Relationship between Emotional Intelligence and Academic Stress of Undergraduate Students

Mahvish Fatima Kashif [*]   Feza Mehddi [†]

Contents:

Abstract: *The present study was an attempt to understand how emotions are related to academic stress. Emotions are an integral part of a human's life. The nature of this study was correlational. Students from Education department at the undergraduate university level were selected as a population from both public and private sector universities in Lahore, Pakistan. Questionaries were used to collect data. To explore the relationship between emotional intelligence and academic stress multiple regression analysis was applied. For comparison between two groups like gender independent sample t-test was used and for comparison between more than two groups like different age groups, one-way ANOVA was applied. The results revealed that students with higher EI suffer less academic stress than others as they are more cognizant of their emotions.*

Key Words: Emotional Intelligence (EI), Academic Stress (AS), Students, Lahore, Pakistan

Introduction

The present study is an attempt to understand how emotions are related to academic stress. Emotions are an integral part of a human's life. Being emotionally intelligent means to be able to control and regulate your own emotions and how well do you understand others' emotions, which eventually affect your relationship with others.

Students face different kinds of stress during their academic years; it can be stress from exams or tests, being anxious in a new class or before presenting or talking in class, not being able to talk to people or make new friends, managing time, and family pressure. These are just a few of the issues that come to mind that students face during their academic life.

Many studies have shown that students are facing high levels of mental health issues. Anxiety, depression, suicides and even attempted suicide. According to Statista (2020) 74% students face anxiety at some point in their academic life. 35.2% college students have reported how stress has affected their academic abilities (ACHA, 2019).

The construct of emotional intelligence (EI) gained attention in end of last century, later a book by Daniel Goleman (1998) claimed that EI is more important than IQ. It was the topic of debate among psychologist and was soon studied as key construct

[*] Assistant Professor, Faculty of Education, Lahore College for Women University, Lahore, Punjab, Pakistan. Email: mahvishfatima79@gmail.com *(Corresponding Author)*
[†] PhD Scholar, STEM Education Department, Lahore College for Women University, Lahore, Punjab, Pakistan.

in understanding the achievement level in academic within students (Busch & Oaklay, 2017).

EI is known as Individual's capability to observe emotions, whether their own or another person's, to differentiate between wide range of emotions and mark it properly and utilize the gained information regarding the emotions to model their behavior and thoughts (Coleman, 2008; Mayer & Salovey, 1997). EI has been studied as a concept of high prominence on global scale especially in academic literature, it is now seen as a key factor in academic success (Cooper, 2012). As Joshi (2012) suggested EI has been recognized as a measure of performance in many fields. Students face many stressful situations at social, personal or academic level. EI has become a key factor in handling these situations and has become focus of many researchers (Jan, 2007).

According to Berrocal and Salovey (2005) academic stress has an effect on student's academic achievement and academic stress is connected with emotional intelligence. Goleman (1998) claimed that students with higher emotional intelligence level has better command on their feelings and face less stress as compared to those who have lower emotional intelligence level.

Emotional intelligence (EI) helps in handling stress, as suggested by Goleman (2012) for many reasons. He broke down EI in four components; awareness, management, use and review. These four are a major part of an individual's emotional intelligence competency.

World is continuously working to make education and academic years more relevant and beneficial for students for example conducting seminars, hiring mental health facilities inside institutes and introducing activities to help students regulate their emotions. This study will also help in providing some information about emotional intelligence and how important it is in students' life.

Study Objectives

The study was conducted with following objectives:

1. Find out the relationship between academic stress and emotional intelligence among university students at undergraduate level.

2. Examine the difference of emotional intelligence among university students on the basis of their gender.

3. Find the difference in emotional intelligence on the basis of age of students.

Hypotheses

Ho: There is no significant relationship between student's emotional intelligence and academic stress.

Ho: There is no significant difference in emotional intelligence among students based on their age.

Ho: There is no significant difference of emotional intelligence among male and female university students.

Literature Review

Emotional Intelligence has been discussed a lot in history after it was introduced by Thorndike in early 1900s. Emotional Intelligence is defined as an ability to understand others and managing oneself around others (Banat & Rimawi, 2019). The five major elements identified by Goleman (1995) are self-awareness, s social skills, elf-regulation, empathy and motivation.

Emotional Intelligence And Gender

Difference of emotional intelligence level between both genders have been studied a lot, Goleman (1998) suggested that many researches have proved no difference in emotional intelligence level between both genders. Bar-on (2006) also conducted a study with self-report measure and concluded that there is a non-existent difference in E.I levels between genders.

On the other hand, studies claimed that higher EI level are found within females compared to males (Brackett and Mayer, 2003). Similar to results of the study of Mandell and Pherwani (2003); it was conducted in both professional and personal settings, and showed females had higher EI level than males in both settings.

Emotional Intelligence And Age

As people grow older, they become organized in their feelings and emotions and have better control

on them, as they have been exposed to different situations and tragedies of life. They have learned through experience and observation. They are more capable of maintaining their wellbeing as compared to younger people. (Carstensen, Fung, & Charles, 2003; Ryan & Deci, 2001). Tsaousis and Kazi (2013) reached the same conclusion as Gardner and Qualter (2011) that even though the debate is still going on about EI being a trait or an ability, but it does grow or increase with age because of better understanding and use of emotions with time.

Stress

Stress is a feeling of misery, pain or emotional drainage. In 17th century it came into focus that stress can be physical or psychological depending on the situation if it is demanding more than one can take. (Kauts, 2016).

Academic Stress

According to the context of the study, focus is on a specific type of stress i.e., academic stress. Gomez (2018) stated that academic stress is the type of stress that is related to academic life of the student. It can be associated with work pressure, study material, culture and environment of the institute or attitude of faculty towards students.

Causes of Academic Stress can be unfamiliar environment (Putwain, 2010); Unfamiliarity to peers, its challenging to be introduced to unfamiliar environment, when facing it alone becomes more difficult and stressful (Yumba, 2008); Rise in level of competition and assessment and evaluation by means of new tools and methods (Acharya, 2003); Lack of proficiency in how to best manage time and resources at hand (Goicochea, 2018); Expectations of close ones and other external factors become source of added pressure (Tangade, 2011).

Emotional Intelligence And Academic Stress

According to Radcliff and Lester (2003) EI deals with individual's cognitive abilities which helps in dealing with feelings of distress and stressful situations. Bar-on (2004) stated in his model that an individual's cognitive intelligence and strength progresses throughout his life. As he progresses through life an individual develop strength to cope

with difficult situations. Various elements of emotional intelligence help in forming an individual's ability which are used for social interactions, relationships and how to deal with different situations.

Study conducted by Tannous and Matar (2010) suggested that if feelings are left unmanaged a human's mind become exposed to mental problems and worsens with time if left unattended. According to Chiva and Alegre (2008) people with higher EI competency, manage their feelings and emotions better. They adapt to the change in environment in healthy manner, as they realize the consequences of their own behavior and are well aware feelings of others as well.

Research Methodology

The present study was quantitative and correlational in nature. The researchers employed quantitative methods to produce empirical evidences to prove the relationship and its nature between the variables. According to Fraenkel and Wallen (2007), a study of correlational nature can be categorized as descriptive given that study aims to study relationship between the constructs. Given the current study attempts to investigate the level by which each variable relates to the other and provide correlational coefficient as evidence the study is categorized as correlational and descriptive.

Population

The population for the data gathering comprises of undergraduate students from public and private universities of Lahore. The total of thirty-one universities in Lahore were selected to be included in population which were recognized by Higher Education Commission (HEC) under general category (Aug., 2018). One key deciding factor for the selection of every university was whether they offer education program, and only those who offered were included in population of study.

Sample

Proportionate stratified sampling was employed to select sample. From selected population of private and public universities, only 5 from each sector offering degree program in Education were selected

as accessible population. 30% of enrolled students were selected to form sample.

Out of total 1998 students enrolled in 10 universities of selected sample, only 30% of students were selected making sample size of nearly 600 students. The details of the sample are presented in the following table.

Table 1. Sample Distribution from Public and Private Sector Universities

Sector	N	n (30%)
Public	1416	426
Private	582	174
Total	1998	600

Reliability Analysis

Instruments

For measuring Emotional Intelligence of students, the questionnaire was adapted from Wong and Law (2002). The items covered four dimensions of the construct; self-emotion appraisal, use of emotion, others' emotion appraisal, and regulation of emotion.

Academic stress scale developed by Ying and Farn (2009) was used. The items covered the seven factors. Only four factors were included for present study and incorporated in questionnaire items, namely, stress from teachers, time management stress, stress from results, and stress from test.

Table 2. Reliability of Emotional Intelligence and Academic Stress Scale

No	Scale	Cronbach's Alpha	N of Items
1	Academic Stress	0.87	21
2	Emotional Intelligence	0.88	16

For testing the reliability of the measures Cronbach's alpha was used. Both sales were reliable as the values of Cronbach's alpha were greater than 0.70. Data analysis Regression analysis was applied to reveal the relationship amongst study variables.

To compare emotional intelligence of male and female students, independent sample t-test is applied. One-way ANOVA test was applied to compare EI of students from different age groups.

Table 3. Relationship between Emotional Intelligence and Academic Stress

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.753	0.559	0.553	13.24222

Predictors: (Constant), EIROE, EISEA, EIOEA, EIUOE

The results of multiple regression analysis show that significant relationship between variables. The value of R-square 0.559 indicates that emotional intelligence is able to explain 55.9% of variance in dependent variable i.e., academic stress.

Table 4. Regression Analysis

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	130846.313	4	32711.579	186.579	0.000
1	Residual	104337.007	595	175.357		
	Total	235183.317	599			

a. Dependent Variable: AS
b. Predictors: (constant), EIROE, EISEA, EIOEA, EIUOE.

The F test was applied to test model fit. The F-value (186.579) and p-value .000 < .05 show that model is a good fit.

Table 5. Beta Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	114.733	2.511		45.712	0.000
	EISEA	–0.536	0.166	–0.124	–3.248	0.001
1	EIOEA	–0.694	0.183	–0.196	–3.771	0.000
	EIUOE	–0.511	0.194	–0.162	–2.630	0.008
	EIROE	–1.032	0.164	–0.345	–6.342	0.000

Dependent Variable: ASThe beta coefficients for study are exhibited in table 5. The coefficients for each variable were EISEA = –0.124(p = .001), EIOEA = –0.196(p = .000) , EIUOE = –0.162(p = .008), EIROE = –0.345(p = .000). The above results indicate changes in measures of Emotional Intelligence are negatively related Academic Stress and are statistically significant.

The inverse relationship is indicative of how increase in Emotional Intelligence would result in decrease Academic Stress.

Table 6. Difference between Emotional Intelligence of Students from Different Age Groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	10524.941	4	2631.234	6.416	0.000
Within Groups	243956.519	595	410.010		
Total	254481.459	599			

Table 6 shows the significant difference in EI of students from different age groups as F value = 6.416 with p– value .000 < .05. Post Hoc was applied to check the difference.

Table 7. Post Hoc Analysis

(I) Age	(J) Age	Mean Difference (I–J)	Std. Error	Sig.
Under 18	18–20	–.09081	2.51796	0.969
	21–23	–4.16621	2.45648	0.091
	24–25	-9.88296*	2.73441	0.000
	26 or Above	-17.27885*	5.95665	0.004
18–20	Under 18	.09081	2.51796	0.969
	21–23	–4.07540	2.11887	0.057
	24–25	-9.79215*	2.43563	0.000
	26 or Above	-17.18803*	5.82555	0.003
21–23	Under 18	4.16621	2.45648	0.091
	18–20	4.07540	2.11887	0.057
	24–25	-5.71675*	2.37202	0.018
	26 or Above	-13.11264*	5.79924	0.026
24–25	Under 18	9.88296*	2.73441	0.000
	18–20	9.79215*	2.43563	0.000
	21–23	5.71675*	2.37202	0.018
	26 or Above	–7.39589	5.92232	0.215
26 or Above	Under 18	17.27885*	5.95665	0.004
	18–20	17.18803*	5.82555	0.003
	21–23	13.11264*	5.79924	0.026
	24–25	7.39589	5.92232	0.215

*. The mean difference is significant at the 0.05 level.

The students were divided into five age groups to effectively spot the difference. The table indicates that students from the age group (18-20, 21-23, 26 & above) have insignificant difference in EI level as compared to other groups. Mean difference shows that students with higher age have higher EI.

Table 8. Difference between EI of Male and Female University Students

Gender	N	Mean	Std. Deviation	T	df	Sig.(2–tailed)
Male	196	77.8476	21.69282	–2.123	598	0.033
Female	404	81.7518	19.96458		361.676	

Table 8 shows independent sample t-test result for male and female university students. The difference is statistically significant with p-value .03 < .05. Mean value shows that female students have more EI level than male students.

Discussion

As reflected in the findings, it has been observed that academic stress and EI are negatively related to each other. The results have been observed to be similar in existing literature; in a study conducted by Ptrides et al., (2004), the results showed negative correlation between variables. This inverse relation between academic stress and emotional intelligence has been revealed by several other studies as well; such as Gottfredson (2001), Reiff et al., (2001) and Eisenberg, (2000). In addition, Sakolfske et al. (2007) discussed that emotional intelligence development is imperative among adolescence and should continue when reach adulthood. Hence, the institutes and teachers should make efforts in helping students how to cope with stress and manage it better whilst building and developing their emotional intelligence (Cohen & Strayer, 1996).

Based on the results, the study proved with statistical significance that higher level of emotional intelligence prevails among females as compared with males. The findings shown in earlier chapter are in coherence with the literature. Proving that emotional intelligence exists in varying levels in genders, male and female, similar to results concluded by Ahmad, Bangash and Khan (2009), in Pakistan and similar to the results shown by Katyal and Awasthi (2005).

As revealed earlier in the study, Emotional intelligence grows strengths with age. To find empirical evidences, Group and Post Hoc analysis has been performed. Results are found to be consistent with that of Rehana (2018) and Emotional Intelligence model of mixed ability suggested by Goldman. The results are consistent with that found in literature, and adds to it by offering more insights pertinent to varying levels of stress and emotional intelligence across age groups and gender.

As existent literature is consistent with present study results and findings. In terms of academic stress evidences of study are parallel with that found in literature which states that students learn to cope with stress with age. However, the institutes are observed to have curriculum designed in way to increase the level of stress on students in ways of added workload and activities as they progress in age. The results of emotional intelligence study in present study are similar to that found in Malaysia (Mahayuddin, Elias, & Noordin, 2010)

The study offers numerous academic implications with its use in Pakistan to further study and dive deeper to draw actionable insights to understand relationship between study variables with relation to new ones and begin taking steps to bring about improvements to current teaching system.

Conclusion

The study aimed to explore the relation of emotional intelligence and academic stress of students in public and private undergraduate institutes. The study underlines pivotal role of EI in education. The results revealed that students with higher EI suffer less academic stress than others as they are more cognizant of their emotions. Whereas students with lower EI face higher academic stress.

The statistical evidences from study show varying levels of EI in both genders, that female rank higher in emotional intelligence compared with male. However, EI was proven to be statistically significant in relation with age and offers useful insights. The study proves with empirical evidences that between the two variables of study i.e., EI and Academic stress, have a negative relation between them.

Recommendations

Universities should develop a system to help students in increasing their emotional intelligence level which can be increased by involving students in decision making on some topics, projects or presentation so they can learn from experience. Increased student's participation in seminars will help in boasting their confidence and will build sense of responsibility among them. Providing students with proper trainings on how to cope with stress and different aspects of life. They will learn how to balance everything and how to manage their feelings and emotions. Team work in classroom will help students in developing a sense of belonging and reduce stress level. Indulging in discussions helps one in improving their relationships and social interactions.

References

Acharya, S. (2003). Factors affecting stress among Indian dental students. *NCBI, 65*(10), 1140-1148.

Ahmad, S., Bangash, H., & Khan, S. A. (2009). Emotional intelligence and gender differences. *Journal of Agriculture, 25*(1), 127-130.

Bar-On, R. (2004). *The Bar-On Emotional Quotient Inventory (EQ-i): Rationale, description, and summary of psychometric properties. In Glenn Geher, Measuring emotional intelligence: Common ground and controversy.* Hauppauge, NY: Nova Science Publishers, 111-142.

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence. *Psicothema, 18*, 13-25.
https://www.psicothema.com/pdf/3271.pdf

Banat, B. Y. I., Rimawi, O., & Namourah, M. (2019). The Impact of Emotional Intelligence on Vocational Interests among Palestinian Students. *Asian Social Science, 15*(3), 58.
https://doi.org/10.5539/ass.v15n3p58

Brackett, M. A., & Mayer, J. D. (2003). Convergent, Discriminant, and Incremental Validity of Competing Measures of Emotional Intelligence. *Personality and Social Psychology, 29*(9), 1147-1158. doi:
https://doi.org/10.1177/0146167203254596

Busch, B., & Oakley, B. (2017). *Emotional intelligence: why it matters and how to teach it.* https://www.theguardian.com/teacher-network/2017/nov/03/emotional-intelligence-why-it-matters-and-how-to-teach-it

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional Selectivity Theory and the Regulation of Emotion in the Second Half of Life. *Motivation and Emotion, 27*, 103–123.
https://doi.org/10.1023/A:1024569803230

Chiva, R., & Alegre, J. (2008). Emotional intelligence and job satisfaction: the role of organizational learning capability. *Personnel Review, 37*(6), 680–701.
https://doi.org/10.1108/00483480810906900

Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. *Developmental Psychology, 32*(6), 988–998.
https://doi.org/10.1037/0012-1649.32.6.988

Coleman, A. (2008). *Dictionary of Psychology (3).* Oxford University Press.

Cooper, A. (2012). *A Psychometric analysis of the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF) using Item Response Theory.* New York: MacGraw Hill Inc. 449-457.

Eisenberg, N. (2000). Emotion, Regulation, and Moral Development. *Annual Review of Psychology, 51*(1), 665–697.
https://doi.org/10.1146/annurev.psych.51.1.665

Farn, C. L. Y. (2006). A study of the emotional intelligence and life adjustment of senior high school students. *World Institute for Engineering and Technology Education (WIETE) 5*(3), 473-476.
http://www.wiete.com.au/journals/WTE&TE/Pages/Vol.5,%20No.3%20%282006%29/22_Chen37.pdf

Fernández-Berrocal, P., Salovey, P., Vera, A., Extremera, N., & Ramos, N. (2005). Cultural influences on the relation between perceived emotional intelligence and depression. *International Review of Social Psychology, 18*(1), 91-107.

Gardner, K. J., Qualter, P., & Whiteley, H. (2011). Developmental correlates of emotional intelligence: Temperament, family environment and childhood trauma. *Australian Journal of Psychology, 63*(2), 75–82. https://doi.org/10.1111/j.1742-9536.2011.00010.x

Goicochea, S. (2018). In their own words: stressors facing medical students in the millennial generation. *Medical Education Online, 23*(1).
https://doi.org/10.1080/10872981.2018.1530558

Goleman, D. (2009). *The Five Components of Emotional Intelligence.*
https://web.sonoma.edu/users/s/swijtink/teaching/philosophy_101/paper1/goleman.htm

Goleman, D. (2012). *The Power of Emotional Intelligence.*
http://www.danielgoleman.info/golemans-model-of-emotional-intelligence/

Goleman, D. (2013). *Emotional Intelligence – EQ or EI is*. https://www.ihhp.com/meaning-of-emotional-intelligence

Gómez, M. G. A. (2018). Stress in high school students: A descriptive study. *Journal of Cognitive Behavioral Therapy, 1*(1), 1-10.

Jan, S. U., & Warraich, N. F. (2007). Emotional intelligence and academic anxieties: A literature review. *New Review of Academic Librarianship, 23*(1), 6-17. https://doi.org/10.1080/13614533.2016.1270839

Joshi, S. (2012). A descriptive study of emotional intelligence and academic performance of MBBS students. *Procedia - Social and Behavioral Sciences, 69*(24), 2061-2067.

Katyal, S., & Awasthi, E. (2005). Gender differences in emotional intelligence among adolescents of chandigarh. *Journal of Human Ecology, 17*(2), 153-155. https://doi.org/10.1080/09709274.2005.11905771.

Kauts, D. S. (2016). Emotional intelligence and academic stress among college students. *Journal of Education and Applied Social Sciences, 7*(3), 149-159.

Mahyuddin, R. H., Noordin, N., & Habibah, E. (2010). Achievement Motivation and Self-Efficacy in Relation to Adjustment among University Students. *Journal of Social Sciences, 6*(3), 333-339.

Mandell, B. & Pherwani, S. (2003). Relationship between emotional intelligence and transformational leadership style: A gender comparison, *Journal of Business and Psychology, 17(3),* 387-404

Mayer, J. D., & Salovey, P. (1997). *What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.). Emotional development and emotional intelligence: Implications for educators,* 3– 31. New York, NY: Basic Books.

Putwain, D. (2010). Personal and situational predictors of test anxiety of students in post-compulsory education. *British Journal of Educational Psychology, 80,* 137-160. https://doi.org/10.1348/000709909X466082

Radcliffe, C., & Lester, H. (2003). Perceived stress during undergraduate medical training: a qualitative study. *Medical Education, 37*(1),

32-38. https://doi.org/10.1046/j.1365-2923.2003.01405.x

Rehana, R. (2018). Relationship between emotional intelligence and academic stress of university students. *Journal of Research in Social Sciences 6*(2), 305- 653. https://doi.org/10.4103/2277-9531.115836

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52,* 141–166. https://doi.org/10.1146/annurev.psych.52.1.141

Saklofske, D. H., Austin, E. J., Galloway, J., & Davidson, K. (2007). Individual difference correlates of health-related behaviours: Preliminary evidence for links between emotional intelligence and coping. *Personality and Individual Differences, 42*(3), 491-502. http://dx.doi.org/10.1016/j.paid.2006.08.006

Tsaousis, I., & Kazi, S. (2013). Factorial invariance and latent mean differences of scores on traitemotional intelligence across gender and age. *Personality and Individual Differences, 54,* 169-173. http://dx.doi.org/10.1016/j.paid.2012.08.016

Tangade, P. (2011). Assessment of stress level among dental school students: an indian outlook. *Dental Research Journal, 8*(2), 95-101.

Tannous, A., & Mattar, J. W. (2010). The Relationship between depression and emotional intelligence among a sample of Jordanian children. *Procedia - Social and Behavioral Sciences, 5,* 1017-1022. https://doi.org/10.1016/j.sbspro.2010.07.228

Yumba, W. (2008). Academic Stress: A Case of the Undergraduate students. https://www.diva-portal.org/smash/get/diva2:556335/FULLTEXT01.pdf

Wong, H. E., Ping, S., & Abdullah, M. C. (2011). Stress and academic achievement among undergraduate students in university Putra Malaysia. *Procedia - Social and Behavioral Sciences, 29,* 646-655. http://dx.doi.org/10.1016/j.sbspro.2011.11.28