An Exploration of Emotional Intelligence of the Students of IIUI in Relation to Gender, Age and Academic Achievement

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Abstract

This correlational study was intended to examine the relationship of emotional intelligence (EI) with gender, age and academic achievement of students of International Islamic University Islamabad (IIUI). In this study the predictor variable was emotional intelligence and criterion variable was academic achievement as measured by students’ Cumulative Grade Point Average (CGPA). Emotional intelligence was measured with the help of BarOn Emotional Quotient Inventory (EQi). The validity and reliability of EQi was measured and the instrument was found to be valid and highly internally consistent. Correlation analysis, regression analysis and t-test were performed to test the hypotheses. Results indicated a significant correlation between emotional intelligence and academic achievement. Emotional intelligence was found a significant predictor of academic achievement. No significant correlation was found between age and emotional intelligence. There was no difference in the mean EQi scores of male and female students except on stress management scale where male students scored higher than female students.

Introduction

Over the past century psychologists studying intelligence remained focused on its cognitive aspect. Though Thorndike’s concept of social intelligence and Gardner’s personal intelligences were important milestones in the explanation of the affective aspect of intelligence, this type of intelligence had not been directly associated with academic achievement or success in life. However, recent research has revealed that the cognitive ability is not the only predictor of performance rather affective development is an equally important predictor of success. Goleman (1998) has asserted that the old yardstick of judgment, that is training and expertise, has been substituted by the new yardstick that judges how well we handle ourselves and how well we handle others. The new rules of the world of work focus on personal qualities such as empathy, initiative, adaptability and

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persuasiveness, taking intellectual ability and technical expertise for granted.

Since the last two decade a new dimension of intelligence, termed as emotional intelligence, has received much attention as being more responsible for success than IQ (Goleman, 1995). The term Emotional Intelligence was coined by Peter Salovey and John D. Mayer in their academic paper in 1990 to describe qualities like understanding one’s own and others emotions and to use this information for guiding thoughts and actions (Mayer and Salovey, 1990). This concept became popular after Daniel Goleman’s publication *Emotional Intelligence* in which he has described emotional intelligence in term of “abilities such as being able to motivate oneself and persist in the face of frustration; to control impulse and delay gratification; to regulate one’s mood and keep distress from swamping the ability to think; to empathize and to hope” (Goleman, 1995, p.36).

In theory, emotional intelligence refers to a collection of such skills as self-control, determination, self-motivation and sensitivity to the feelings of others. Different scholars have defined and explained the concept of emotional intelligence in terms of models consisting of various emotional skills. However, these models share common core of basic concepts (Goleman, 2000a).

Caruso, Mayer and Salovey (2002) divided these models into two types: Ability models (Mayer and Salovey’s Model) and Mixed Models (Goleman’s Model and BarOn’s Model).

Mayer & Salovey (1997) proposed a four-branch model of emotional intelligence that includes the abilities to:

1. accurately perceive emotions in oneself and in others;
2. use emotions to facilitate thinking;
3. understand emotions, emotional language, and the signals conveyed by emotions; and
4. manage emotions so as to attain specific goals.

The model proposed by Goleman (2000b) identifies four domains of emotional intelligence that comprise 20 competencies. The four major domains are as follows:

1. **Self-Awareness** that includes three competences: Emotional Self-Awareness, Accurate Self-Assessment, and Self-Confidence.
2. **Self-Management** that involves six competences: Self-Control, Trustworthiness, Conscientiousness, Adaptability, Achievement Drive and Initiative.
3. **Social Awareness** that includes three competencies: Empathy, Service Orientation and Organizational Awareness.
BarOn (2006) defines emotional intelligence in terms of such emotional and social skills that influence our understanding and expression of ourselves, our understanding for others and interaction with them, and the ability to deal with everyday demands.

After 17 years of research he developed the BarOn EQi that is a scientifically developed and validated measure of emotional intelligence. This inventory consists of five major components and 15 subscales of these components. The five composite scales include: Intrapersonal Component, Interpersonal Component, Stress Management, Adaptability and General Mood. A brief description of these scales is given below:

1. **Intrapersonal Component:**

The intrapersonal component of emotional intelligence emphasizes self awareness and self expression. It includes following five subscales:

- **Emotional Self Awareness** involves the awareness and understanding of one’s own emotions.
- **Self Regard** involves the understanding, acceptance and respect of the self.
- **Self-Actualization** refers to the ability to strive for personal goals and actualize one’s potentials.
- **Assertiveness** is the ability to effectively express and defend one’s beliefs and thoughts.
- **Independence** is the ability of being self-directed and self-controlled.

2. **Interpersonal Component**

The interpersonal component of emotional intelligence model is concerned with social awareness and interpersonal interactions. It includes following subscales:

- **Empathy** is the ability to be aware of and understand how others feel.
- **Social Responsibility** is the ability of being a cooperative, constructive and responsible member of the society.
- **Interpersonal Relationships** refer to the ability to establish pleasant relationships and healthy interaction with others.

3. **Stress Management**

This component of EI involves managing and regulating emotions and includes two sub-scales:

- **Stress Tolerance** is the ability to withstand the difficult conditions and unpleasant events by constructively managing emotions.
Impulse Control is the ability to resist or delay a desire, a drive or a temptation by controlling one’s emotions.

Adaptability

This component of EI model is concerned with the ability to adjust with the change and cope with the problems that come with the change. It includes following sub-scales:

- **Reality Testing** means the ability to objectively judge the external reality and the internal feelings.
- **Flexibility** is the ability to adapt one’s thoughts and emotions according to the changing situations and adjust in new situations.
- **Problem Solving** refers to the ability to identify the problem and to put forward an effective solution.

General Mood

This component of emotional intelligence includes the competencies related to self motivation. It includes two sub-scales:

- **Happiness** refers to the satisfaction with one’s life, and the ability to express positive feelings and enjoy life.
- **Optimism** is the ability to think positively, to keep in view the bright side of the life and remain hopeful in the face of difficulties and negative feelings.

As emotional intelligence involves such skills as motivation and determination, it can play an important role in achieving goals in various fields of life thereby leading to success. Studies conducted in multiple areas like education, health, work, etc. indicate that emotional intelligence is related with different aspect of success in life. For example, Fernandes and Rego (2004) found that EI is an important predictor of students’ satisfaction with life, health and academic achievement. The study conducted by Carmeli (nd) revealed significant relationship of Emotional Intelligence of senior managers with work attitude, work behaviour, work outcomes and job satisfaction. Khokhar and Kush (2009) found that high emotional intelligence in executives brings about better quality of work performance.

Abdul-Azib (2006) found a significant negative relationship between emotional intelligence and workplace deviant behaviour of 73 lecturers of a university in Malaysia. Schutte, Schuettpelz and Malouff (2000) found relationship of emotional intelligence with performance on cognitive tasks. In a study Qualter, Whiteley, Hutchinson, and Pope (2007) found that higher levels of emotional intelligence facilitate students’ ability to cope with the transition from primary to secondary school.

Effective learning takes place when students have an understanding of how to learn and this understanding requires such emotional skills as
confidence, self-control, the ability to communicate and the ability to cooperate with others. Many studies have found positive correlation between emotional intelligence and academic achievement. The findings of the study, conducted by Fennin (2000), showed positive correlation between emotional intelligence and achievement scores. Marquez, Martin and Brackett (2006) found relationship between emotional intelligence and academic achievement. Rozell, Pettijohn, and Parker, (2002) found relationship between emotional intelligence and CGPA of undergraduate students of Mid-Western University.

The study conducted by Nelson and Low (2004) revealed the importance of emotional intelligence during transition period of high school graduates in the first year of college. They emphasized the importance of emotional intelligence skills as influencing variables in students’ achievement and retention. Parker, Summerfeldt, Hogan and Majeski (2004) found emotional intelligence a predictor in identifying academically successful and academically unsuccessful students during transition period. A study conducted by Jaeger and Eagan (2007) revealed Interpersonal, Stress Management and adaptability scales of BarOn EQi as significant predictors of academic performance of students in the first year of university. Abdullah (2006) also found that some dimensions of emotional intelligence significantly predict academic performance of college students. After reviewing research studies about emotional intelligence in relation to university students, Abraham (2006) concluded that training in appropriate emotional skills is necessary for career success and fulfillment.

Research studies have been conducted in Pakistan to find out the relationship of emotional intelligence with different aspects of life including educational and work settings. Zafar (2005) found a relationship between EI and self efficacy of university teachers; Kiani (2003) studied the relationship between EI and conflict management in workplace; and Aslam (2004) found relationship between EI and occupational stress among informational technology professionals. Farooq (2003) examined the effect of emotional intelligence on academic performance of 246 adolescent students and found that students with high emotional intelligence show better academic performance than the students with low emotional intelligence.

As regarding gender differences in emotional intelligence, psycho-educational research has demonstrated some degree of a relation between the two; however, this relation has not been clearly established. The results of some studies indicate significant gender differences in emotional intelligence and those of others contradict the notion. Popular literature apparently suggests that men and women significantly differ in their styles of emotional intelligence. Women and girls are generally considered more caring and emotionally responsive than men and boys (Eisenberg, 1994). Goleman (1998), however, denies the idea that women are smarter than men regarding emotional intelligence and vice versa. BarOn (1997) asserts that
there are no gender differences in terms of total emotional intelligence, nevertheless, difference may be found in some emotional capacities.

The study, conducted by Harrod and Scheer (2005) on 200 youths of age 16-19, revealed a significant difference in the scores of males and females on emotional intelligence with females reporting higher EI level. The study of Katyal and Awasthi (2005) on adolescence of Chandigarh, showed females with higher EI scores, however, the difference was not as significant to be conclusive but only suggestive of the trend. Mandell and Pherwani (2003) found a significant difference in EI scores of male and female manager in the study of relationship between emotional intelligence and transformational leadership style. Adeyemo (2008) found a significantly higher emotional intelligence in female workers in different organizations than their male counterparts. Other studies revealed gender differences in some aspects of emotional intelligence (Reiff, et. al., 2001; Petrides and Furnham, 2000; Sutarso, et. al., 1996; etc.).

The increase in cognitive abilities with increase in age brings about more social and emotional intelligence (BarOn, 2006), however, the research in this area shows little difference in emotional intelligence regarding age. For example, Balci-Celik and Deniz (2008) conducted a study on the difference in the EI levels of Turkish scouts and scouts from other countries with regard to age and gender. They found no gender difference in emotional intelligence, neither there was any difference in emotional intelligence regarding age. Birks, McKendree and Watt, (2009) also did not found any significant correlation between age and emotional intelligence of healthcare students. However, Fariselli, Ghini and Freedman (2006) have examined the relationship between emotional intelligence and age, showing a slight but significant positive correlation between them ($r= .135$). They concluded that this correlation is very weak and there are more decisive factors that account for variations in emotional intelligence.

In the light of these studies it can be said that a relationship may exist between emotional intelligence and academic achievement. Also, age and gender may be important factors in EI development of a person. Keeping in view the above points this study was conceptualized to explore the relationship between emotional intelligence and academic achievement of the students of International Islamic University Islamabad (IIUI). Moreover, the relationship of gender and age with emotional intelligence has been examined. The study posits that emotional intelligence is a significant predictor of academic achievement and there is no significant difference in emotional intelligence regarding gender and age.

**Methodology**

The participants of the study were randomly selected 132 students, studying in different departments of IIUI. The sample mainly comprised of those students who were willing to participate in the study and they properly
completed the given inventory. Fifty percent of the sample consisted of male students and 50% of female students with the age range 18-35 years. Their mean age was 24.14 years (SD= 4.04).

A validated version of BarOn Emotional Quotient Inventory was used to measure emotional intelligence. The instrument consisted of 117 items of EQi and few items about background information like gender, age, faculty, study program, etc. It took 30-35 minutes to be completed.

Initially 200 respondents were personally contacted in their free time. As the instrument was very lengthy and time taking, many students were reluctant to spare such a long time for completing the inventory, however, a considerable number of students agreed to participate in the study. They were briefed about how to rate the responses. Most of the students genuinely completed the inventory; however, some questionnaires were returned incompletely or invalidly filled. They were not included in the sample.

The data about students’ academic achievements was collected from their academic records in the University. Correlational statistics were applied to find relationship among variables and $t$ test was applied to find gender difference in emotional intelligence.

**Validity of EQi**

BarOn Emotional Quotient Inventory (EQi) has been developed by Dr. Reuven BarOn to measure emotional intelligence. It is a standardized tool to measure a number of constructs related to emotional intelligence. The original instrument includes 137 items. The overall EQi is divided into five composite scales including Intrapersonal Component, Interpersonal Component, Adaptability Component, Stress Management Component and General Mood Component. These composite scales are further divided into 15 subscales.

The EQi used in this research was a validated version of the original BarOn EQi used by Aslam (2004) in his research conducted in National Institute of Psychology (NIP), Quaid-i-Azam University, Islamabad. The validated instrument was used with the permission of NIP. This instrument consists of 117 items. The items are positive or negative statements related to the particular sub- scales of EQi, rated on five point likert type scale ranging from 1 (not true of me) to 5 (true of me). For example, a positive statement about Emotional Self Awareness is, ‘I’m aware of the way I feel’; and a negative statement says, ‘It’s hard for me to describe my feelings.’ The instrument was revalidated and alpha reliability coefficients were computed with the help of SPSS. The reliability coefficients of EQi and the sub-scales are given in Table 1.
Table 1
Alpha Reliability Coefficients of EQi and 15 Sub-Scales (N = 132)

<table>
<thead>
<tr>
<th>Name of scale</th>
<th>Alpha coefficient</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQi</td>
<td>0.94</td>
<td>117</td>
</tr>
<tr>
<td>Emotional Self Awareness</td>
<td>0.65</td>
<td>8</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>0.67</td>
<td>7</td>
</tr>
<tr>
<td>Self Regard</td>
<td>0.73</td>
<td>9</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>0.67</td>
<td>9</td>
</tr>
<tr>
<td>Independence</td>
<td>0.74</td>
<td>7</td>
</tr>
<tr>
<td>Interpersonal Relationship</td>
<td>0.73</td>
<td>11</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>0.72</td>
<td>9</td>
</tr>
<tr>
<td>Empathy</td>
<td>0.74</td>
<td>8</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>0.75</td>
<td>8</td>
</tr>
<tr>
<td>Reality Testing</td>
<td>0.65</td>
<td>10</td>
</tr>
<tr>
<td>Flexibility</td>
<td>0.66</td>
<td>8</td>
</tr>
<tr>
<td>Stress Tolerance</td>
<td>0.71</td>
<td>9</td>
</tr>
<tr>
<td>Impulse Control</td>
<td>0.75</td>
<td>9</td>
</tr>
<tr>
<td>Happiness</td>
<td>0.75</td>
<td>9</td>
</tr>
<tr>
<td>Optimism</td>
<td>0.76</td>
<td>8</td>
</tr>
</tbody>
</table>

The alpha reliability coefficient of total EQi is 0.94 and those of its 15 sub-scales range from 0.65 to 0.76. These results indicate that the instrument has a high internal consistency.

Results

Pearson Product-Moment Correlation Coefficient was calculated for measuring correlation of emotional intelligence with gender, age and academic achievement. A significant correlation was found between emotional intelligence and academic achievement ($r = 0.34$, $p< .01$). No significant correlation was found in emotional intelligence and gender ($r = 0.01$, $p> .05$). Emotional intelligence was neither significantly correlated with age ($r = 0.04$, $p> .05$).

The mean scores of male and female students on total EQi and five composite scales were compared through t-test (Table 2).

No significant difference was found in the overall EQi scores of male and female students. Out of five composite scales of EQi, only one (stress management) has significant difference in means ($t = 2.04$, $p< .05$), with male students having higher score than female students.

Regression analysis was performed for analyzing whether emotional intelligence is a significant predictor of academic achievement. The results of regression analysis showed that coefficient of correlation (R) between emotional intelligence and CGPA was 0.34 and $R^2$ was 0.12. This result indicated that emotional intelligence significantly predicts academic achievement ($F= 17.14$, $p< .01$), and it accounted for almost 12% variance in academic achievement as measured by CGPA ($R^2 = 0.12$).
Table 2
Comparison of Mean Scores of Male and Female Students on Total EQi and 5 Composite Scales of EQi. (N= 132, Male= 66, Female= 66)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Gender</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQi</td>
<td>Male</td>
<td>459.36</td>
<td>48.806</td>
<td>6.008</td>
<td>0.114</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>460.39</td>
<td>54.913</td>
<td>6.759</td>
<td></td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Male</td>
<td>142.62</td>
<td>16.089</td>
<td>1.980</td>
<td>0.407</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>141.39</td>
<td>18.461</td>
<td>2.272</td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Male</td>
<td>101.21</td>
<td>15.341</td>
<td>1.888</td>
<td>1.848</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>106.53</td>
<td>17.648</td>
<td>2.172</td>
<td></td>
</tr>
<tr>
<td>Adaptability</td>
<td>Male</td>
<td>90.50</td>
<td>10.494</td>
<td>1.292</td>
<td>0.176</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>90.15</td>
<td>12.182</td>
<td>1.500</td>
<td></td>
</tr>
<tr>
<td>Stress Management</td>
<td>Male</td>
<td>62.14</td>
<td>6.430</td>
<td>.792</td>
<td>2.040*</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>58.67</td>
<td>12.229</td>
<td>1.505</td>
<td></td>
</tr>
<tr>
<td>General Mood</td>
<td>Male</td>
<td>62.89</td>
<td>9.787</td>
<td>1.205</td>
<td>0.412</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>63.65</td>
<td>11.268</td>
<td>1.387</td>
<td></td>
</tr>
</tbody>
</table>

*p< 0.05

Discussion

The results of this study signify the importance of emotional intelligence in academic success. These results are consistent with the existing research literature (Fennin, 2000; Nelson and Low, 2004; Parker, Summerfeldt, Hogan and Majeski, 2004; Marquez Martin and Brackett, 2006; Jaeger and Eagan, 2007; Holt, 2008; etc.).

A significant positive correlation between emotional intelligence and academic achievement indicates that academic success does not only depend on cognitive aspects of intelligence rather it is affected by emotional abilities. Regression analysis shows that emotional intelligence is a significant predictor of academic achievement that accounts for 12% variance in CGPA ($R^2 = 0.12$). These results are in line with the outcomes of the study conducted by Holt (2008) who found that 14% of variance in the GPA of college students was accounted for by emotional intelligence. Mayer and Salovey (1997) assert that a single personality factor explains only a small portion of life outcomes, so, even a 10% contribution of emotional intelligence would be considered very large. So, we can say that the result of this study provides considerable evidence of the contribution of emotional intelligence in academic success.

Educators are realizing that such non-cognitive skills like emotional intelligence can play an important role in academic achievement as well as in life success. Being at the top of academia is not the only requirement for future success rather it demands skills of communication, decision making, leadership and teamwork. Emotionally intelligent individuals tend to lead happier and more productive lives. At school, they show better academic...
performance and maintain a healthy classroom atmosphere in which learning becomes easier.

Therefore, in educational settings due consideration should be given to the affective aspect of intelligence in order to attain better educational outcomes in terms of improved academic performance and healthy personality development. In case of university students it seems to be more important to equip them with such emotional and social skills that are essential for a successful practical life.

Contrary to the common belief that women are more apt in emotional skills, this study revealed no significant difference in overall emotional intelligence of male and female students. Theses results are in agreement with the results of study conducted by Abdullah (2006) who found no difference in the emotional intelligence scores of male and female students. These results can also be compared to studies conducted by Reiff, et. al. (2001), and Petrides and Furnham (2000), revealing difference in only one component of emotional intelligence while the overall emotional intelligence scores do not differ significantly. However, these results contradict with the outcomes of the studies conducted by Harrod and Scheer (2005), Adeyemo (2008) and Mandell and Pherwani (2003) who found that male and female respondents significantly differ on emotional intelligence scores.

After analyzing the research studies on gender differences in emotional intelligence, Sanchez-Nunez, Fernandez-Berrocal, Montanes and Latorre (2008) concluded that the self-report and performance based measures of emotional intelligence provide different information. However, they assert that difference in emotional intelligence on the basis of gender may be attributed to the socialization and emotional teachings of girls and boys in childhood. They contend that girls receive wider spectrum of emotions from parents than do boys which make the former more adept at recognizing and expressing emotions.

The results of this study do not corroborate the common belief that age brings about more social and emotional intelligence (BarOn, 2006) because no significant correlation was found between age and emotional intelligence. The result is in line with the outcome of the studies conducted by Harrod and Scheer (2005), Balci-Celik and Deniz (2008) and Birks, McKendree and Watt, (2009); however, the result is not consistent with the study conducted by Fariselli, Ghini and Freedman (2006). Since the sample of this study was small, this result may be inconsistent and a larger sample may produce different result.

The findings of this study suggest that non-cognitive aspects of personality should be given due consideration in educational settings. These settings are not only characterized by academic aspects but also involve social attributes. Emotional intelligence plays an important role in creating healthy classroom environment through developing positive interpersonal
relationships between teachers and students and among peers. Also it can facilitate the process of learning through harnessing the energy of positive emotions and controlling the adverse effects of negative emotions.

Development of better emotional competencies in university students may bring better educational outcomes in terms of improved academic performance, healthier personality development and greater success in work field. As university graduates are supposed to enter in practical life after completing their study, emotional intelligence can produce essential life skills related to effective team work, leadership and management that are helpful in the world of work.

Emotional competences are not only the requirement of the world of work; these are also required by the world we live in so that a peaceful global culture can be created. The education of youth with an emphasis on healthy personality development, positive interpersonal relations, determination for goal achievement and aspiration for a better life will produce in them the awareness of their attitude, understanding and empathy for others and optimism for their future. These emotional skills can enable our youth to persist in the face of challenges and fabricate them into a nation full of energy and enthusiasm for a brighter future.

This study was limited to the students of International Islamic University Islamabad and the randomly selected samples of male and female students were not proportionate to respective populations. These aspects may limit the generalizability of the findings, however, this study provides basis for further exploration in the field of emotional intelligence which requires a great deal of research.

References


