al. (2013); Banga (2014), and Rani and Manita (2015) support the findings of this study. However, Joshi (2013), Neelam and Attri (2013), and

Das (2014) found such findings in favour of girls. So, the findings of the present study are antagonistic to some studies but in support of some other studies. Both the genders were of almost the same age group and studied in almost similar institutions. Physical (classrooms, etc.) and academic infrastructure (teachers, library facilities, etc.) were almost alike for both so, academic anxiety was obstructing them almost equally. Hence, in this aspect (anxiety) no significant difference was found between them.

H₀₃: There is no statistically significant difference between the adjustment scores of boys and girls at the secondary school level.

The obtained t-value is significant at 0.05 and 0.01 levels of significance in favour of boys at the secondary school level, hence, this null hypothesis is rejected. This finding doesn't support Malek et. al. (2011), in which it was found that with respect to adjustment, the two genders don't differ significantly. Generally, in the society, it is assumed that males have to perform outside jobs and females are supposed to know household work so, by virtue of this fact, boys get comparatively more opportunities to interact with people, face situations, etc., and over time it may help them adjust to the scenario and girls by being restricted within the four-walls may not get such opportunities, and hence, it may restrict their social skills.

Table 2
Coefficient of correlation (r) between scores of two dependent variables

S.N.	Dependent Variables	r-value
1	Emotional intelligence and academic anxiety scores	-0.02
2	Emotional intelligence and adjustment scores	0.47*
3	Academic anxiety and adjustment scores	-0.18*

.01 level of significance

* .05 level of significance

Table 2 shows the obtained values for the coefficient of correlation (r) between scores of any two dependent variables that is emotional intelligence and academic anxiety, emotional intelligence and adjustment, and academic anxiety and adjustment.

With reference to Table 2, the following sub-section discusses the testing of hypotheses framed with respect to coefficient of correlation (r) between the scores of any two dependent variables involved in the present study.

H₀₄: There is no statistically significant correlation between emotional intelligence and academic anxiety scores of secondary school students.

Obtained value of Karl Pearson's Product Moment Coefficient of Correlation (r) that is at -0.02 is not significant at either level of significance that is at 0.05 and at 0.01 levels, hence, this null hypothesis is accepted. This finding is in support of findings by Rani and Manita (2015) but in opposition to findings by Joshi (2013). The plausible reason behind this finding may be the fact that there was no significant difference

with respect to academic anxiety between two genders but emotional intelligence scores were significantly in favour of girls. In other words, considering academic anxiety as a dependent variable, intervening variable like exposure to similar environmental conditions in terms of physical and academic infrastructure of institutions might have intervened so significantly that it nullified the effect of gender on emotional intelligence (a dependent variable) while finding a co-relation between them.

H₀₅: There is no statistically significant correlation between emotional intelligence and adjustment scores of secondary school students.

Obtained value 'r', which is at 0.47, is significant at 0.01 level of significance so, this null hypothesis is not accepted. These results support the findings by Marques (2006) and Wing, Schutte and Byrne (2006). This finding is in consonance with the other findings of the present study also because girls had significantly higher emotional intelligence scores than boys and with respect to adjustment, they significantly outshined. So,

while considering these two dependent variables, individually, both genders differed significantly from each other. Hence, when the combined scores as regards to emotional intelligence and adjustment for both the genders were co-related, a significant positive correlation was found between them.

H₀₆: There is no statistically significant correlation between academic anxiety and adjustment scores of secondary school students.

The obtained value of 'r', which is at -0.18, is significant at 0.01 level, so this null hypothesis is not accepted. Study by Singh (2013) had similar findings. The plausible reason behind this finding may be the fact that the two genders were found more or less equally academically anxious but boys had significantly higher adjustment scores than girls. While considering the effect of an independent variable (gender) on a dependent variable (adjustment), intervening variable like family, where a division of labour among male and female members usually takes place, might have favoured boys and the effect of this intervening variable might have dominated the non-significant effect of gender on anxiety.

IMPLICATIONS

For Students: Students need to accept the situations as such, rather than criticising them and ultimately giving up. They should try to overcome their shortcomings as such efforts

will shape their struggling capacity, rather than intentions of surrender or escape. At the cognitive level, they may be motivated and perceive that they are capable of doing something. They can be encouraged to rehearse reading-writing, enhance vocabulary skills, etc. They can be encouraged to build a habit of thinking beyond conventions. A helping hand may be given to set up realistic goals before them, without any peer or parental pressure, etc., and develop a work plan for their achievement. After the attainment of even a single or small success, they may be motivated to cheer themselves as it will help develop intrinsic motivation among them. All these initiatives will ultimately foster their emotional intelligence, which acts as a predicator of their academic motivation, performance and achievements.

For Teachers: A good rapport between teachers and students can minimise certain adverse aspects, which generally hinder the latter's development. Rapport between teachers and students can be established when the former understand the latter in totality and respect their individuality as it may help them to relax and overcome unnecessary levels of anxiety. Acknowledging students' ideas or thoughts and giving opportunities to express themselves may develop confidence among them, hence, facilitating their emotional intelligence.

For School Administrators: At the school level, provision of guidance and counselling services may relax students and as a first measure it requires that the school timetable, at the class level, must reflect an arrangement of guidance and counselling hours. Otherwise, when a student needs guidance or counselling, then he/she would have to visit the counsellor during some class. Thus, school administrators (principals) should reorganise the timetable so that in a week/fortnight/month on a particular day and time a particular class gets a chance to interact with the counsellor.

For Curriculum Planners: The curriculum planners must assure that across different levels of schooling, there is a uniform academic workload among students. They must see to it that till the upper primary level there is Continuous and Comprehensive Evaluation (CCE) and under this there is a non-detention policy. But when a student is promoted to the secondary level, there is a sudden introduction of conventional examination-oriented curriculum and a student's achievements are assessed in terms of his/her performance, which is the marks obtained in unit or term-end examinations. Hence, a state of turmoil arises and students develop doubts regarding their capability, which may affect their emotions or feelings towards themselves. So, a balanced school curriculum with

respect to content, teaching, learning and evaluation, etc., may resolve this.

For Parents: Parents may realise that their child is also a human being and imposing their unfulfilled desires may pressurise him/her, hence, his/her normal and natural performance may get paralysed. So, it is better that parents help their child in setting a realistic goal, keeping in view his/her capabilities, and support him/her by making him/her realise that nothing wrong will happen if he/she is unable to achieve that goal. Ultimately, the child and his/her health, happiness, etc., are more important for parents than any materialistic achievement. Thus, all these efforts on the part of parents may support a student by boosting his/her emotional intelligence, adjustment skills and coping abilities.

CONCLUSION

In this world, where changes are taking place exponentially, there is a dire need to view emotional intelligence, anxiety and adjustment as inborn personality traits of students. Researches and literature in these domains are substantially enriching professionals. As far as a student, as an individual, is concerned his/her emotional intelligence (feelings or emotions), inter-personal adjustment and inter-personal skills (like, ability to cope with anxiety) must be supported by family, schools and society so that it may help him/her to grow, develop and contribute to the society. The Theory of Emotional Intelligence given by Mayer and

Salovey (1990) and Goleman (1995) visualised that intelligence alone does not guarantee success but emotional intelligence, adjustment, etc., are the determining factors. Emotional intelligence supports an individual in monitoring his/her own and others' emotions and enables him/her to differentiate among people and, thus, help in guiding one's own thoughts and actions. Emotional intelligence as an inborn or latent trait profoundly affects other capabilities of humans by either facilitating or obstructing them. So, the need of

the hour is to gauge the emotional intelligence, academic anxiety and adjustment among students with some constructive outlook. Adopting the same outlook, the present study was conducted and it was found that girls of secondary school had higher emotional intelligence than boys, while a reverse trend was observed in adjustment as, here, boys excelled girls. However, both boys and girls were more or less equally academically anxious. Emotional intelligence helps students to adjust and adjustment is negatively related to anxiety.

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