



ORIGINAL ARTICLE

Anxiety and Academic Performance among Private Medical College Students

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Abstract

Background: Medical students are in a huge pressure due to their academic syllabus. **Objective:** The purpose of the present study was to assess the relationship between anxiety and academic performance among private medical college. **Methodology:** This cross sectional study was done in private medical College Hospital, Dhaka, Bangladesh and 3rd and 4th year medical student were included. Data was collected by using semi structured Socio-demographic questionnaire and Burn Anxiety Inventory scale and Checklist. Finally all data and results were analyzed using latest version of SPSS software. For descriptive statistics means, medians, SD and range will be calculated as required. Data will be presented in frequency table, bar, pie and scattered diagram as per need. Statistical test chi-square test were used and $p < 0.05$ was consider to be statistically significant. **Results:** A total number of 200 medical students were studied after fulfilling the inclusion and exclusion criteria. Among them 87.0% were Muslim; 98.0% were unmarried; 83.0% were in nuclear family; family member of 42.5% respondents had 4 to 6 persons; monthly income of 64.7% respondents were less than 50,000 Taka; 47.0% of the respondents' father occupation was businessman. In 1st profession examination 68.0% in Anatomy, 73% in Physiology, 76% in Biochemistry were passed in anatomy. In 1st professional exam, students suffered from moderate to extreme anxiety were passed 78% and referred 22% as well as suffered from minimal to mild anxiety were passed 43% and referred 57% in Physiology. So there was strong association between the two variables ($p < 0.05$). **Conclusion:** Three fifth of the students are suffered from moderate anxiety level and those who are suffered moderate to extreme anxiety passed more and their class attendance are good. [*Journal of Current and Advance Medical Research 2018;5(2):68-72*]

Keywords: Anxiety; academic performance; private; medical college students

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Introduction

Anxiety is a psychological disorder that is associated with significant suffering and impairment in functioning. It is a blend of thoughts and feelings characterized by a sense of uncontrollability and unpredictability. Anxiety at moderate levels is necessary for efficient functioning and performance. However, at every high levels it may impair normal functioning and performance in a task¹.

Anxiety is important in education because it helps student prepare for exams. Excessive anxiety may have a detrimental effect on individual performance in tasks that require competence². Medical education is perceived as stressful. High levels of anxiety have been documented in medical students in various studies³. Amongst medical students, anxiety has been reported to be due to academic demands, exam, inability to cope helplessness, increased psychological pressure, mental tension and too much work load⁴. The transition from preclinical to clinical training has been identified as a crucial stage of medical school regarding student stress. All this can result in decreased life satisfaction among students⁵.

Stress during medical school can lead to problems later in professional life compromising patient care⁶. Several studies have reported high rates of psychological morbidity amongst medical students using various instruments⁶. Performance in academic life demands all aspects of well-being, those that include physical, social, emotional, spiritual and psychological well-being⁷. Students who are physically and psychologically stable are expected to perform better compared to those who are not physically, mentally and psychologically fit. Grade Point Average (GPA) is widely used as a measure of academic performance which is obtained by dividing the total amount of grade points scored by the total amount of credit hours attempted. A GPA equal to 3.0 of higher indicates good performance by the students⁷. The purpose of the present study was to assess the relationship between anxiety and academic performance among private medical college.

Methodology

This cross-sectional study was conducted in Private Medical College, Dhaka, Bangladesh to find out the level of anxiety and it's associated among private medical students and their academic performance. This study was carried out from

January 2013 to December 2013 for a period of one year. The sample were selected randomly from the private medical college. The 3rd and 4th year medical college students were included in this study as per the inclusion and exclusion criteria. Data were collected by using semi structured socio-demographic questionnaire and Burn Anxiety Inventory scale and Checklist.

After taking verbal consent from the students data was collected by face to face interview ensuring privacy and confidentiality and reviewing routinely kept academic record. Before collection of data pretesting of questionnaire and checklist was done. Data processing involves categorizing of data, coding and summarizing the data and entry of data into the software SPSS. Anxiety score was constructed by summation of all of the anxiety scales.

Analysis was performed using latest version of SPSS software. For descriptive statistics means, medians, standard deviations and range for numerical data and frequencies and proportions for categorical data will be calculated as required. For inferential statistics, Chi-square test was used. Data will be presented in frequency table, bar, pie and scattered diagram as per need. Statistical test chi-square test were used and $p < 0.05$ was consider to be statistically significant.

Results

A total number of 200 medical students were studied after fulfilling the inclusion and exclusion criteria.

In this study conducted to private medical college 85.0% were age of 21 years and only 3.0% were belonging to 24 years; 87.0% were Muslim; 10.0% were Hindu and 2.0% were Buddha.

However, 98.0% were unmarried, 83.0% live in nuclear family 18% live in joint family. 42.5% respondents family member were 4-6 persons, 35% family member were 7 to 10. 64.7% respondents monthly income of the parents were less than 50,000 Tk, 29.5% were 50001 to 1 lac Taka, 5.8% were more than 1 Lac taka. 68.0% live in hostel, 32.0% live in home. 47.0% fathers' occupation was businessman, 33.0% was service holder, 7% was physician, 1.0% farmer, 55.0% were other groups. 79.0% respondents mother was housewife, 10.0% was service holder and 4.0% physician (Table 1).

Table 1: Distribution of respondents by Socio-demographic Characteristic

Variables	Frequency	Percent
Religion		
Islam	174	87.0
Hindu	20	10.0
Buddha	04	2.0
Christian	02	1.0
Marital status		
Married	4	2.0
Unmarried	196	98.0
Type of family		
Nuclear family	166	83.0
Joint family	34	18.0
Monthly income of parents		
≤ 50000	129	64.7
50000-100000 Tk	59	29.5
≥ 100000 Tk	12	5.8%
Residence of respondents		
Live in hostel	136	68.0
Live in home	64	32.0
Father's Occupation		
Businessman	94	47.0
Service holder	66	33.0
Teacher	14	7.0

Physician	14	7.0
Farmer & Others	12	6.0

Students passed 68% in Anatomy, 73% in Physiology, 76% in Biochemistry as well as 32% in Anatomy, 24% in Physiology and 23% in Biochemistry failed (Table 2).

Table 2: Distribution of Respondents by Subject wise in 1st Professional Examination

Points	Anatomy	Physiology	Biochem
Distinction	0(0.0)	6(3.0)	2(1.0)
Passed	136(68.0)	146(73.0)	153(76.5)
Referred	64(32.0)	48(24.0)	45(22.5)
Total	200(100.0)	200(100.0)	200(100.0)

Biochem= Biochemistry

Performance of 1st term examination result, students were passed about 43% in physiology, 61% in Microbiology, 48% in Pharmacology, 53% in Forensic Medicine and 55% in Community medicine as well as students were referred about 54% in Pathology, 37% in Microbiology, 47% in Pharmacology, 42% in Forensic Medicine and 47% in Community medicine (Table 3).

Table 3: Distribution of Respondents by Performance of 1st Term Examination

Points	Pathology	Microbiology	Pharmacology	Forensic Medicine	Community Medicine
Distinction	6(3.0%)	6(3.0%)	10(5.0%)	10(5.0%)	6(3.0%)
Passed	86(42.0%)	121(60.5%)	96(48.0%)	106(53.0%)	110(55.0%)
Referred	108(54.0%)	73(36.5%)	94(47.0%)	84(42.0%)	84(42.0%)
Total	200(100.0%)	200(100.0%)	200(100.0%)	200(100.0%)	200(100.0%)

In 1st professional exam, students suffered from moderate to extreme anxiety were passed 78% and referred 22% as well as suffered from minimal to mild anxiety were passed 43% and referred 57% in Physiology. So there was strong association between the two variables ($p = <0.05$) (Table 4).

In this study 32.0% students were in moderate anxiety; 29.0% were in severe anxiety; 20.0% were in mild anxiety; 13.0% were in extreme anxiety and 7.0% had borderline anxiety (Figure 1).

Table 4: Relationship between Anxiety level and Academic performance (1st Professional Exam of Physiology)

Score of Anxiety	Passed	Referred
Minimal to mild	6(42.86%)	8(57.14%)
Moderate to extreme	145(77.86%)	41(22.04%)
Total	151(75.5%)	48(24.5%)

P value=0.0003

Those class attendance good (57%) suffered moderate to extreme anxiety (Table 5).

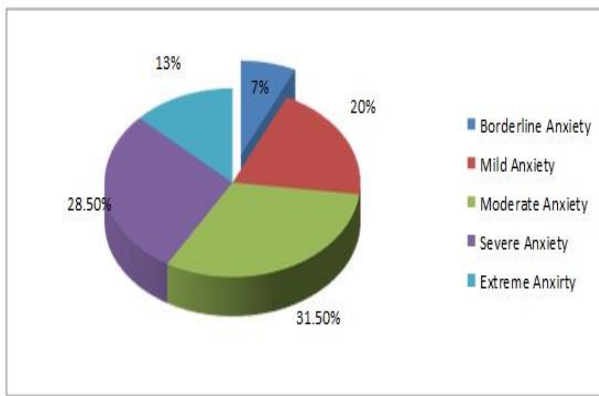


Figure I: Showing distribution of respondents by their score of anxiety

Respondents were passed 46% and referred in forensic medicine whose monthly income less than 50000 Tk. There was strong association between monthly family income of parents and academic performance ($P \leq 0.05$) (Table 6).

Table 5: Relationship between Anxiety level and Academic performance (class attendance Pharmacology)

Score of Anxiety	Passed	Referred
Minimal to mild	2(14.28%)	12(85.72%)
Moderate to extreme	79(42.86%)	107(57.53%)
Total	81(40.5%)	119(24.5%)

P value=0.04

Those respondents residing in nuclear family passed more (69%) in microbiology term. And there was strong association between family type and academic performance (Table 7).

Table 6: Relationship between Monthly family income & Academic performance

Monthly Income	Passed	Referred
≤ 50000	56(45.5%)	67(54.5%)
≥ 50000	60(77.9%)	17(22.1%)
Total	116(58%)	84(42%)

P value=0.001

Discussion

Anxiety is a serious problem for students because it interferes with their ability to think and perform during the tests. Medical students experience anxious and stressful environment throughout their stay at medical school. Inability to cope with stressful situations lead to worrisome outcomes in personal and social lives of the students.

According to this study, there was a positive relationship between test anxiety and educational performance greater the anxiety level, greater the chances of increase in educational performance.

Table 7: Relationship between Academic performance and anxiety related factors among family type

Family Type	Passed	Referred
Nuclear	141(69.1%)	51(30.9%)
Joint	16(45.7%)	19(54.3%)
Total	130(65%)	70(35%)

P value=0.008

This study revealed that 31.0% students were in moderate anxiety period and 13% crossed the severe anxiety to extreme. It is comparable to the prevalence of anxiety reported in US⁸ (49%), Turkey⁹ (27.1%). Medical students have to deal with stressors specific to medical school in addition to normal stressors of everyday life which explains this high prevalence of anxiety and depression in their 1st professional exam. Students were about 68.0% in anatomy, 73.5% in Physiology and 76.0% in Biochemistry as well as students were referred about 325 in Anatomy, 24% in Physiology and 23% in Biochemistry.

Conclusion

This study has been revealed that about three fifth of the students are suffered from moderate anxiety level. And the students who are suffered moderate to extreme anxiety have passed more and their class attendance is good. Those who reside in the hostels have good academic performance. Those respondents whose monthly family income is below average has poor academic performance. When students are anxious before and during exam, test anxiety has a significant and effective impact on their academic performance.

To effectively manage test anxiety, students can be helped by teachers, parents and educational administrators through use of cognitive, affective and behavioral strategies. Students must be fully informed nature and duration of course by respective departments for the successful completion of course. However further research is needed to improve understanding the causes and consequences of medical student distress and to investigate potential solution.

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