

## Emotional Intelligence, Test Anxiety and Academic Stress of Students

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### Abstract:

*The transformation of global education sector gave raise to stringent testing procedures on students. Since high stakes testing is the solitary routine to identify effective students in the present education system, test anxiety is shown to be an obvious company for the students in the research literature. Students' community is in a challenging and stressful phase where aspirations are being spelt out to ensure them a place in the job market. The question lies on how the students can manage their test anxiety and academic stress using the well reconnoitered strength called emotional intelligence. To find the answer, this study aimed at exploring the emotional intelligence among university students of India, in relation to their test anxiety and academic stress. For this purpose, a sample of 200 students in the age range of 18 to 23 years with no history of clinically significant anxiety/ stress was taken. The study adopted survey research design using Emotional Intelligence scale by Schutte et al (1997), Fried-Ben Test Anxiety Scale by Friedman & Bendas Jacob (1997) and Student Academic Stress Scale (SASS) by Busari (2011). The objectives are (i) to study the differences in emotional intelligence, test anxiety and academic stress of students on the basis of their gender, (ii) to study the differences in emotional intelligence, test anxiety and academic stress of students on the basis of their course of study and (iii) to study the relationship among emotional intelligence, test anxiety and academic stress of students. The results revealed significant differences in the study variables on the basis of students' gender and course of study. Further, it is discussed on how training programmes may be devised to equip the emotional intelligence of students for their better performance in exams via managing their test anxiety and academic stress.*

**Key words:** *Emotional Intelligence, Test Anxiety, Academic Stress, Gender, Course of study, University students*

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### INTRODUCTION

Emotional Intelligence is a well explored and appealing construct since it conduits the gap between deficit perspective and positive psychology. Also, research on emotional intelligence since Mayer & Salovey (1997) facilitated the professional psychology to holistically address the problems of behavioural maladaptation, to maintain adaptive outcomes (Saarni, 1999), and to promote well-being (Goleman, 1995) in all contexts. Specifically in

academic context, emotional intelligence plays a crucial role in optimizing the students to face growing challenges (Saklofske, Austin & Minski, 2003). It has been proved that academic success is strongly associated with emotional intelligence (Parker, 2004; Parker, Hogan, Eastabrook, Oke & Wood, 2006). Also, low emotional intelligence is found to be positively correlated with poor academic performance (Abisamra, 2000). Academic success is primarily assessed by the

test scores of students since tests are the sole evaluative procedures existing in the contemporary education system. Hence, it can be biologically conceptualized that students with low emotional intelligence who suffer academically, find it difficult to achieve in tests.

High stakes testing has been a strong source of anxiety for students where their performance is hampered due to their concern about results (Zeidner, 1998). Students tend to perceive tests as threatening and also, visualize the consequences of getting low scores or even fail score. Such a concern results in cognitive worry and intensified arousal that has been revealed to impede the test performance of students (Liebert & Morris 1967; Hill & Wigfield, 1984). This condition is conceptualized as test anxiety in psychology literature. A very clear definition of test anxiety is given by Sieber, O'Neil & Tobias (1977), as "a set of physiological, phenomenological and behavioural responses that accompany concern over possible negative consequences or failure in an exam or similar evaluative situations".

Test anxiety is theoretically attributed to various reasons viz. recurrent thoughts about failure which interfere attentional resources (Sarason & Sarason, 1987, Stöber & Pekrun, 2004), due to a joint influence of deficient study skills (Kirkland & Hollandsworth, 1979) and perceived inability to accomplish the goal (Carver & Scheier, 1984). However, test anxiety can be conceptualized as the result of students' inability to satisfy the overwhelming demand from academic stressors. Academic stress is predicted by anxiety, ineffective time management and lack of satisfying extra-curricular activities (Misra & McKean, 2000). Academic stress among students is conceptualized the result of a transaction between their cognitive appraisal with environmental stressors or demands related to academic settings. Students reported that tests &

grades, homework assignments, expectations about academic achievements as their greatest stressors (Kohn & Frazer, 1986; Pluut, Curşeu & Ilies, 2015).

In summing up, the rapid changes in education sector gave rise to stern testing procedures on students. When the performance in tests is perceived as life determining, students end up developing test anxiety by internalizing the pressures exerted on them. Job market demands various skills to be possessed by the prospective recruits but academic excellence in terms of test scores still top the recruitment criteria. Hence the question of managing test anxiety and academic stress by students using the famous strength called emotional intelligence needs to be answered. Test anxiety is a challenge posed on students' community and it needs to be faced effectively for academic success. Academic stress needs to be managed by the strengths of the students. Emotional intelligence is considered as one of the strengths which equip the students to deal with test anxiety by enhancing coping with the academic stress. Thus, there is a need to study the relationship among emotional intelligence, test anxiety and academic stress.

### Objectives

1. To study the differences in emotional intelligence, test anxiety and academic stress of students on the basis of their gender.
2. To study the differences in emotional intelligence, test anxiety and academic stress of students on the basis of their course of study.
3. To study the relationship among emotional intelligence, test anxiety and academic stress of students.

### Hypotheses

1. There is a significant difference in the emotional intelligence of students with respect to their gender

2. There is a significant difference in the dimensions of test anxiety of students with respect to their gender.
3. There is a significant difference in the academic stress of students with respect to their gender.
4. There is a significant difference in the emotional intelligence of students with respect to their course of study
5. There is a significant difference in the dimensions of test anxiety of students with respect to their course of study
6. There is a significant difference in the academic stress of students with respect to their course of study
7. There is a significant relationship between the emotional intelligence, dimensions of test anxiety and the academic stress of students.

## METHOD

The present study adopted normative survey method for data collection. Students of age 18-21 years, studying in a university are selected through simple random sampling technique (n=200). Students are selected with inclusion criteria of no previous clinically significant anxiety and stress. The sample were administered using (i) Emotional Intelligence scale by Schutte et al., (1998) with cronbach alpha - 0.87. The scale consists of 33 items in which the respondents are expected give their preferences on 5-point scale ('1' represents "strongly disagree" and '5' represented "strongly agree") to specify to what degree each item defined them, (ii) Fried-Ben Test Anxiety Scale (FTAS) by Friedman & Bendas-Jacob (1997) with cronbach alpha - 0.82. This scale has 26 items distributed to three dimensions namely social derogation, cognitive obstruction and tenseness with 6-point rating scale starting from '1' does not characterize me to '5' characterizes me well. Social derogation refers

to the worries of being socially belittled and criticized by noteworthy others after a failure on tests while cognitive obstruction specifies a disturbed concentration, difficulty in recall, troubles in effective problem solving, before or during a stringent test and tenseness refers to the physical and affective discomfort. (iii) Student Academic Stress Scale (SASS) by Busari (2011) with cronbach alpha- 0.93. Respondents are supposed to rate how much of the time they experience the given symptoms on a 5-point likert scale with the response anchors from '1' None of the Time to '5' All of the Time. The collected data were analyzed using independent sample 't' test, one way analysis of variance (ANOVA) and Pearson's product moment correlation.

## RESULTS AND DISCUSSION

**Table - 1:** Emotional Intelligence, Test anxiety and Academic stress of students on the basis of Gender via independent sample 't' test

Variables & Dimensions	Mean (S.D.)		t' value
	Male (n=100)	Female (n=100)	
Emotional Intelligence	110.46 (19.33)	121.07 (13.69)	4.480*
Test Anxiety - Social Derogation	25.05 (8.40)	24.86 (8.94)	0.155 N.S.
Test Anxiety - Cognitive Obstruction	23.14 (7.32)	21.92 (7.11)	1.195 N.S.
Test Anxiety - Tenseness	17.20 (6.34)	19.69 (6.65)	2.708*
Test Anxiety Total	65.39 (14.80)	66.47 (16.12)	0.494 N.S.
Academic Stress	120.83(24.03)	118.39 (22.80)	0.737N.S.

N.S. - Not Significant; \* - Significant at 0.05 level / (df=198)

From Table-1, it is seen that the emotional intelligence of students differ significantly ( $t=4.480$ ) with respect to their gender. Female students ( $121.07\pm 13.69$ ) scored higher than male students ( $110.47\pm 19.33$ ). The existing research literature has evidence that females may have a greater advantage in staying with emotions than males, particularly in empathy (Zeidner, Mathews & Roberts, 2009). It is a well-known finding that females tend to stay with the emotions expressed by others as emotional empathy is high but males tend to focus on activities that needs to be done in order to come out of those emotions (Clarke, Marks & Lykins, 2015). The analysis of present study revealed that results regarding emotional intelligence are aligned with the existing literature. Hence, hypothesis (1) stating “There is a significant difference in the emotional intelligence of students with respect to their gender” is accepted

Further, it is inferred that the students do not significantly differ in social derogation ( $t=0.155$ ), cognitive obstruction ( $t=1.195$ ) dimensions of test anxiety and also, while considering test anxiety total ( $t= 0.494$ ) with respect to their gender. However, significant difference is found in the tenseness ( $t=2.708$ ) dimension. It can be stated that test anxiety of students as a variable, has no significant difference with respect to their gender except for physiological arousal. Gender differences in test anxiety is a still an open question in the research forum as few studies (Schnell, Ringeisen, Raufelder & Rohrmann, 2015) highlighted that there are no gender differences in test anxiety. Hence, hypothesis (2) stating “There is a significant difference in the dimensions of test anxiety of students with respect to their gender” is accepted only for the tenseness dimension of test anxiety.

From the same table, it is also found that the students do not significantly differ in the

dimensions of academic stress ( $t=0.737$ ). Few studies revealed the gender differences in academic stress (Abouserie, 1994; Backović, Ilić Živojinović, Maksimović, & Maksimović, 2012). However, Misra & Mc Kean (2000) indicated the result of no significant gender differences in academic stress and the present study revealed the same. Hence, hypothesis (3) stating “There is a significant difference in the dimensions of academic self-concept of students with respect to their gender” is not accepted.

**Table - 2:** Test anxiety and Academic Self Concept of students on the basis of Course via one way analysis of variance (ANOVA)

Variables	Course (Mean Scores)				F (3, 196)
	S&T (52)	B&AA (35)	H&E (61)	AMS (52)	
Emotional Intelligence	105.33 a	116.77 b	121.21 b	119.13 b	9.975*
Test Anxiety - Social Derogation	24.77 a	27.31 a	24.92 a	23.60 a	1.310 N.S
Test Anxiety - Cognitive Obstruction	26.98 b	23.09 a	20.36 a	20.25 a	11.883*
Test Anxiety - Tenseness	19.23 a	19.54 a	17.26 a	18.31 a	1.232 N.S.
Test Anxiety Total	70.98 b	69.94 a,b	62.54 a,b	62.15 a	4.933*
Academic Stress	127.60 b	118.77 a	116.15 a	116.25 a	2.920*

1. Sc&T– Science & Technology; B&AA- Business & Applied Arts; H&E-Humanities & Education; AMS- Allied Medical Sciences.
2. N.S. - Not Significant; \* - Significant at 0.05 level
3. a,b- Tukey's Posthoc subsets (where  $a < b$ ) / (df = 3,196)

From table-2, it is observed that the students differ significantly in emotional intelligence ( $F=9.975$ ) with respect to their course of study. The students belonging to science & technology discipline scored least (105.33) than the students of business & applied arts (116.77), allied medical sciences (119.13) and humanities & education (121.21). Students belonging to science & technology may be not so social than the students of other courses of study. This may be attributed to their curricular activities that involve machines and instruments. On the contrary students belonging to humanities & education scored high in emotional intelligence may be because of involving the soft side of life (i.e. literature, performing arts, pedagogical training and social behavioural sciences which involve interactions with variety of people with various emotional states). This applies to allied medical sciences where the interaction between the students and other human is for the cause of health care. Students belonging to business & applied arts scored third in emotional intelligence. This may be due to their interaction of the students with self and with other people is professional. Hence, hypothesis (4) stating "There is a significant difference in the emotional intelligence of students with respect to their course of study" is accepted

Also, it is observed that the students do not differ significantly in social derogation ( $F=1.310$ ) and tenseness ( $F=1.232$ ) dimensions of test anxiety with respect to their course of study. However, it is seen that students significantly differ in cognitive obstruction dimension ( $F=1.310$ ) and test anxiety total ( $F=4.933$ ). It is clear that the students belonging

to science & technology discipline scored high (26.98) in cognitive obstruction dimension, than the students of business & applied arts (23.09), humanities & education (20.36) and allied medical sciences (20.25) It is found that the students of science & technology do experience more difficulty in organizing their thinking process with respect to exams. Excessive academic information is reported to be obstructed due to examination fear. On the contrary, students of allied medical sciences reported low score in cognitive obstruction. This difference may be due to the pedagogical practices where allied medical sciences involve more satisfying academic tasks i.e. consulting with patients during internship. While considering test anxiety total, the same order is found i.e., the students belonging to science & technology discipline scored high (70.98) than the students of business & applied arts (69.94) and humanities & education (62.54). Comparatively, students belonging to allied medical sciences scored least (62.15) in test anxiety total. Hence, hypothesis (5) stating "There is a significant difference in the dimensions of test anxiety of students with respect to their course of study" is accepted.

From the same table, it is also found that the students significantly differ in the academic stress ( $F=2.920$ ) with respect to their course of study. Students from science & technology forming a separate subset indicate that the academic stress is high in these students when compared to the other courses. Academic tasks such as higher arithmetic calculations, pictorial skills, concept clarity and a demand for integrated learning resulted in high academic stress for students belonging to science

& technology. More self-dependent academic tasks are signed to students of humanities & education like teaching, theory developing, data collection etc. This may be the reason for them to score least in academic stress.

Hence, hypothesis (4) stating “There is a significant difference in the academic stress of students with respect to their course of study” is accepted.

**Table - 3:** Relationship between Test anxiety, Emotional Intelligence and Academic stress of students via Pearson’s product moment correlation

<i>r</i>	Social Derogation	Cognitive Obstruction	Tenseness	Test Anxiety Total	Academic Stress
Emotional Intelligence	-0.034 <sup>N.S</sup>	-0.433*	-0.107 <sup>N.S</sup>	-0.267*	-0.163*
Academic Stress	0.141*	0.302*	0.293*	0.346*	

1. N.S. - Not Significant; \* - Significant at 0.05 level

From table-3, it is inferred that significant inverse correlations are found between emotional intelligence and dimensions of test anxiety. The social derogation and tenseness dimensions are not significantly correlated with emotional intelligence but show insignificant inverse orientation. The cognitive obstruction dimension ( $r = -0.433$ ) and test anxiety total ( $r = -0.267$ ) show significant inverse correlation with emotional intelligence. Further, a significant inverse relationship is found between emotional intelligence and academic stress ( $r = -0.163$ ). Academic stress has significant positive relationships with social derogation ( $r = 0.141$ ), cognitive obstruction ( $r = 0.302$ ), tenseness ( $r = 0.166$ ) and test anxiety total ( $r = 0.346$ ) are found.

Emotional intelligence highlights the ability to perceive the emotions of one’sself as well as others. Academic stress refers to the reaction of

students when their resources are outrun by the demands posed in academic settings. Social derogation is when the students tend to internalize others’ criticisms regarding his or her poor exam performance. Cognitive obstruction is the disturbance in cognitive processes that are supposed necessary to accomplish the task of giving tests. Lack of emotional awareness or overwhelming emotional experiences thus lead to poor cognitive functioning. Tenseness concerns about bodily arousal which is found insignificantly related to emotional intelligence but significantly related to academic stress.

Also, several studies revealed the inverse relationship between emotional intelligence and test anxiety (Dutta&Dasgupta, 2013; Jung, Wranke, Hamburger &Knauff, 2014);and between emotional intelligence and academic stress(Garg&Rastogi, 2009). Further positive relationship between test anxiety and academic stress was also highlighted (Putwain, 2007; Banks & Smyth, 2015). It can be concluded that the present study reveals findings analogousto those of existing literature.

Hence, the significant inverse relationship of emotional intelligence with dimensions of test anxiety, test anxiety total and academic stress, and the significant positive relationships between dimensions of test anxiety and academic stress are deemed logical.

## CONCLUSION

Emotional Intelligence is considered as a strength of students which enhances their academic performance. Previous researches in the field of educational psychology indicated the importance of exploring the emotional intelligence of students with various psychological and demographic variables significant for their academic settings especially with those debilitating their academic performance. Hence the present study aimed at exploring emotional intelligence with test anxiety and academic stress. Also, demographic variables were included to verify the differences. From findings of this study, it is found that the female students have higher emotional intelligence than male students and also students belonging to humanities & education have higher emotional intelligence than the students of other allied medical sciences, business & applied arts and science & technology. Regarding test anxiety, the female students have higher tenseness than their male counterparts but less and insignificant social derogation and cognitive obstruction than male students. Also, students belonging to science & technology discipline showed higher test anxiety than those studying business & applied arts, allied medical sciences and humanities & education. Both males and females had indifferent academic stress but students studying science & technology reported more academic stress than the student of business & applied arts, allied medical sciences and humanities & education. The emotional intelligence and test anxiety of students is inversely correlated with test anxiety and academic stress. Further, test anxiety and academic stress are positively correlated. It is an inevitable duty of school administration to open the doors for school consultation with psychologists to address worrying issue of low emotional intelligence, significant test anxiety and poorly coped

up academic stress by implementing suitable interventions. The school psychologists may consider these findings while planning emotional equipment programs for students. It is an apt time for the policy architects and curriculum developers in the education sector to incorporate the training programmes on emotional coping systems as an important module in school curriculum and to consult school psychologists for devising and implementing appropriate emotional intelligence training programmes which not only eases the test anxiety and academic stress of the students but also promotes their holistic well-being. Furthermore, it is suggested that the future directions of the present study can include (i) in-depth analysis of interaction between emotional intelligence, test anxiety dimensions and academic using sophisticated statistical operations such as prediction and path analysis, (ii) Developing an educational cum intervention program for assuaging test anxiety and academic stress via enhancing emotional intelligence and testing its efficacy, and (iii) identification of other latent dimensions of test anxiety and testing their relationship with emotional intelligence in order to propose an indigenous measurement model.

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