

The Relationship Between Emotional Intelligence and Academic Success

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Abstract: Emotional intelligence is defined as a construct involving the ability of an individual to monitor their own and others' emotions, to discriminate among the positive and negative effects of emotion, and to use emotional information to guide their thinking and actions. This study was carried out to find the relationship between emotional intelligence (EI) and academic success and the association between emotional intelligence and major of study. The scores obtained on EQ-i and the GPA of 187 students of physical education, chemistry, mathematics, English and medicine were correlated. Results show a coefficient of correlation of 0.161 which is significant at 0.05 level of significance. This indicates no significant relationship between EI and academic success. The result of a correlational analysis between assertiveness and academic success shows an $r = 0.318$ at 0.03 level of significance that is not a statistically significant association. The F value of 1.461 at the level of significance of 0.205 indicates that there is no significant difference between the different majors regarding their EI. Hence major has no relationship with the EI of students.

Keywords: Emotional Intelligence, Academic Success, Major

1. Introduction

The past few decades have witnessed the advent of many new psychological measures. In the realm of intelligence for example, following the introduction of multiple intelligence, we have been hearing about linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal and intrapersonal intelligence, as well as more far-fetched ones such as spiritual intelligence [1,2]. A form of intelligence which is claimed to account for more than 80% of a person's success is emotional intelligence.

Emotional intelligence includes the measurement of the following: understanding and managing one's own emotions, motivating oneself, recognizing emotions in others, and handling a relationship with others [3]. Emotions are believed to be managed by EI: emotional intelligence as the "effective use of emotion" [4].

There has been meager literature regarding students' emotions [5]. Thus one reason for the significance of this study is that it highlights the importance of the under-researched topic; students' emotions.

Being a student can be demanding and involves difficulties with a heavy workload and long hours of study which can result in feelings of frustration. Emotionally intelligent students are better able to place themselves in a positive state of mind. They are likely to know how to avoid dysfunctional emotions and use emotions in adaptive ways to ease feelings of frustration [6]. Research by reveals individuals with high levels of emotional intelligence are expected to recognize, manage, and

use their emotions to eliminate the ensuing obstacles and advance their horizons better than people with low emotional intelligence [7,8]. This is true when the task has high levels of complexity and demands. Studying and especially cramming can be demanding and leads to high levels of stress. Emotional intelligence can enable students to control this stress effectively and prevent its negative effects on their attitude and as a result on the outcome of their work, which is grades and ultimately academic success.

However, research on emotional intelligence and academic success is in its early stages and should be regarded with caution. Thus, researchers first need to develop a better understanding of what emotional intelligence is, how to measure it, and how it is related to academic success before attempting to use EI to improve academic success. This research strives to explore the relationship between EI and academic success in Iran. In addition, the study also wants to investigate whether there is a difference between the emotional intelligence of students studying in different fields; that is different university majors that students choose to specialize in. The research questions in this study are:

1. Is there a significant relationship between emotional intelligence and academic success?
2. Is there a significant difference in the emotional intelligence of students majoring in different fields?

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2- Methodology

Participants: In order to answer the research questions 187 university students were chosen. They had undergone instruction for at least two years at state universities. The participants were both men and women of 18-30. The subjects were 41 students of physical education, 19 of chemistry, 22 of mathematics, 46 of English, and 43 of Medicine. The students of Physical Education, Chemistry, Mathematics, and Teaching English were studying at Shahid Rajaee University. A group of 16 MA students of TEFL were studying at Khatam University (a non-profit university situated in Tehran that offers MA courses) and the students studying Medicine were at Tehran University.

Instrumentation: The instrument used in this study was the Persian version of the Bar-On Emotional Quotient Inventory (EQ-i). It is claimed that the EQ-i is the most comprehensive self-report measure of EI available [9-11]. The scoring of this questionnaire is done on an item basis. The answers are given in a likert scale and each item can score between 1-5 marks. There are 90 items in this questionnaire so a subject can score between 90 the lowest score to 450 the highest. In order to find the academic success of the students their Grade Point Average (GPA) was used. This was derived from their files by the researcher.

Procedure: The Persian version of the Bar-On Emotional Quotient Inventory (EQ-i) was found and used in this study [12]. This questionnaire was given to the students to complete. Students chosen to take part in this study had undergone at least four semesters of training at university. The questionnaire was administered to the students in class and they were given thirty minutes to complete it. When EQ-i was completed it was scored by the researcher. The next step was to find the GPA of the students. In order to do this the researcher extracted all grades needed from the students' files. This information was punched into SPSS (Statistical Package for Social Sciences) for the statistical analysis.

Design: This study has a correlational design. Two sets of data on two different variables; emotional intelligence and academic success were obtained from the students. The relation between these two sets of data was then compared. The purpose was to see if a student scoring high on emotional intelligence will also have a high GPA and how different majors would do on the EQ-i.

Statistical Analysis: A Pearson correlation was run to find if there was any relation between the

GPA and emotional intelligence of the participants. In addition an ANOVA (Analysis of Variance) was run to see whether students majoring in different fields had any differences in their emotional intelligence.

3- Results and Discussion

The first question of this study was whether there was a significant relationship between the EI of the participants and their academic success. The result of the correlational analysis run between the two is as follows:

Table 1 Descriptive Statistics for scores on EI and AS

Variable	Mean	Std. Deviation	N
EI	329.8877	37.39549	187
AS	15.9532	1.35853	187

Table 2 Correlation between EI and AS

Variable	Statistical info	EI	AS
EI	Pearson Correlation	1	.161*
	Sig. (2-tailed)		.028
	Number	187	187
AS	Pearson Correlation	.161*	1
	Sig. (2-tailed)	.028	
	Number	187	187

*Correlation is significant at the 0.05 level (2-tailed)

As seen in the table the coefficient of correlation is 0.161 which is significant at 0.05 level of significance. However, this is a very weak association; therefore, it is safe to conclude that there is no significant relationship between EI and academic success.

Even though the association was weak it still existed so the researcher carried out a correlational analysis between the 15 components of EI and academic success. Only one of these components; that is "assertiveness" showed a statistically significant relationship with academic success. This is illustrated in the following tables.

Table 3 Descriptive Statistics for scores on AS and assertiveness

Variable	Mean	Std. Deviation	N
AS	15.9532	1.35853	187
Assertiveness	20.0870	3.58903	46

Table 4 Correlation between AS and assertiveness

Variable	Statistical info	AS	Assertiveness
EI	Pearson Correlation	1	.318*
	Sig. (2-tailed)		.031
	N	187	46
Assertiveness	Pearson Correlation	.318*	1
	Sig. (2-tailed)	.031	
	N	46	46

The result of this correlational analysis shows that an $r = 0.318$ at 0.03 level of significance exists between the two variables. However, this variable is also very weak; hence it is safe to say that the relation between Assertiveness and academic success is not statistically significant.

EI can predict academic success, however, Zeidner asserted that little research has been conducted to clarify the exact influence which EI [13,14].

The second question was whether there was a difference between the EI of students majoring in different fields of study. In order to answer the second research question a one way ANOVA was

carried out. The results are seen in the following tables.

Table 6 ANOVA to compare EI of different majors

Variance	Sum of Squares	df	Mean Square	F	Sig
Between Groups	10090.41	5	2018.083	1.461	.205
Within Groups	250016.2	181	1381.305		
Total	260106.6	186			

Table 5 Descriptive statistics on EI of all majors

	Number	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	16	350.437	35.65196	8.91299	331.4399	369.4351	293.00	409.00
2.00	46	325.8261	37.71372	5.56058	314.6265	337.0257	213.00	395.00
3.00	19	322.6316	45.71313	10.48731	300.5986	344.6646	263.00	405.00
4.00	22	322.6818	41.26383	8.79748	304.3865	340.9772	236.00	403.00
5.00	43	333.0233	30.59605	4.66585	323.6072	342.4393	265.00	392.00
6.00	41	330.3659	36.82985	5.75186	318.7409	341.9908	241.00	392.00
Total	187	32.8877	37.39549	2.73463	32.4928	335.2826	213.00	409.00

Unlike cognitive intelligence, emotional intelligence predicts an individual's success because it reflects how a person applies knowledge to the immediate situation [16]. Research applying EQ-i has shown significant correlation between overall EQ-i scores and GPA [17,18]. In this concern, three subscales of EQ-i including stress management, adaptability, and intrapersonal abilities have specific and significant correlations with GPA [18]. The present study, however, found no such association. It is also interesting to note that in this study the subscale of assertiveness was the only component that had a very weak significant relationship with academic success. The reason for this difference may be the difference in culture where assertive students are more successful. may or may not have on academic success. The present study does not show any significant relationship between EI or any of its subscales and academic success. Therefore, the research that predicts cognitive ability and personality as stronger predictors of academic success compared with EI is in line with the present study [15].

The F value of 1.461 at the level of significance of 0.205 indicates that there is no significant difference between the different majors regarding their EI. So,

it is possible to say the major one is studying does not affect one's EI. Different majors study different fields of science. Different fields of science look at different phenomena in the universe and since these phenomena are different the approach used to study them are different. When different approaches are used the students of these fields come to look at the world and the phenomena in it differently. So, different viewpoints are shaped. These viewpoints give rise to your world view and how you interact with the world. One part of your interaction with the world is the emotions you have when in exchange with the outside world. Based upon the above logic the researcher, assumed that the major or field one is involved in may shape and have a role in one's emotional intelligence, however, Table 4.6 proves that this deduction is not accurate. So, the field of study or the major that a student is pursuing does not have a significant effect on their EI and if training is to be had to make a difference, it should be found in other areas.

4- Conclusion

The results of this study show that there is no significant relationship between EI and academic success. Only one of the components of EI; that is "assertiveness" showed a statistically significant but weak relationship with academic success. The very weak correlation between assertiveness and

academic success can be used as a pointer denoting the fact that assertive students may have a quality that helps them achieve success. In line with this study, predicts that cognitive ability and personality are stronger predictors of academic success compared with EI [15]. This can lead us to the conclusion that for enhanced academic success it is more helpful to increase the cognitive abilities of students. This can be done through instruction in cognitive strategies and problem-solving techniques. The next finding of this study was that the major one is studying shows no relationship with one's EI. Therefore, it does not matter whether you are studying Math, Medicine or Language Learning, it does not influence your EI.

The results of this study show that EI does not have a strong relationship with academic success. However, all teachers have come across students who have a high IQ but do not achieve academic success and are not able to focus. Upon further questioning and investigation it becomes evident that some of these students are not well-adjusted and have different forms of emotional problems. The problems these students have are not captured through the EQ-i and the construct of EI. The answers must be sought in other places. Therefore, the next step to be taken is to find what the emotions that play a role in academic success are and how these emotions interact with academic success.

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