The Relationship between Test Anxiety and Academic Achievement of students at university level

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Abstract

The major aim of this research study was to find out the relationship between test anxiety and academic achievement of students at university level. 237 students were randomly selected as a sample from six different departments in a public sector university in Rawalpindi, Pakistan. Test Anxiety Inventory (TAI) developed by Spielberger was used for data collection. Pearson correlation, multivariate statistics and regression analyses were used for data analysis. Significant negative relationship was found between test anxiety scores and students' achievement scores. Results showed that a cognitive factor (worry) contributes more in test anxiety than affective factors (emotional). Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

Introduction

We are living in the age that counts the human success according to few standard sets designed by some other humans and the burden to be succeeded is emphasized upon people from early ages in the educational patterns. Tests are the pressure now days for the students and it is even assured by the research attempted at Institute of Heart Math with alliance of Claremont Graduate University, research involved the faculty and the students too emphasis on the recent years observations. The results are frightening.

The most commonly observed angst is the restlessness and disturbance in one's behavior before attempting the tests and especially that seems difficult to the individuals. Problem reaches to its hype when the infected individuals cannot pay attention before attempt and sometimes the preparation went in vain due to lack of confidence, examination fever and poor performance because of this threat. The pressure fads out all traits of knowledge in the crucial situation. This happens in all ages and it badly affects the academic performance, self-respect and health too. The results show that the students suffering this anxiety are always tense about dropping out of the institutions. Test fear shows unfavorable results upon studies.

The present research analyzes the relationship of test anxiety and academic achievement of university's students in Pakistan.

Literature Review

The American Heritage Dictionary describes the word test as ― a procedure for critical evaluation of the presence, quality, or truth of something; a series of questions or problems designed to determine knowledge, intelligence, or ability; and a basis for evaluation of judgment (Houghton Mifflin Company, 2001).A test can also be defined as a methodology to check the ability and the knowledge of the student through some standard patterns (Cizek & Burg, 2006). Emotion can be described as the judgment of the threats (Spielberger, 1972). Anxiety can be denoted as a feeling of uneasiness, restlessness or feeling uncertain results from some specific situation (Houghton Mifflin Company, 2001), it can also defined as the feeling or threat perceived even that threat is not tangible but only the perception. The field of test researches about test anxieties is almost 50 years ago. (Cizek & Burg, 2006) Nearly 1,000 publications on the research of test anxiety are available since 1952, but it faces a turn down, as almost 30 researches came on the surface in 50's about test anxiety, 150 in 60's and 127 in 70's and in a very small quantity in 80's and 90's (Lowe, et al., 2007:Cizek, 2006).

According to (Cizek & Burg, 2006) students suffering with this test nervousness cannot perform well in the standardized tests and their shattered personality can't help them to come up with good or desired outcome which results in drop out from school. Potentially unstable and confused students cannot get good grades and they face a lot of hurdles to get admitted in colleges; in completion of their degree and even their cognitive abilities. These types of student go for the institutions where they will go through minimum evaluations

Test and assessments are important at all stages of education and specially higher education where it considered being important for the decision making and people of all ages are evaluated through this procedure of test regarding their abilities and talents. Zollar and Ben-chain (1990) says that the era in which living is the age of test based performance , which highly affects the individual and some have gained enough just because of their test performance. Test threats are designed to prevent student perception about their knowledge. It is been observed that test anxieties are permanent threat for the student which is increasing day by day. It makes them unable to express their achievements in better way (Zollar & Ben-chain, 1990; Spielberger, 1978) these feelings influence the performance of the students which results in a text anxiety (Hill & Wigfield, 1984). Consequently, it is seen that the tests are taken in the frightening and alarming situations as compared to normal situations it should be a fair and qualitative method to check the achievements of the students.

Various ways are suggested by the researchers to minimize this anxiety by changing the environment of the examination hall or through a change in the examiner's behavior as external factors. Internally, the questions could be more explained, clear instructions and well explained context can affect the test results internally. It is generally observed that it is one of the main reasons of the underachievement (Oludipe, 2009) at the different levels of the student's career. The cure is required essentially to minimize the pressure from the students as they could perform well according to the given instructions (Schonwetler, 1995).

It is proved that anxiety affects progress (Annett, Bender and Gordon.M (2007), Masson, A. M., Hoyois, P. Gadot, M.V., Petit, F., Ansseau, M. 2004, Putwain (2007), Sullivan, L (2002) Keoghi.E(2004). Eysenck (2001) distraction, irrelevant thoughts, less concentration and huge attention span which badly affects the performance. Keoghi, (2004) found that test anxiety causes distraction and come up with poor academic results. Chapell, Blanding, and Silverstein (2005) organized a study among 5,551 students of different levels (low, moderate, and high) in Pennsylvania and Illinois and they found amazingly different results that how the test anxiety results on individuals. Study involves the graduates and under graduate students. In case of the results the students had low test anxiety had better academic achievements than the moderated ones, and similarly the moderated test anxiety students had better results than the highest anxiety.

The early researches explains that the test anxiety could be measured by one dimension (Sarason, 1986), even with this perception of one dimension, however it was considered that there are two measures of test anxiety. Sarason (1986) anticipated that the interruptions faced during the results are the ''heightened physiological activity'' means it is a combination of different factors and ''self-deprecating ruminations''.Since early 1970's the two dimensions as the reason of this anxiety are accepted like emotionality and worry. Therefore the most researches are focused upon the solution of these two dimensions (Spielberger, Gonzalez, Taylor, Algase, & Anton, 1978) and determining the influence of two factors (Hembree, 1988). Anxiety is more reported by the students at higher levels as the demands and the material is very complicated that disables the students to perform, the previous failure decrease their success expectations. Grown up students report more anxiety than other age groups (Cizek & Burg, 2006; Zeidner, 1998).

Most of the physical responses explain the level of anxiety during the evaluation. Psychological manifestations including (a) nausea (b) increased heart rate (c) dizziness e) galvanic skin response (Depreeuw, 1984; Hembree, 1988; Morris, Davis, & Hutchings, 1981). However it is considered as the subjective arousal as compared to influence by itself (Schwarzer, 1992). Emotionality is considered different in case of test anxiety but it could influence the performance in high levels of fret (Morris et al., 1981; Schwarzer, 1992).

Two concepts which seem interrelated provide different results. Emotions can only influence the performance in case felt on high intensity and it impacts negative impressions on the overall performance (Depreeuw, 1984). As a consequence the individuals start feeling upset for the exams to build up their confidence.

The basic momentum for the test anxiety is that it badly influences the performance of the students range from grade three till the graduate students. It affects the skills such as (a) IQ (b) ability (c) academic attainment in reading, English, math, natural sciences, foreign language, psychology, and mechanical knowledge (d) problem solving (e) memory and (f) grades (Hembree, 1988;Sapp, Farrell, & Durand, 1995).

Research Methodology

This study is a descriptive in nature. Six departments were randomly selected from a public sector university in Islamabad, Pakistan. Ongoing classes were used in the sample from each selected department and sample of this study comprised of 237 randomly selected post graduate students (Male = 69, Female = 168).The

data were collected personally by the researchers. Ongoing classes were used for this study. The consent of the participants, and other ethical sureties were provided to the participants. Data were analyzed by using SPSS Software Package. Descriptive statistics in table 1,2 were to provide an understanding of the dimensions of data while inferential analysis focused on finding the relationship of emotionality scale, worry scale and TAI total score with student achievement as described in research questions.

Results

Table 1 shows the distribution of sample. Seven departments were randomly selected from the public sector university in Islamabad, Pakistan. As a result, sample comprised of 237 randomly selected university' students (Male = 69, Female =168).

Table 2 shows the descriptive values for Emotionality scale scores, Worry scale scores, Total test anxiety scale scores and achievement scores for male and female students in different departments. It is evident from table that for emotionality component, mean value is ranging between a minimum of 15.32 for male students of department of mass communication to a maximum of 17.13 for female students studying in department of Pakistan studies. Similarly, female students of department of Statistics possess a minimum mean score of 15.29 on emotionality and a maximum of 20 for female students of English department. For worry component, mean value is ranging between a minimum of 16.16 for male students of department of mass communication to a maximum of 19.50 for male students studying in department of education. Similarly, female students of department of Islamic studies possess a minimum mean score of 16.49 on worry and a maximum of 20.08 for female students of English department. For test anxiety component, mean value is ranging between a minimum of 40.0 for male students of department of education to a maximum of 48.97 for male students studying in department of English. Similarly, female students of department of Islamic studies possess a minimum mean score of 44.39 on test anxiety and a maximum of 48.96 for female students of English department.

Table 3 shows significant negative correlation between test anxiety and students' achievement scores. This study congruent with the studies of (Keogh, et.al.2004; Chapell et al) that high test anxiety leads to low academic achievement.

Table 4 shows significant negative correlation between Emotionality and students' achievement scores.

Table 5 shows significant negative correlation between worry and students' achievement scores. Furthermore, result of the present study confirmed with (Sarason ,1984 as cited in, Keoghi, et al.2004) who showed that worry impaired the performance by reducing attainable working memory capacity which in return was related to poor academic achievement.

Discussion

Result from the present study was in agreement with (Keogh, et.al,2004) and (Chapell et al. ,2005) who found a relationship between level of test-anxiety and academic achievement. For instance, students with low test-anxiety had higher academic achievement than the students with moderate and higher test-anxiety, and also, students with moderate test anxiety had higher academic achievement then students with higher test-anxiety. Furthermore, result of the present study confirmed with (Keoghi, et al,2004) who showed that worry impaired the performance by reducing attainable working memory capacity which in return was related to poor academic achievement. Thus, it can be concluded that test-anxiety or worry about test and examination decreases academic performance. In addition, finding from the present study was supported by Eysenck (2001), who found that limitation in working memory capacity caused cognitive impairment to individual experiencing a high test-anxiety. Students with high test-anxiety have encountered task-irrelevant thoughts, such as worries and anxious about self-evaluative aspects of failure. This is due to limited working memory capacity that disturbs the recall of prior learning and resulted in reduced academic performance. Cassady & Johnson (2002) investigated the effect of cognitive test anxiety on students' academic performance and found that negative relationship between cognitive test anxiety and academic performance. Hancock (2001) found the effects of teacher's evaluation practices and test anxiety on students' achievement and motivation at secondary level. It was concluded that that test-anxious students and particularly with highly evaluative assessment environment in their educational institution perform poor and are less motivated to perform (Hancock, 2001).

Conclusion

Significant negative relationship was found between test anxiety and academic achievement of university' students in Pakistan. Test anxious students must be recognized and trained to improve academic achievement. This study showed that academic achievement of students is affected by test anxiety. Student' learning competencies is decreased and brilliant academic progress is hampered. Test anxiety leads to academic failure and declines the drive towards concentration. For that reason family and educational institutions must provide counseling to students to assist them in managing their test anxiety. Students' mental health may be tonic by

using support strategies like counseling, behavioral therapy, teach life skills programs, study skills training, self instructional training, positive thinking, relaxation training, mental simulation.

All of us are living in test taking society and no one can safe himself or herself by test. to effectively test anxiety management teachers, parents, educational administrators should assist students through affective, cognitive and behavioral strategies. Students should be informed about nature of courses, obligations and period of semester for the successful completion of the course. Findings of this present research should not be generalized to all level' school students. This study is limited to public sector's university and should not be generalized to the other private 'sector university.

Table: 1 Detail of Sample of the Study

Department	Number of Students		
	Male	Female	Total
English	30	40	70
Islamic studies	3	25	28
Education	3	24	27
Arabic	8	28	36
Mass communication	21	30	51
Pakistan studies	4	21	25
Total	69	168	237

Table: 2 Descriptive Statistics by Department, Gender, Test Anxiety Sub-Scales and Student Achievement

Departments	Gender	Emotionality		Worry		Total Test Anxiety		Achievement	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
English	Male	16.49	4.13	16.65	3.10	48.97	14.43	68.49	9.28
	Female	20.00	6.55	20.08	6.00	48.96	14.00	69.36	8.21
Islamic studies	Male	16.00	1.41	19.05	0.70	40.31	5.65	73.66	10.37
	Female	15.29	4.05	16.42	4.08	44.39	9.91	68.86	5.52
Education	Male	16.00	1.41	19.50	0.70	40.00	5.65	73.66	10.37
	Female	20.00	6.55	20.00	6.01	48.90	14.21	63.54	10.31
Arabic	Male	15.36	4.38	16.27	4.74	39.40	10.75	69.68	8.56
	Female	15.29	4.05	16.45	4.08	44.41	9.91	68.86	5.52
Mass communication	Male	15.32	3.99	16.16	4.60	40.62	10.84	70.43	8.66
	Female	17.19	4.84	17.47	4.87	42.86	10.39	68.49	9.28
Pakistan studies	Male	17.13	4.64	18.45	4.03	43.44	6.45	71.00	4.12
	Female	18.00	4.32	18.65	4.00	44.68	6.07	66.34	6.32

Table: 3 Correlation between Test Anxiety and Students' Achievement Scores

Variables	Mean	S.D	N	r	Sig (2-tailed)
Test anxiety	44.23	20.986	200	-0.637*	0.000
Achievement	52.23	8.265	200		

Table: 4 Correlation between Emotionality and Students' Achievement Scores

Variables	Mean	S.D	N	r	Sig (2-tailed)
Emotionality	17.13	20.986	200	-0.600*	0.000
Achievement	52.23	8.265	200		

Table: 5 Correlation between Worry and students' achievement scores

Variables	Mean	S.D	N	r	Sig (2-tailed)
Worry	18.43	20.986	200	-0.598*	0.000
Achievement	52.23	8.265	200		

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