Emotional Intelligence and Scholastic Performance among Children of a High School in South India

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Abstract

Background: Emotional intelligence is one's ability to monitor one's own and others' feelings and emotions. In the recent years, the EI has been linked to academic success, school dropout, or the development of emotional and behavioral problems in children and job performance among adults. Early identification of low EI would help to implement corrective actions right in the school age for their better performance.

Objectives: 1. To assess the emotional intelligence (EI) of high school children in a select English medium school in Bangalore Urban District 2. To determine the factors associated with EI and its association with scholastic performance.

Methodology: Cross sectional study was conducted among 295 students of an English Medium School in a town in Bangalore Urban District in the year 2011. Students completed self reported TMMS scale to assess EI.

Results: 164(55.6%) boys and 131(44.4%) girls in the age group 12–16 yrs, participated in the study. TMMS scale assesses three domains of EI i.e. attention, clarity and repair of the emotions. Using this, 24.7% of the students paid little attention to their emotions, 21.5% need to improve understanding and 17.6% of the students had little regulation on their emotions, which needs some intervention for improvement, while majority of the students reported right attention, clarity and regulation of their emotions. Girls scored significantly higher in all the domains of EI compared to boys. Majority of the students (41.4%) had scored ≥75% marks in the last academic year and having excellent regulation of their emotions was significantly associated with their academic performance (Chi sq=14.398, p=0.006), while attention and clarity component of EI did not have association with scholastic performance.

Conclusion: Boys showed less EI compared to girls, therefore they will have to be focused more by school teachers and health personnel in improving EI, since EI has shown significant association with scholastic performance especially regulation of one's emotions.

Key words: Emotional Intelligence, Scholastic performance, School children

Introduction

Emotional intelligence is a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action,[1] and Emotional Quotient (EQ) is a measure of Emotional intelligence. Interest in the concept of "emotional intelligence" (EI) emerged in dramatic fashion in 1995 following the publication of Daniel Goleman's book on the topic. Goleman identified 5 factors that affect EI. [2] They are: self-awareness, self-regulation, motivation, empathy and social skills. Similarly, Bar-On has identified 5 factors, intrapersonal ability, interpersonal ability, stress management, adaptability and general mood.[3] One important reason for the poor quality of early work on EI was the problematic state of assessment tools for the construct[4]. Intervention programs were being created, but few valid and reliable EI measures were available. Since the late 1990s, however, several new measures have appeared that have sought to correct this problem, Multi-Factor Emotional Intelligence Scale[5], later revised as Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). Later Bar-On[3,6] developed Bar-On Emotional Quotient Inventory (EQ-i), a 133- item self-report instrument that assesses all the dimensions of EI.

Another idea accompanying popular discussions about the "new" construct of EI was the claim that EI was an important predictor of achievement in various educational contexts.[2,7,8] In a longitudinal study examining the transition from high school to university[9], Parker et al. found that various EI dimensions were predictors of academic success. At the end of the academic year, the successful group (first-year GPA of 80% or better) scored higher than the less-successful students (GPA of 59% or lower) on several dimensions of EI. Goleman[10] attempts to clarify the relationship between IQ and EQ and their applicability in job performance. According to him, IQ determines the types of jobs individuals are capable of holding, while EQ predicts who will excel in a particular job when levels of IQ are relatively equal.

Since EI assessment can help pinpoint negative and ineffective coping strategies that can contribute to academic underachievement, dropping out of school, or the development of emotional and behavioral problems, early identification of children with low EI, could help to tackle these problems. In view of this, the present study was undertaken to assess EI of high school children in a select English medium school in Bangalore Urban District and to determine the factors associated with EI and its association with scholastic performance.

Methodology

This study was undertaken in a private English medium school located in a town within Bangalore urban district during the period of May to July 2011. Students in 8th to 10th standard participated in the study. Purposive sampling was used to select the study group. A Written consent was obtained from the school principal and verbal consent from the students. They were further advised that it was their choice to participate and that they could also withdraw at any point during the administration of the questionnaire. Both anonymity and confidentiality were assured. Self administered questionnaires were completed during regular classroom periods and any assistance required by individual students in understanding the questions was given. The study used a pretested questionnaire containing demographic details and percentage of marks scored in the last exam and a 24 item TMMS (Trait Meta Mood Scale) to assess the EI level.

The TMMS is one of the most popular questionnaires in the scientific field, and it is also widely used in clinical practice. It can be used from age 12. The scale offers a personal estimate of the reflective aspects of our emotional experiences. The TMMS is a twenty-four item Likert-type scale. This scale addresses three key aspects of emotional intelligence: *Attention* conveys the degree to which individuals tend to observe and think about their feelings and moods (8 items, e.g. "I don't think it's worth paying attention to your emotions or moods"); *Clarity* evaluates the tendency to discriminate between emotions and moods (8 items, e.g. "I am usually very clear about my feelings"); *Repair* refers to the subject's tendency to regulate their feelings (8 items, e.g. "Although I am sometimes sad, I have a mostly optimistic outlook"). Participants were required to rate the extent to which they agreed with each item on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). Previous studies using this scale have proved to be reliable and satisfactory: Attention (α=0.86), Clarity (α=0.87) and Repair (α=0.82).[11] The TMMS scores classify students according to their socioemotional risk. Each domain has three groups, poor, right and more attention, clarity and repair.

Data was entered in Microsoft excel sheet and analyzed for mean, standard deviation, Pearson's correlation, chi square, independent t-test, using SPSS 16. Cronbach's alpha coefficients were calculated for each domain of the assessment tool002E

Results

A total of 295 students participated in the study of which 164 (55.6%) were boys and 131 (44.4%) were girls. Their age ranged from 12 – 16 yrs with mean of 14.05 ± 1.01 yrs. A total of 100 (33.9%), 99 (33.5%) and 96 (32.54%) students participated from 8th, 9th and 10th standards respectively. Reliable data was not available on the total family income by many of the students, however only 11 people reported that they possessed APL card and 29 possessed BPL cards at home. Mean family size i.e. the total household members among the students was 5.45 ± 2.19.

The correlations among study variables and their mean, standard deviations (SD) and alpha coefficients are shown in table 1.

Using the 24 item TMMS, distribution of the students according to the EI scores obtained is shown in the table 2.

Table 3 describes that girls scored significantly higher in all the dimensions of EI compared to boys.

Age, rural/urban residence or APL/BPL card holding did not have any significant association with EI level. Scores were again compared among small families (less than the mean) and big families (>5 members). Attention scores were significantly higher big families compared to small families (t = -2.413, p = 0.016) while clarity and repair did not show significant difference between the two families.

Scholastic performance was assessed using the percent of marks obtained in the last academic year. Majority of the students (41.4%) had scored ≥75%, while 98 (33.2%) scored 60 – 74% and 75 (25.4%) had scored <60%. Paying more attention to emotions (Chi sq=4.49, p=0.344) and understanding of emotions (Chi sq=6.226, p=0.183) did not have significant association with the scholastic performance, while excellent regulation of the emotions was significantly associated with good performance in the school (Chi sq=14.398, p=0.006).

A total of 163 (55.25%) students were absent for at least one day in the last one month, and the mean days of absenteeism was 2.03 ± 3.34 days, ranging from zero to 30days. Sickness absenteeism was found in 109 (67% of total absentees) students and the mean days of absenteeism was 0.85 ± 1.83 days, ranging from zero to 15days. Using the independent t-test, it was found that school absenteeism did not show any significant association with EI.

Discussion

In his review of research surrounding emotional intelligence, Becker[12] criticized emotional intelligence on two fronts. The first is the lack of valid and reliable measures in the area. Becker argues that since the construct cannot yet be measured with reasonable accuracy, it is impossible to know whether it is rooted in reality or imagination. The second criticism stems from the fact that emotional intelligence appears to be based on problematic conceptualization, with Becker stipulating that emotional intelligence is nothing more than general intelligence aimed at emotional phenomena.

There is a dearth of studies on this new concept of Emotional Intelligence especially in India. However few studies done in different parts of the world have used varying EI assessment scales. There are few self online assessment scales available, which may have not been validated, however this could be used for practical purposes since they are simple and short. One such study using online assessment scale done in Rural South Bangalore among high school children[13] showed that 31% of the students had low Emotional Quotient, 69% had average EQ, and none had very low, high or genius EQ categories. The scale used for EQ assessment was different from the present study, however it could be made out that most of the students had right attention, understanding and regulation of the emotions in the present study also. Academic performance was assessed using best marks scored in each of 6 subjects in the previous year, and

most of the students had scored ≤60% and only 8% had scored >80% while 41.4% of the students had scored ≥75% in the present study. However this study showed no significant association between academic performance and EQ, which is similar to the findings in the present study except the repair domain of EI.

Similarly another study conducted among 124 students of a high school located in a Tuscan province, Italy[14] showed that emotional intelligence, in particular ability-based EI, helps in predicting scholastic success. Similarly Brackett and Mayer (2003)[15] showed that EI was positively correlated with high school academic rank ($p<0.01$) and college academic performance ($p<0.05$).

Daniel Goleman (1998)[16] asserts that no gender differences in EI exist, admitting that while men and women may have different profiles of strengths and weaknesses in different areas of emotional intelligence, their overall levels of EI are equivalent. However in the present study, EI scores were found to be high among girls compared to boys which was comparable to many other studies[13,17-20] conducted among school children and adolescents.

Study by Rashmi et. al[13] has shown that EI scores increased with increasing age/ standard in school, however in the present study, no such association was elicited. This finding may not be justifiable since the present study included very short range of classes.

Study conducted in Mumbai among school children[17] in 2006, had shown that EI had no association with parent's income. Similarly in the present study, socioeconomic status did not show any association with EI. However this cannot be justified in the present study since the response rate for this question was very low.

Limitation

The study was conducted in only one school limiting the geographical area covered. Therefore the findings cannot be generalized to other children of the same age throughout the country. Another important limitation is that assessment of EI varies from person to person based on his/her intelligence and also with assessment tools, especially with the self assessment scales. Instead if one tool can be developed which can be used for varying ethnic and cultural communities, this problem can be minimized to some extent. Few studies have shown that, people are not skilled at assessing their own competencies especially with self report questionnaire like (Self-Report Emotional Intelligence Test) SREIT and EQ-I, and also because of their cognitive functions stating that different individuals remember the same event in different manners.[21] The TMMS scale appears to be a useful tool in the analysis of individuals' ability to monitor and regulate their individual emotions and mood, but it does not provide measurement of individuals' ability to monitor and regulate the emotions of others. It has also been observed that method for assessment of school performance was different in different studies and also the performance might depend on the teacher or circumstantial influences in the student's life at that point in time, which may affect the conclusion of the study. Moreover this study gave cross sectional data, which do not prove the temporality of the outcome.

Conclusion

There is undoubted evidence identifying EI in predicting personal and school success, and this has potential implications for students. The present study showed no association between paying attention to one's own emotions and experiencing feelings with clarity with the scholastic performance, while it showed significant association with the ability to recover from negative states of mind, which is the most important domain of EI as mentioned in several literatures.

Education, training and counseling approaches aimed at developing personal excellence in individuals will provide a widely applicable model for making the world a better place, by improving individual health emotionally. By focusing on excellence, emotionally intelligent students will help the country in healthy ways – raising the HDI of India, developing the Human Capital. The main goal of these studies is to provide a coherent and practical approach to human emotional behavior that students can learn and apply to stay healthy both physically and mentally, think of career progression, and enhance individual and collective productivity[17] and achieve a good life satisfaction[22]. It has also been proved that EI is significantly related to leadership style, one can assess the EI level right in the childhood and motivate or train accordingly to become a successful leader who can be an asset to the society. This EI concept can be used in furthering the child behavior by developing EI radar as experimented in a study conducted in 28 schools of Maharashtra.[17]

However there are some researchers who found that personality traits are strongly influenced by genes and persist from childhood to adulthood, remaining static over time. Some theorist would argue that although it may be possible to give people training in emotional intelligence and change some of their specific attitudes, behaviours, or policies, creating deep and pervasive changes in personality are difficult. Also, because personality traits are so enduring, any changes in attitude or behaviour that are made, may be superficial and short-term in nature.[23] Nonetheless there are sufficient studies proving association between Emotional Intelligence and academic achievement or success in life, and also emotional-social intelligence can be taught and are generalizable across situations (i.e., work, school, social, etc.).[24,25] Thus it is necessary to identify children with low EI early by orienting school teachers its importance and train them accordingly.

Conflict of Interest: None declared.

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Table 1: Frequencies, Correlation and Reliability of each domain of EI

Domains	Attention	Clarity	Repair
Attention	–		
Clarity	0.47*	–	
Repair	0.42*	0.53*	–
Mean	3.14	3.22	3.41
SD	0.73	0.81	0.79
Cronbach's Alpha	0.47	0.61	0.56

n=295, * p < 0.01

Table 2: Distribution of students according to the level of EI

Domains	Categories of risk	Frequency (n=295)
Attention	Pays little attention	73 (24.7%)
	Attention is right	208 (70.5%)
	Pays too much attention	14 (4.8%)
Clarity	Needs to improve understanding	63 (21.5%)
	Understanding is right	205 (69.5%)
	Excellent understanding	27 (9.2%)
Repair	Needs to improve regulation	52 (17.6%)
	Regulation is right	210 (71.2%)
	Excellent regulation	33 (11.2%)

Table 3: Gender analysis of Emotional Intelligence

Dimensions of EI	Gender	Mean (SD)	t	P at 95% CI
Attention	Males	24.23 (6.22)	-2.933	0.004
	Females	26.22 (5.18)		
Clarity	Males	25.01 (7.17)	-2.443	0.015
	Females	26.86 (5.43)		
Repair	Males	26.51 (6.28)	-2.50	0.013
	Females	28.34 (6.20)		