

## ORIGINAL ARTICLE

PREVALENCE OF EXAMINATION RELATED ANXIETY  
IN A PRIVATE MEDICAL COLLEGE

Abdul Najeeb Khan, Sohail Ataur Rasool\*, Ambreen Sultan\*\*, Irum Tahira

Department of Physiology, Frontier Medical and Dental College, Abbottabad, \*Department of Physiology CMH Medical College Lahore

\*\*Department of Paediatrics Women Medical College, Abbottabad, Pakistan

**Background:** To assess examination related anxiety among first professional medical students and to determine the factors contributing to this kind of anxiety among them. **Methods:** A cross-sectional study using structured self-administered questionnaire was carried out over 10 days in Frontier Medical and Dental College, Abbottabad, in December 2012, using sample size of 200 students. Survey questionnaire consisted of twenty questions regarding life style, study style, psychological and social problems, and results were analyzed by Visual Analogue Scale (VAS). **Result:** A total of 200 students out of 220 (90.90%) filled in the questionnaire. There were 61.50% male and 38.50% female students. The average maximum Examination related Anxiety marked on VAS was 47±21. Among different factors contributing to exam anxiety, inadequate rest (89%), irrational thoughts (67.50) and excessive course load (60%) were the most important factors reported by the students. Most of the students were aware of anxiety-reduction techniques but seldom implement them. **Conclusion:** On a VAS, examination, in its own right, has been established as a definite cause of anxiety, although the magnitude is not alarming. Students who regularly participate in class tests and perform well there, are least affected by this anxiety.

**Keywords:** Anxiety, Visual analogue scale, inadequate rest

J Ayub Med Coll Abbottabad 2013;25(1-2):113-5

## INTRODUCTION

Anxiety is defined as an abnormal and overwhelming sense of apprehension and fear often marked by physiological signs (as sweating, tension, and increased pulse), by doubt concerning the reality and nature of the threat, and by self-doubt about one's capacity to cope with it.<sup>1</sup> Stress and anxiety are substantially raised in many preclinical students in their early years at medical school. Although correlated with poor end-of-year examination performance, anxiety levels do not cause poor performance, but are themselves caused by previous poor performance in session examinations.<sup>2</sup> Lifestyle related issues including inadequate rest, insufficient physical activity, poor nutrition and lack of time management are found to be the contributing factors leading to exam anxiety.<sup>3,4</sup>

Psychological factors which contribute significantly to exam anxiety are negative and irrational thinking about exams, outcomes of exams and feelings of no control over exam situation (e.g., going blank during exam) are reported by many authors.<sup>5,6</sup> Higher anxiety levels in the student community are considered as important indicators for poor mental health.<sup>7</sup>

The potential negative effects of emotional distress on medical students include impairment of functioning in classroom performance and clinical practice, stress-induced disorders and deteriorating performance.<sup>8,9</sup> Students in extreme stress need serious attention, otherwise inability to cope successfully with the enormous stress of education may lead to a cascade of consequences at both personal and professional

levels.<sup>10</sup> This study was carried out to see the prevalence of examination-related anxiety among students.

## METHODOLOGY

This study utilised a cross-sectional survey design and was conducted by administering a questionnaire to 200 students of First professional MBBS class, 100 in First Year (Part-I) and 100 in Second Year (Part-II) at Frontier Medical and Dental College, Abbottabad. Data collection was done over 10 days in December 2012 during First Professional *Viva Voce* Examinations. Survey questionnaire consisted of 20 questions regarding age, sex, social background, status of the regular class test results, personality, psychological disorders, sleep habits, eating habits, adherence (or otherwise) to study time table, intellect and determination level of room mates, etc. Exam anxiety was measured using Visual Analogue Scale (VAS) which is used to assess subjective states like anxiety and pain. It consists of 10 Cm line, the ends of which are marked with signs indicating the extremes of symptoms (Zero indicating no anxiety and 100 indicating maximum anxiety). Students were asked to mark the level of their maximum anxiety on the most appropriate point on the scale. The scale was divided into three categories (0-30 for mild, 40-60 for moderate, and 70-100 for severe symptoms).

## RESULTS

As there are 100 students in 1<sup>st</sup> year and 120 students in 2<sup>nd</sup> year class, i.e., part-I and part-II of First Professional MBBS, therefore only 220 questionnaires were

distributed among them on different days, on their respective dates of *viva voce* examinations; 200 of them responded so the response rate was 90.90%. There were 123 (61.50%) male and 77 (38.50%) female respondents. Age of the students was 19.7±0.8 years.

The mean level of anxiety on VAS was 47±21. For male students it was 51±19.4, and for female students it was 63±27.6 ( $p<0.05$ ). Prevalence of exam anxiety in students of 1<sup>st</sup> year was 73.46% and that in 2<sup>nd</sup> year students was 54.90% (Table-1).

While observing different factors contributing to examination related anxiety, inadequate rest, irrational thoughts largely based on the exam related stories narrated by senior students, extensive course load, long duration of exams and inadequate preparation were the most frequently reported factors. All factors were more common among female students (Table-2).

By and large, all the students were fully aware of the examination procedure as they rehearsed it during their mid-term and Pre-professional examinations. They did have enough knowledge about anxiety reduction techniques but seldom applied them.

**Table-1: Prevalence of anxiety in the two classes**

CLASS	Male			Female			Overall %
	Total	Anxious	%	Total	Anxious	%	
1 <sup>st</sup> Year	61	40	65.57	37	32	86.48	73.46
2 <sup>nd</sup> Year	62	27	43.54	40	29	72.50	54.90

**Table-2: Factors contributing to examination related anxiety**

Contributing factors	Total (200)	%	Male (123)	Female (77)
Inadequate rest	178	89	106	72
Irrational thoughts about examination result based on fears generated by seniors	135	67.5	59	76
Excessive course loads	120	60	52	68
Long duration of exams	96	48	42	54
Not studying adequately	88	44	21	67
Failure to respond well in discussion of subject with colleagues	74	37	31	43
Negative thinking & self-criticism	65	32.5	24	41
Type-A personality	46	23	14	32
Do not recall & review	28	14	27	1
No control over exam situation	15	7.5	5	10
Multiple Warnings by parents	5	2.5	5	0

## DISCUSSION

That examinations as a cause of anxiety is a fact that was being discussed way back in 1956.<sup>11</sup> There, however, are few who still insist that there is nothing like examination related anxiety.<sup>12,13</sup> That females are more likely to fall prey to this anxiety is also a well known observation and an overwhelming majority of researchers have gathered enough evidence to prove this.<sup>13,15,16</sup> Various reasons have been postulated in order to justify the female predominance in this context. Some of these include female tendency to over-report medical

and psychological symptoms<sup>17</sup>, excessive stress due to self expectation and feeling of lack of competence and their exaggerated concerns about the volume and complexity of the material they had to cover<sup>15</sup>.

Bit of anxiety is a sign of one's concern towards examination and in this way it is beneficial for the student. However when it crosses certain limits and culminates into lack of sleep and lack of concentration, then the damages begin. Our study is a continuation of, and a comparison with that of Shireen Hashmat *et al*<sup>18</sup>, carried out in Karachi in 2006. There are quite a few noticeable differences in our results. One, that overall prevalence of examination related anxiety is much less. It is probably because of the fact that over the years, the student-teacher relationships have improved and the teachers have become more sympathetic towards the shortcomings of their students. Secondly, the factors which contributed most in causing examination related anxiety have been changed to a great degree.

In our study inadequate rest (89%), irrational thoughts (67.50%) and excessive course load (60%) are the main contributors. But in Shireen Hashmat *et al*<sup>18</sup>, excessive course load (90.80%), long duration of examination (77.50%), and inadequate rest (75%) were the chief contributors. In a way, it is logical also because that study was confined to Final Professional examination students whereas our study is restricted to First Professional examination students only.

Final year students are justified to blame excessive course load (90.80%) but surprisingly, students of First Professional examination, whose course load is hardly one third in magnitude to that of final year, also complained the same in large number (60%). Irrational thoughts are generally a result of horrible examiners-related stories narrated by senior students. This is a big deal in First Professional examination (67.50%) but carries no weight when a student is appearing in final year. In a final year student, the irrational thoughts do exist but these are related more to the future plans than anything else. This is why no less than 65.85% of final year students in the aforementioned 2006 study blamed this factor as a major cause of examination related anxiety.

Inadequate study was a cause of anxiety in 64.2% students of the previous study,<sup>18</sup> while it stands at 44% in our study. Obvious reason is the improved teaching methodology and a regular setup of monthly Continuous Assessment Tests.

Contrary to some earlier studies,<sup>18-20</sup> we believe that improper nutrition and lack of physical activity are never a cause of examination related anxiety but are, in fact, a result of it.

Type-A personalities (much more among females) also succumb more easily to the stresses and strains of examination. No less than 23% of our students were found to have a type-A personality.

Some of the earlier studies used anxiety and depression as synonyms,<sup>21,22</sup> which is unfortunate. These are two separate disorders (although similar in certain aspects) with highly different consequences.

Almost all students were fully aware of exam-taking and anxiety-reduction techniques. Somehow, a vast majority of them did not utilise these techniques when it was most required.

## CONCLUSION

Examination related anxiety does exist and it does deteriorate the overall results of the students to a sizable extent. Teachers should realise that the best solution of this problem is very much in their hands. Holding regular tests is good but not enough to limit this curse. Students who get persistently low marks should be carefully isolated and properly guided. Counselling services and stress management programs must be launched and implemented as comprehensively as possible. After all, success of student is the success of the institution and also of the medical profession itself!

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## Address for Correspondence:

**Dr. Abdul Najeed Khan**, Department of Physiology, Frontier Medical and Dental College, Abbottabad, Pakistan.

**Cell:** +92-300-9689817

**Email:** drabdul.najeed@gmail.com