

TEST ANXIETY: GENDER AND ACADEMIC ACHIEVEMENTS OF UNIVERSITY STUDENTS

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ABSTRACT

Objectives: To investigate undergraduate students' test anxiety level; to measure the correlation between undergraduate students test anxiety with their academic achievement; and to measure the correlation of undergraduate students' test anxiety from the perspective of their gender.

Methodology: Students of eight departments at University of Swat constituted the study sample. Among these, 126 undergraduate level students were selected through simple random sampling technique. The tool used for the study was Westwide Test Anxiety Scale. Analysis of data was done using SPSS version 21.

Results: Among the selected respondents, there were 89 (70.63%) male and 37 (29.37%) female students. Our results revealed that 39.7% of undergraduate university students were suffering from moderately high test anxiety. Male students had 44.9% while female students had 27% moderately high test anxiety. The correlation coefficient between CGPA and test anxiety of students was $-.317$ which shows inverse relationship. The average CGPA of male students was 2.8 while female students had a CGPA of 3.19. The mean test score of male undergraduate students was 3.25 ± 0.60 and female undergraduate students was 3.13 ± 0.77 , p value .366.

Conclusion: Moderately high test anxiety was found in undergraduate university students which was similar in both male and female students. Female students showed better performance as compared to male students.

Key Words: Test anxiety, Academic achievement, Undergraduate students

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INTRODUCTION

A physical, emotional and mental reaction to threat of failure on test or evaluation is known as test anxiety. It is an unpleasant emotional response to judge a situation with a sense of worry and fear¹. Test anxiety results in reduced concentration among students on their studies². Stober³ noted the two elements of test anxiety; firstly 'worry' which is the feelings in reaction to evaluation and the consequences of failing the examination or test and secondly the perception of reactions produced by test situation. These components of test anxiety affect different aspects of students' life such as educational activities, inter and intrapersonal communication, confidence, trust in self and above all mental health⁴. Test anxiety results into high level of worry, fear and academic failure in competent as well as low performing students⁵.

Research studies⁶⁻⁸ confirm the prevalence of anxiety among students who encounter examination and

reveal its effects on students' performance. Academic achievements of students having high anxiety of tests are relatively less as compared to students who have low test anxiety, but it is not clear whether there is any role of test anxiety in lowering the performance of students^{9,10}. Lufi et al¹¹ described that students evaluation may adversely affect their performance irrespective of their gender and age. Test environment, nature and difficulty of the evaluative task, atmosphere of examination hall, time constraints for solving test tasks, mode of administration of test and physical settings are also contributory factors that cause anxiety among students.

It has been reported that test anxiety negatively affect the performance of deprived students (i.e. students with lower socioeconomic status, students from minorities and special education students¹²⁻¹⁴). Knox et al¹⁵ described that students who are unable to cope with test anxiety, fail courses and drop out of school. Furthermore, the state of anxiousness is evoked when a person under evaluation think that the evaluative situa-

tion does not suit his/her potentials and is beyond one's intellectual and social capabilities¹⁶. Some researchers also found gender differences in test anxiety^{9,17-18}. McDonald⁸ observed that anxiety was found to be higher in female students as compared to male students. Colom et al¹⁹ reported high IQ level of male students as the brain size of males is larger than female students. However, Lao²⁰ concluded that female students accomplished better; and got better results in terms of CGPA than male students in pre-collegiate level. Reporting test anxiety in most cases is not taken seriously thus resulting into increased difficulties for students, teachers and parents. Mulvenon et al²¹ found in his research that in most cases students themselves, their parents, teachers and educational counselors do not report high level of stress and anxiety in students.

Test and examinations at all stages of educational career are of high significance for an individual, especially at tertiary level of education it has been considered very important and powerful device for decisions. In higher education in Pakistan and elsewhere students with variety of age range are being assessed with respect to their academic abilities²². The completion of higher education leads to practical life and the success or failure at this stage may affect the whole life of the person tending to result in probable anxiety in them²³. It is of concern that increase in high-stake testing will result in greater test anxiety which can damage the students' well-being in diverse ways. Therefore it is of high significance to investigate the academic successes of university students in relation to test anxiety. The purpose of the study included finding out test anxiety level of undergraduate university students, their gender-wise differences and its relationship with their academic achievement.

METHODOLOGY

This was a descriptive study. There were 625 students in 08 selected departments, out of these a sample of 126 (20%) students were selected for our research. The study was sampled in light of directives of Gay et al²⁴, where they recommended that when the population comprised of 100 so all must be included in sample group; when it is between 101 to 500 individuals so 50% may be included; when it is between 501 to 1500 the sample may include 20%; and for above 1500 a sample of 5% is enough for the sample group. Simple random sampling technique was used. Table 1 shows details of study sample.

The tool used for the study was Westwide Test Anxiety Scale. It is a ten item self-explanatory scale constructed by Driscoll²⁵. The scale was initially developed to measure subject's anxiety related problems. Most of the items in scale straight away ask about performance impairment, fear or stress, which is mostly concerned with concentration. The scale was pilot tested for local validation. Some changes were made as per requirements of the local context. While gathering data from the respondents, the scale was used in March 2017 (two weeks before the start of final term examination). The selected students for data collection were briefed about purpose of data collection. They were briefed that their honest response to the questions may lead to correct research conclusions. They were also assured that their responses will not be disclosed to anyone. The total score (CGPA) of selected students were requested from their relevant departments soon after declaration of their results. Data were analyzed for frequency, percentages, comparisons and p value using SPSS version 21.

Table 1: Contingency table for sample (n=126)

Department	Male Students	Female Students	Total
Psychology	11	6	17
Education	12	4	16
Statistics	9	6	15
Economics	12	0	12
Management Sciences	12	5	17
Botany	9	7	16
Zoology	12	6	18
Computer Sciences	12	3	15
Total	89	37	126

Table 2: Gender-wise comparison of students on Westwide Test Anxiety Scale (n=126)

Variables	All Students		Male Students		Female Students	
	Frequency	Percentages	Frequency	Percentages	Frequency	Percentages
Small Test Anxiety	8	6.3	6	6.7	2	5.4
Moderate Test Anxiety	17	13.5	7	7.9	10	27.0
High Normal Test Anxiety	8	6.3	4	4.5	4	10.8
Moderately High Test Anxiety	50	39.7	40	44.9	10	27.0
High Test Anxiety	28	22.2	25	28.1	3	8.1
Extremely High Test Anxiety	15	11.9	7	7.9	8	21.6
Total	126	100	89	100	37	100

Table 3: Relationship of university undergraduate students' academic achievement and test anxiety

Constructs	CGPA	Test Anxiety	p value
CGPA	1	.317**	.000
Test Anxiety	.317**	1	

** Correlation between the constructs is significant at 0.01 level

Table 4: Gender-wise differences among university students from the perspective of their CGPA and Westwide Test Anxiety Scale

Variables	Male Students		Female Students		t	p value
	n=89		n=37			
	M	SD	M	SD		
CGPA	2.8	0.47	3.19	0.44	4.32	.000
Test Anxiety	3.2	0.60	3.13	0.77	0.90	.366

RESULTS

There were 89 (70.63%) male and 37 (29.37%) female students in the present study. Our results revealed that 39.7% of undergraduate university students were suffering from moderately high test anxiety. Male students had 44.9% while female students had 27% moderately high test anxiety (Table 2).

The correlation coefficient between CGPA and test anxiety of students was -0.317 which shows inverse relationship (Table 3).

The average CGPA of male students was 2.8 while female students had a CGPA of 3.19. Gender-wise differences among university students from the perspective of their CGPA and Westwide Test Anxiety Scale are shown in Table 4.

DISCUSSION

We observed that most of the university students had moderately high test anxiety. Our findings are in accordance with studies by Segool et al²⁶ and Zhang et al²⁷ who found that most of the students were going through moderate to high level of anxiety during their career. Methia²⁸ also found that majority of school going children experience at least some test anxiety. This was also supported by Afzal et al²⁹ who found high levels of test anxiety in medical students and recommended anxiety-reduction programmes for medical students. Matters et al³⁰ also found that students with high level of test anxiety omit test item or some time do not respond to test item which leads to poor performance. Possible reasons for high level of test anxiety may be parental and teacher expectation, lengthy and extensive courses, lack of study and long duration of exams.

The negative relationship between students' test anxiety and academic attainments (in terms of CGPA) of undergraduate students was also supported by Chapell et al¹³ who found significant relationship between test anxiety and GPA in both undergraduate and graduate students. This was also supported by Rezazadeh et al³¹ who noted a negative relationship between test anxiety and academic achievement in undergraduate university students. On the other hand, Ogden³² observed no relationship between test anxiety and grade point average of students. Vogel et al³³ also studied correlation of test anxiety and academic achievement of students and concluded that students showing high level of test anxiety and students with low level of test anxiety exhibited lower academic performance.

In our study, female students showed significantly better performance than male students (CGPA of 3.19 vs. 2.8, respectively). Our findings are supported by the study of Lao²⁰ who reported that female students achieved higher CGPA as compared to male students.

Fortin et al³⁴ also concluded that female students had higher academic success as compared to male students. These findings, however, were contrary to the study by Mackintosh³⁵ who noted that there are no gender differences in general intelligence.

We found no gender differences in undergraduate students in terms of test anxiety. This was in conformity with the study by Soffer³⁶ who showed that there was no significant gender difference on test anxiety in elementary school students. However, he found that female students experience high level of test anxiety than males at different grades levels. Hembree³⁷ also revealed that female students experience higher levels of test anxiety than male students. McDonald⁸ noted that although there are apparent gender differences but the occurrence of test anxiety becomes more similar across sexes.

CONCLUSION

Moderately high test anxiety was found in undergraduate university students thus negatively affecting their academic achievements. Male and female undergraduate students exhibited similar test anxiety. Undergraduate female students showed better performance as compared to male undergraduate students.

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Student may be provided with institutional help through various stress reduction programs to help students in reducing test anxiety and increasing their academic achievements. University and college teachers may arrange counseling sessions for students to assess their test anxiety and increase their test taking skills and confidence. Further research studies are needed probe into other factors such as culture, family background, institutional facilities, parental education, peer pressure, parental expectations and test administration.

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CONTRIBUTORS

NA conceived the idea, planned the study, drafted and critically revised the manuscript. SH did data collection and analysis. FNK interpreted the data and critically revised the manuscript. All authors contributed significantly to the submitted manuscript.