

Frequency And Determinants Of Test Anxiety Among Medical Students In A Private Medical College In Lahore Pakistan

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Background:

4. Test anxiety is a kind of performance anxiety, it can affect undergraduate students as well as postgraduate candidates, also it can affect any one during the exam season. Around 16-20% Americans are suffering from test anxiety. ^[1] Test anxiety can be due to different factors, that include generalized anxiety disorder, fear of failure, history of poor test taking. ^[2] Test anxiety in Medical students is found extremely high as of the result pressure and fear of failure & long duration of exams. ^[3]

Keywords:

Test Anxiety, Exam Anxiety, Westside Test Anxiety Scale, Medical Students

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Introduction:

The purpose of present study is to investigate the frequency & level of test anxiety among medical students in a private medical college lahore. Test anxiety is one of the most factors that can affect the concentration, performance and mood in medical students Test anxiety affects females more than males. "Crying" was the most common

depressive symptom, and “fear of worst happening” was the most common anxiety manifestation in medical students. Results show that medical students are highly anxious.

Objectives of the Study:

To investigate the frequency of test anxiety among medical students in a private medical college in Lahore.

Methodology: Study Design: Cross sectional

Sample size: Was 100 students from first, second and third year MBBS classes

Sampling technique: Convenience sampling

Study tool used: Self-reported Westside Test Anxiety Scale

Data analysis: Data was entered SPSS Version 20 Demographic variables frequencies were showed as mean and test anxiety scores were reported as low, average, moderate and high test anxiety scores.

SPSS Version 20 was used for data entry and analysis.

Results:

Study results shows a significant test anxiety in medical students. 11% participants have low test anxiety, 22% have normal or average test anxiety and 30% have normal level of anxiety and 22% have moderate level of anxiety. It was found that test anxiety is a predictor of psychological distress that disturbs the performance of students.

Conclusion:

This study indicates that Females are more prone to test anxiety than males, females have 7:3 ratio of test anxiety is our study. Age group that are more respondent is 17-29 years, High normal test anxiety was present in thirty percent of total sample.

Introduction

Anxiety can be defined as worrying about something that is unknown or a conditioned response to a perceived threatening stimulus which could be learned or inherited. ^[4] It is a common phenomenon that present in almost all Medical Students worldwide. Test anxiety is one of the most factors that can affect the concentration, performance and mood in medical students. ^[5] Stressful environment of medical schools and colleges has been also noted to have a negative effect on the academic performance, physical health and psychological abilities of the students. ^[6] Psychological morbidity, such as depression and anxiety, have been reported in several studies from different western

countries as well as from other parts of the world.^[7]

Study done in Sweden the prevalence of Test Anxiety and Depression was 12.9%^[8], from these almost 2.9% students also tried suicidal attempts due to high depression.^[8] In British medical Schools stress is that due to test anxiety prevalence was 31.2%^[9] while in a study done in a medical school in Thailand estimated prevalence of test stress was 61.4%^[10] and in Malaysian medical school around 42%^[11]. Study conducted in different medical colleges among undergraduate students indicates that prevalence of emotional disturbance is higher among medical students than those of general population.^[12] A research study shows that In a occasionally test anxiety in medical students is 61% while frequent test anxiety is 26%.^[13]

Test anxiety affects females more than males. According to different research conducted worldwide prevalence of stress

is higher in females around 75.7% and around 57% in males.^[14]

According to DilekCakıcı in 2006 a research shows higher score of anxiety for females (M=45.91) than that of males (M=37.53)^[14] Different researchers have analyzed that anxiety is more in 2nd and 3rd year Medical students^[14] and in age group 17-22 Years of age.^[15]

Significance of the study

In the light of above mentioned findings it is important to explore the phenomena of test anxiety among medical students as test anxiety is becoming important factor to influence to psychological health and academic motivation in students^[16] In Pakistani context, also it will be helpful for medical colleges for the assessment of student's test anxiety and then to devise plans for its management, this will improve medical student's performance and will reduce their psychological distress.

Objectives of the Study

The present study aimed at

- To investigate the frequency of test anxiety among medical students in a private medical college in Lahore.
- To check the gender differences of test anxiety levels among the respondents
- To check the age difference of test anxiety levels among the respondents

Literature Review

In the modern society stress and anxiety are inherent in human life. It is common phenomenon that present all medical students worldwide. Due to anxiety, medical students are affected by several problems. Test anxiety is one of the most important factors that can affect on the educational performance of medical students.^[17] Different studies have published to assess the test anxiety of medical students worldwide.

Stressors specific to medical school for development of anxiety and depression were information and input overload, financial indebtedness, lack of leisure time and pressure of work and career choices.^[18]

A study indicated that 335 were calculated to be 21.9%. The Chinese medical students were assessed for depressive symptoms. 50 % of respondents were found to be depressed with 2% having severe depression.^[19]

In another study suggested that Psychiatric morbidity was found in 16% cases found in whereas prevalence rate of depression was found to be in the range of 14-24%. Similarly, in Turkish medical students, this prevalence was calculated to be 21.9%.^[20]

A study on psychological intervention, aim of that study was to identify psychological intervention for test anxiety, to reduce the distress among medical students.^[21] The three scales (Westside test anxiety scale, Kessler Perceived Stress Scale and Academic Motivation Scale) were used to measure test anxiety, psychological distress and motivation on 436 1st year medical students. This was randomized experiment study. The target respondents were 436 undergraduate medical students from one of the private universities in Malaysia. The findings of this study indicated that after perceived the psychological intervention it is effective to reduce anxiety among medical students.

Test anxiety in medical students of United States was conducted. Westside test anxiety scale was used for that

study.^[22] Randomly 2nd year medical students were selected as participants. Ninety three out of 101 were participated. . The baseline test anxiety score for all students was 2.48 (SD 0.63). Test anxiety was inversely correlated with USMLE step 1 ($\beta = -0.24$, $p = 0.01$), adjusting for Medical College Admission Test (MCAT) scores. The test anxiety score of the participants decreased from 2.79 to 2.61 after the course ($p = 0.09$), and decreased further to 2.53 after the USMLE ($p = 0.02$), whereas the scores of the controls increased. The mean USMLE step-1 score was 234 for the cases and 243 for the controls ($p = 0.03$).^[22]

Different studies have been published in Pakistan to explore the anxiety of medical students.^[23] Associated non-academic risk factors for development of anxiety and depression were female gender, having family history of depression and anxiety, loss of close relative in past one year 5 and substance abuse.^[23]

A study on depression and anxiety associated factors in Pakistan.^[24] The students of Wah medical college were selected for this study. The cross- sectional survey was carried out. The 279 students were included for this study after excluded first year students. The mean of age of students was 72.4% with the female preponderance. 47.4% anxiety was found in medical students. One third of students were found to have anxiety and depression which was associated with the socio demographic and educational factors as stated above.^[24]

A study on the measures used by medical students was aimed to explore the measures which medical students used to reduce the test anxiety.^[25] The cross- sectional study was carried out in August 2009 at the Dow University of Health Sciences, Karachi and 388 voluntary participants were involved in this study. The 10-item Westside test anxiety scale was used to measure the test anxiety. Four hundred and fifty participants who were initially considered for the study, 388 fulfilled the inclusion criteria. 25.3% were male students with a mean anxiety level of 2.55 and 71.8% were females.

Anxiety and depression were found to be depression present in 70% and 60% according to two Pakistani studies respectively.^[26]

Methodology

Study Design:

- Descriptive Cross sectional study.

Sampling:

- Data was collected by convenience sampling of 100 medical students from first second and third year MBBS in a private medical college in Lahore

Inclusion criteria: Medical students

Exclusion criteria: Non-medical students

Demographic data: Collected including age, gender, education, profession, marital status, year of study, family monthly income of the participants

Tools/ instruments: Westside test anxiety⁶ was used to measure test anxiety

Data Collection:

Data collection was voluntary and anonymous. Students were approached in between classes and questionnaire was self-administered by the respondents. The purpose of the research and any inquiries about the questionnaire were answered by the investigators.

Data Analysis:

Quantitative data was presented as frequencies and chi square test was used to check the difference of test anxiety levels among different groups of students based on gender and age difference value.

Results

Table 1: Gender of the respondents in the study

Gender of the respondents	n	%
Males	30	30.0

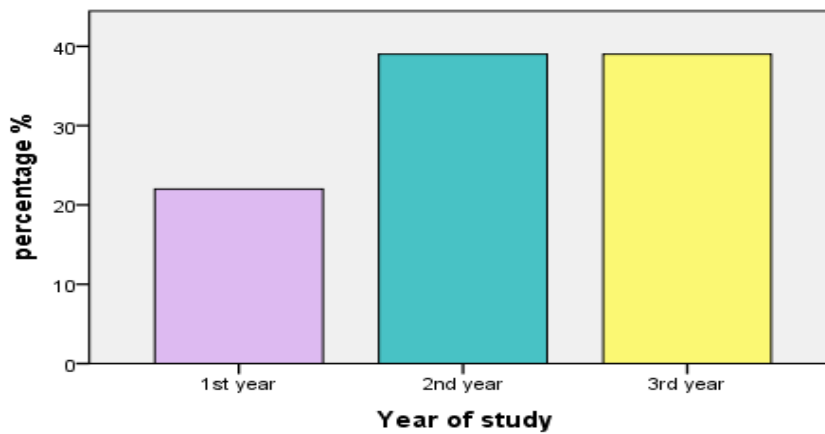
Females	70	70.0
Total	100	100

Table 2: Age of the respondents in the study

Age in years of the respondents	n	%
17-20	59	59.0
22-24	39	39.0
24-27	2	2.0
Total	100	100

Most of the respondents were in the age group 17-29 years

Bar Chart 1:Year of study of repondents



As can be seen from the above graph second and third year contributed equally to the study participation

Pie Chart 1: Gender distribution of the respondents

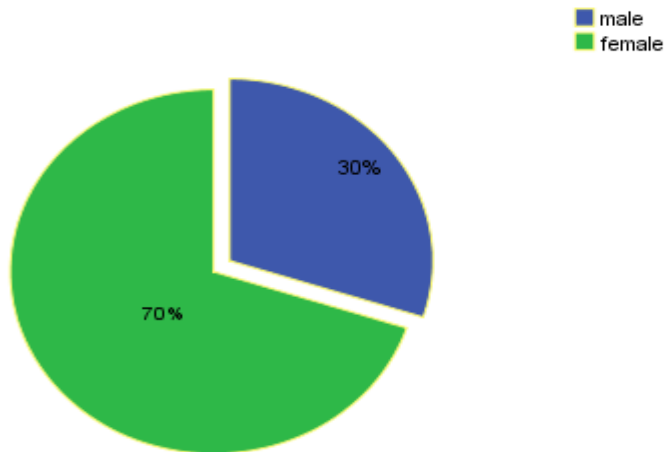


Table 4: Marital status of the participants in the study

Marital status of the respondents	n	%
Married	1	1.0
Unmarried	99	99.0
Total	100	100

As noted above most of the participants were unmarried

Table 5: Family Income of the participants in the study

Family income in rupees per month	n	%
< 15000	36	36.0
15000-30000	49	49.0
30000-45000	15	15.0

Total	100	100
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Most the participants had a monthly family income of 15000-30000 rupees per month

Table 6: Frequency of Test anxiety among respondents

Test anxiety category/score	n	%
Low test anxiety	11	11.0
Normal or average test anxiety	22	22.0
High normal test anxiety	30	30.0
Moderately high anxiety	22	22.0
High test anxiety	11	11.0
Extremely high test anxiety	4	4.0
Total	100	100

Table 7: Cross tabs for age groups of respondents and anxiety level

Age in years	Anxiety level		Total
	Normal Anxiety level	High anxiety level	
17-20	24	35	59
21-24	9	30	39
25-27	0	2	2

Total	33	67	100
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Chi square value =4.29

p =.117

As can be seen from the above table that the difference in anxiety level between various age groups was not statistically significant

Table 8: Cross tab for gender and anxiety level of respondents

Gender of respondents	Anxiety level		
	Normal	High	Total
Males	10	20	30
Females	23	47	70
Total	33	67	100

P value =.963

As can be seen from the above table that the difference in anxiety level between gender groups was not statistically significant although majority of females tended to show a high anxiety level percentage than male respondents.

Table 9: Cross tabulation of year of study and anxiety level

Year of study of respondents	Anxiety level		
	Normal	High	Total
1st year	9	13	22
2nd year	13	26	39
3rd year	11	28	39

Total	33	67	100
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chi square=1.030p value =0.598

Anxiety level increased from first year of study to second year however there was no statistically significant change between the year of study and anxiety level

Discussion

The profession of medicine has been attributed to high level of anxiety with medical students being put at an 85th percentile when it comes to measuring stress levels as compared to other professions. ^[27] A detailed systematic review of depression, anxiety and other psychological indicators of distress among North American medical students found widespread presence of depression and anxiety among medical students. The study has also concluded that the level of anxiety was much higher and prevalent in female students than their male counterparts. ^[28] The results of the above said study are pretty much consistent with our findings where we compared both the genders in the nervousness test.

Another study undertaken by Dr Yasmin from University of Punjab in collaboration with Charles Spielberg from University of South Florida focused mainly on exam and test anxiety between the two genders when it came to the field of medicine. The dataset comprised of 150 students from SIMS medical college and 1:1 male-female ratio ensured that the dataset was not skewed which could have had a

negative impact on the results. Although the sample size of the dataset was small (150), the sampling technique used to conduct the research, textual anxiety inquiry(TAI) a sampling method that is used to measure test anxiety levels of an individual, promised accurate results. The results of the study gave three conclusive findings. The study found out that female medical students typically had a higher test level anxiety compared to their male counterparts, there was an inverse relationship established between two important attributes used in the study, one being “test anxiety” while the other being ”academic performance” and the last finding being that male medical students achieved higher academic performance due to them being associated with less levels of anxiety. ^[29] Another study focused on factors causing exam anxiety in medical students employed a method of using a structured questionnaire which centered on things like “lifestyle”, ”study style”, “psychological problems” and “study environment” to measure the level of anxiety as well as the reasons behind the said anxiety amongst the medical students.

^[30] A sample size of 120 answered the said

questionnaire. The findings gave three root causes for the increased stress levels amongst medical students. According to the study, extensive course loads coupled with lack of physical exercise and long duration of exams significantly contributed to heightened stress levels in medical students. In addition to that, the study pointed out that most of the students that had answered the questionnaire had no knowledge of anxiety reducing techniques and those that had, didn't implement it.

Another study also strengthened the hypothesis that the female gender suffered more as compared the male when it came exam and academic related anxiety in the field of medicine. ^[31] All of the above-mentioned studies and researches are consistent with our findings and investigations into the level of test anxiety amongst medical students in a private medical college. Our research indicates that Female students have 70% high test anxiety level whereas in male it is 30% test anxiety level. Students living Joint family system anxiety level in students is less than the students living the nuclear families. 40% in joint family and 60% in nuclear family. Family income status also play a vital role in student's anxiety level. Low income family students suffer more anxiety than high income families. This study shows that 4% students have high test anxiety 22% students have moderate test anxiety 30% students have normal test anxiety. The findings of

the present research showed a significant impact of test anxiety, thus hypothesis one was supported. When we compare male with female in the experience of test nervousness, in our study; result suggest that anxiety is more common in females than males, many studies conducted worldwide which include the signs symptoms of test anxiety and the gender differences ^[32] which also in favor of the female gender is more prone to anxiety and have worst psychological effects on medical student life as well as in clinical practice. In many countries of world with separate educational campus for females and less educations facilities and creative activities can be contributory to more stress in females, although there are too many factors those take part in the gender difference and stress but college environment confidence level and fear of failure also factor that lead to anxiety. ^[33] Students seems to be much nervous, while getting ready to take examination. This pressure decrease the efficiency of students, especially of females.

A review recommends that college studies appears to have direct anxiety in regards to their exams. As soon as exam started the anxiety level raised, ^[34] many students have test anxiety related problems, while appearing in exams most of the students even not able to attempt paper properly and failed in exams. In another study it was found that there are certain risk factors other than academic stressors, which

predispose a medical student to anxiety and depression [35]. In a study there was a significant correlation found between depression and anxiety among medical students. [36] The study reported that "Crying" was the most common depressive symptom, and "fear of worst happening" was the most common anxiety manifestation in medical students [37]

Conclusion

Our study concluded that the anxiety was majorly due to study burden and psychological distress that disturbs the performance of students specifically during exam days. **Limitation**

- convenience and small sampling limits generalization of the study results. cross sectional survey limits the evaluation of time trends and measurement of incidence
- self-reporting can lead to social desirability bias with underreporting of actual test anxiety levels other mental health issues of the respondents were not checked which could have impacted the test anxiety

Implications & Recommendations

- A medical college should provide proper counseling session to help students develop helpful and efficient ways of managing stress and tackling test anxiety • Encourage students to use positive self talk

- Teach students successful test taking strategies and encourage them to seek clarification and additional help.
- Practice different form of relaxation technique with students and provide them with cognitive skills.
- College should offer workshop to parents focusing on ways they may help their children reduce test anxiety to evaluate their children academic progress over a period of time rather than on one single test score
- Medical college should develop school policies for standerization6 of test to remove subjective bias.

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