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## Emotional Intelligence, Test Anxiety and Academic Stress among University Students

### Abstract

In today's highly competitive world, students face various academic problems including exam stress, anxiety during the test, problems with homework assignments, expectations about academic success or inability to understand the subjects. Rapid changes in the education sector gave rise to stern testing procedures for evaluating students' knowledge. Thus, the main objective of this research was to investigate the possible relationship between emotional intelligence, test anxiety and academic stress among university students. The Self Report Emotional Intelligence Test (SEIT), Test Anxiety Inventory (TAI) and Student Academic Stress Test (SAST) were administered to a sample of 200 university students (100 female and 100 male students). The results indicated that the total score of emotional intelligence correlated with the test anxiety and academic stress felt, as well as the academic success achieved, by the university students. At the same time there was a significant positive relationship between emotional intelligence, test anxiety, academic stress and gender. There was no correlation between emotional intelligence and the course of study, but there was a positive relationship between test anxiety, academic stress and the course of study. Also we found a significant positive relationship between emotional intelligence, test anxiety, academic stress and high academic performance, but a negative one between emotional intelligence, test anxiety, academic stress and low academic performance. The study conducted found that emotional intelligence, test anxiety and academic stress are significant for and predictive of the academic achievement the university students' population accomplish.

Keywords: emotional intelligence, test anxiety, academic stress, students, management

### Introduction

It is a fact that a nation's progress depends upon its students' academic achievements and development (Parker et al., 2014). That is why every nation puts emphasis on its students' academic achievements (Elias et al., 2001).

Academic achievement is the outcome of education – the extent to which a student, teacher and institution have achieved their educational goals. Academic achievement refers to the extent to which learners acquire the knowledge, skills and proficiencies that the instructor seeks to teach or assign (Salami, 2010).

Researchers have shown that academic achievement depends on certain psychological factors such as emotional intelligence, motivation, anxiety, depression, and stress (Banyan, 2015; Meeker, 2011). It has been proved that academic success is strongly associated with emotional intelligence (Parker, 2006). It has been found that college students who scored higher on a test of emotional intelligence were able to recover from stress from exams or similar evaluation

situations better. Also, high stakes testing has been found to be a strong source of anxiety for students because their performance is hampered due to their concern regarding the results. Too much anxiety regarding a test is commonly referred to as test anxiety, which is rather common among college students. Examination stress and test anxiety are pervasive problems of the modern educational processes.

### **Definition of emotional intelligence**

Emotional intelligence is a type of social intelligence that involves one's ability to monitor one's own emotion as well as those of others, to discriminate among them and to use that information to guide one's thoughts and actions (Bar-On, 2014). The emotional intelligence scope includes the verbal and nonverbal appraisal and expression of emotion, the effective regulation of emotion in the self and others, and the utilization of emotional content in problem solving.

Emotional intelligence is essential for interpersonal and intrapersonal relationships at school, at home and at work (Brackett et al., 2011). People with high emotional quotient are expected to progress more quickly through the designated abilities and to master more of them (Mayer et al., 2009). It is the capacity to create positive outcomes which include joy, optimism, and success in school and life.

Various investigators have engaged in research designed to examine and apply emotional intelligence constructs within academic and other learning settings (Bronzes & Militia, 2014; Brackett & Katella, 2007). They found that emotional intelligence predicts academic performance and other cognitive outcomes.

### **Test anxiety**

Anxiety is a psychological and physiological state characterized by physical, emotional, cognitive and behavioral components. Anxiety means unease in either presence or absence of psychological stress; it can create a feeling of fear or worry. Anxiety can occur as a result of stress and can affect learning and memory, as well as academic performance, negatively.

Researchers have provided a classification of this phenomenon into different subcategories, one of which is test anxiety (Singh et al., 2009). It is a psychological condition in which people experience extreme stress, anxiety and discomfort before taking and during a test. Test anxiety is prevalent among student population of the higher education. Students who experience test anxiety tend to be easily distracted during a test, experience difficulty with simple instructions, and have trouble organizing or recalling relevant information.

### **Academic stress**

The definition of academic stress is the anxiety and stress that come from schooling and education. There is often a lot of pressure that comes along with pursuing a degree in one's education. Since it involves studying, homework, tests, labs or reading, there is the stress of doing all that works, balancing the time one needs for it, and finding time for extra-curricular activities.

Academic stress can be conceptualized as a student's interaction between environmental stressors, the cognitive appraisal of the academic related stressors and

coping with them, and psychological or physiological response to the stressors (Mire & McKean, 2000).

Academic overloads, difficult courses, insufficient time to study, the workload in a semester, the results from exams, low motivation, and high family expectations generate moderate stress among students. Students have different expectations, goals and values that they want to fulfill, which is only possible if integrated with that of the institution. The pressure to perform well in the examination or test and the time allocated to that end, makes the academic environment rather stressful.

### **Relationship between emotional intelligence, test anxiety and academic stress**

In today's highly competitive world, students face various academic problems including exam stress, anxiety during tests, problems with homework assignments, expectations about academic success, or inability to understand the subjects. Rapid changes in the education sector gave rise to stern testing procedures for evaluating students' knowledge. Hence the question of managing test anxiety and academic stress by students using the famous strength called emotional intelligence needs to be answered (Mayer, 1997). While students experience some degree of stress and anxiety before and during exams, test anxiety can actually impair learning and affect test performance (Stoker & Perkin, 2014). So it needs to be faced effectively for the purpose of academic achievement. Academic stress needs to be managed by the strengths the students have. Emotional intelligence is considered to be one of the strengths which equip the students to deal with test anxiety by enhancing their ability to cope with the academic stress. Thus, there is a need to study the relationship between emotional intelligence, test anxiety and academic stress among high university students.

### **Research methods**

#### *Participants*

The research was conducted on a group of 200 university students between 20 to 22 years of age. The mean age of the students was calculated to 20.35 (SD=7.65). Among the participants, 100 were male (50%) while 100 were female students (50%). The study groups of the research were third-year students who studied psychology and medical sciences at the university in Skopje. The success was calculated by the average success during their studying. We divided students into two groups: 100 students with academic success lower than 7.50 (M=7.34) and 100 students with academic success higher than 7.50 (M=8.76). Students were selected with the inclusion criteria of no previous clinically significant anxiety and stress.

#### *Data collection tools*

Within the scope of the study, the following data collection tools were used among students: Self Report Emotional Intelligence Test (SEIT), Test Anxiety Inventory (TAI) and Student Academic Stress Test (SAST).

#### *Self Report Emotional Intelligence Test (SEIT)*

The scale developed by Stirred (2010) was used by the participants. The scale aiming to determine emotional intelligence is composed of 30 items, five each to assess self-awareness, empathy, self-confidence, motivation, self-control and social competence. The total score was the sum of all six domain scores. The minimum and maximum scores for each domain were 5 and 25, respectively, with an overall score ranging from 30 to 150. In this study, Cronbach's alpha coefficient for internal consistence was 0.825.

#### *Test Anxiety Inventory (TAI)*

Test Anxiety Inventory (TAI) developed by Sarasin (2004) was used to measure general test anxiety level. The scale was composed of 20 items. It is a three-point linker type scale. According to the sum of scores, the total score ranges from 20 to 60, where higher scores prove higher level of test anxiety. The internal coefficient of consistence (Cronbach's Alpha) was 0.723.

#### *Student Academic Stress Test (SAST)*

Student Academic Stress Test (SAST) was a 70-item questionnaire, a liker type response format from 0 to 5, and consisted of two categories: Types of stressors/pressures and Reaction to Stressors Agents (Bursary, 2011). The higher scores indicated high rate of academic stress and its related reactions. The internal coefficient of consistence (Cronbach's Alpha) was 0.775.

#### *Data procedure and data analysis*

Data collection tools were administered by the researchers during the winter semester of the academic 2017-2018. The instruments were applied to the students in a classroom setting, with the permission of the instructors. The period for answering the scale lasted 45 minutes.

Statistical analysis of the results obtained in the research was conducted with SPSS 20.0 for Windows package program. The results were analyzed using independent sample t-test, one way analysis of variance (ANOVA) and Pearson correlation.

## **Results**

In our study, we observed that the mean rate of emotional intelligence was 124.20 (SD=18.34), while the mean rate of test anxiety was 48.64 (SD=8.32), and of academic stress was 235.20 (SD=14.35). There was a positive relationship between the level of emotional intelligence, test anxiety and the academic stress ( $F_{199,1}=48.341$ ,  $\text{sig}=0.012$ ,  $p<.01$ ).

The results indicated that there were significant differences between the score of emotional intelligence between the male and female students. Male students had a mean score of 112.14 (SD=17.32) of emotional intelligence, while for the female participants it was 121.95 (SD=18.21). A significant difference between the female and male participants was found via the Pearson correlation ( $r=.038$ ,  $p<.01$ ). At the same time, the girls had higher mean scores in the domain of empathy, motivation and self-confidence parameters of the emotional intelligence, while the boys in the domain of self-awareness and self-control.

The results indicated that there was a positive and significant relationship between emotional intelligence and academic stress ( $p=0.032$ ), emotional intelligence and types of stressors ( $p=0.045$ ), but negative correlation between emotional intelligence and type of reactions ( $p=0.124$ ). Also, there was a strong negative relationship between emotional intelligence and test anxiety ( $p=0.214$ ).

Furthermore, we found that the students did not differ significantly on the level of emotional intelligence with respect to their course of study ( $r=.321$ ,  $p<.01$ ). However there was a positive relationship between self-motivation ( $r=.451$ ,  $p<.05$ ) and self-control ( $r=.425$ ,  $p<.01$ ) among students who studied medical sciences, while the students who studied psychology had a positive relationship between motivation and social competence ( $r=.299$ ,  $p<.01$ ). The results confirmed that students who studied medical sciences had higher levels of test anxiety than students who studied psychology ( $p=.045$ ). On the other hand we found that the students did not significantly differ in dimensions of academic stress ( $p=.425$ ).

The results showed that there was a significant mean difference in the levels of emotional intelligence, test anxiety, academic stress and academic achievement. There was a positive and significant relationship between emotional intelligence and high academic achievement ( $p=.012$ ), test anxiety and high academic achievement ( $p=.038$ ), academic stress and high academic achievement ( $p=.014$ ). In contrast there was a strong negative relationship between emotional intelligence and low academic achievement ( $p=.314$ ), academic stress and low academic achievement ( $p=.042$ ), but a positive relationship between test anxiety and low academic achievement ( $p=.014$ ).

## Discussion

The results showed that the total score of emotional intelligence correlated with test anxiety, academic stress and academic achievement among university students. Based on this, we can conclude that emotional intelligence may influence test anxiety and academic stress components. The obtained results are similar with the results obtained by other researchers (Heather & April, 2009). Test anxiety affects students in the field of assessment and evaluation of their abilities and achievements. Concerning the causal ordering of the test anxiety – emotional intelligence relationship, there are reasons to hypothesize that test anxiety predicts changes in students' emotional intelligence. Some researchers found that test anxiety is associated with some negative and positive evaluations and accompanying emotions (Rain, 2010).

Some studies revealed that academic stress was strongly associated with several dimensions of emotional intelligence (Credo, 2015). College students are faced with a unique set of stressors that may be overwhelming, thus altering the abilities to cope with a situation. Strategies to reduce stress have been associated with emotional intelligence in university students (Curvet et al., 2006).

In our study we found that female students have higher level of emotional intelligence, test anxiety and academic stress than male students. Existing literature reveals the same information about these parameters in female students (Sanchez-Nunez et al., 2008). One of the reasons behind the increasing levels of emotional intelligence of female students may be due to the biological and psychological differences between males and females. Also, females tend to stay with the emotions expressed by others as emotional empathy, but males tend to focus on activities that

need to be done in order to come out of those emotions. Another reason may be that female students have more tension, anxiety, stress and physical rigidity when they face exams.

At the same time, we found that there were no differences in the level of emotional intelligence and academic stress among students who studied medical sciences and psychology, but the level of test anxiety was higher in the students of medical sciences. These differences may be due to the pedagogical practices where allied medical sciences involve more satisfying academic tasks, i.e. consulting with patients. Also, results indicated that emotional intelligence, test anxiety and academic stress are the common cause for the students' poor academic performance during examination. The results with regard to academic stress are also in line with those obtained from other studies (Keenan & Pearisburg, 2003). All have reached the conclusion that students with better academic achievement had a higher level of emotional intelligence, test anxiety and academic stress.

## **Conclusion**

The present study aimed at exploring emotional intelligence with test anxiety and academic stress. From the findings of this study, it can be derived that female students have higher emotional intelligence than male students. On the other hand, the students did not significantly differ in the emotional intelligence with respect to their course of study. Also, low emotional intelligence is to be positively correlated with poor academic achievement.

Regarding test anxiety, there was no difference between female and male students, and students of medical sciences showed higher test anxiety than those studying psychology. Also, we found that females had higher level of academic stress than males. The girls are more stressed than boys, because they are more influenced by self and the ideal self. Besides, females have skills in understanding and revealing their feelings, but boys possess the ability to control impulses and tolerate stress.

The study conducted found that emotional intelligence, test anxiety and academic stress are significant and predictive of the academic achievement of university students.

## **Educational implications**

The current study has produced some important results that have implications for both the educational and the clinical practice. This study demonstrated that aspects of personality such as feelings and thinking, which have previously been identified as forces that may affect one's learning styles, emotional expression and emotional regulation (all factors of influence on emotional intelligence), are major determinants of academic success.

Our study demonstrated that test anxiety, academic stress and academic achievement have powerful predictive qualities with regard to changes in students' emotional intelligence, which reflects the need for further research in the context of intervention programs and strategies to treat test anxiety and academic stress in education successfully. The school psychologist may consider these findings while planning emotional equipment programs for students.

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