

Exam stress in MBBS students and the methods used for its alleviationMittal R¹, Kumar R²

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ABSTRACT

Background: Stress is a state of mental or emotional strain or tension resulting from adverse or demanding circumstances. Stress level in all aspects of life is growing at an exponential rate but stress level in students, especially MBBS students is alarming.

Objective: To find out the level of stress and relieving methods used by medical students before examination.

Material and methods: Observational, Cross sectional study was conducted on 600 medical students using questionnaire. Responses of the students were recorded on Likert's scale just after the examination. Data was tabulated and analyzed statistically.

Results: The mean age of 600 medical students were 20.1±0.9. 143(23.8%) students always felt stressed, 161(26.8%) often, 211(35.2%) sometimes, 37(6.2%) rarely and 48(8%) never felt stressed before examination. 252(42%) reported that this level of stress did not affect their performance in examination while decrease in performance was reported by 198(33%). 150(25%) said that their performance was improved during examination due to stress. 145(24.2%) felt no anxiety during examination, 432(72%) felt healthy anxiety and 23(3.8%) felt unhealthy anxiety level.

Conclusion: Majority of the medical students experiences some level of anxiety during exams and used various coping mechanisms to deal with stress. Although some degree of stress is accepted as a normal part of medical training and can be a motivator for some individuals, not all students find the stress manageable.

Key words: Stress level, students, MBBS, method, anxiety

Introduction

The American Psychological Association defines stress as "any uncomfortable emotional experience accompanied by predictable biochemical, physiological and behavioral changes." Stress is a state of mental or emotional strain or tension resulting from adverse or demanding circumstances. Despite being a global concern, there is no clear consensus for defining stress as it is highly subjective. A stressor is defined as the personal or environmental event that can cause stress. In present world, it is a continuous struggle to get from one day to another. [1,2,3,4] Life at all stages comes with its own stressors but what is growing at an alarming rate is the level of stress in students. Examinations are a part of academic curriculum and are often tiresome and extremely stressful for students at any level of education. Exam anxiety is the emotional reaction that some students face before exams which may interfere with their abilities. The fear is not irrational, but excessive fear interferes with performance. A medical student in his or her life goes through

several academic stresses. Mild stress may be beneficial in cognitive tasks and performance while persistently high stress may lead to anxiety and/or depression. Anxiety causes physical and emotional effects, physical effects like palpitations, muscle weakness, fatigue, dyspnea, abdominal pain, headaches and emotional effects like feeling of apprehension, lack of concentration, feeling tense and anticipating the worst, irritability, restlessness, nightmares, etc. Anxiety also has some of the cognitive symptoms like racing thoughts, going blank, dreadful fear and difficulty in organizing thoughts. Some studies have found little or no evidence of emotional distress among medical students; others have reported significant distress. [2,3,4,5,6,7,8] The mammoth course burden, long hours, distance from families, family expectations along with undergoing transition from a carefree youth to a professional who has to work in a competitive and always advancing medical field adds to life stresses. Along with the daily strains one deals with, there comes the day of reckoning

when you are to be tested and judged, the day of examination. Examinations are the hardest part of a student life as it is associated with pressure to do well, cramming for long hours, and making up for lost work and in general, feeling your life is centered on one result. Prior conducted studies [1-21] have focused on the stress level in students and identification of various stressors. The purpose of our study is to study the pre-examination stress (level of anxiety) in medical students and also the methods they commonly use for its alleviation.

Material and Methods

Observational, Cross sectional study was conducted on 600 medical students. Questionnaire was designed to check the level of stress and different methods used to relieve it during examination. Pilot study was done on 30 students to check the internal consistency of the questionnaire which was found to be 0.83. Responses of the students were recorded on Likert's scale just after the examination. The items on the questionnaire epitomize the manifestations of stress and respondents rate the occurrence of each manifestation in themselves by choosing from five typical responses never, rarely, sometimes, often, always, and scoring was done. Stress level was calculated based on the scale developed by Nist and Diehl. A total of 10 questions were asked with five possible choices ranging from never(0) to always(5). Based on the answers provided, the scores were calculated ranging from 10 to a possible 50. A score of 10 to 19 was set as no anxiety, 20 to 35 as healthy anxiety and above 35 as unhealthy anxiety. Data was tabulated and analyzed statistically using SPSS software version 19.

Results

The mean age of 600 medical students were 20.1 ± 0.9 . 143(23.8%) students always felt stressed, 161(26.8%) often, 211(35.2%) sometimes, 37(6.2%) rarely and 48(8%) never felt stressed before examination. (Fig.1) 252(42%) reported that this level of stress did not affect their performance in examination while decrease in performance was reported by 198(33%).

150(25%) said that their performance was improved during examination due to stress.

They were asked about the methods they adopted to decrease their level of stress (Fig 3). 108(18%) listened to music, 71(11.8%) slept when they felt stressed out, 39(6.5%) took a break from study, 86(14.3%) spent time with family and friends, 43(7.2%) used beverages(tea, coffee), 3(0.5%) exercised and majority 250(41.7%) used various combinations of afore mentioned methods, which were grouped as others. Some of the used combinations were listening to music and contacting family and friends or listening to music, taking a break from study and exercising and so on and so forth.

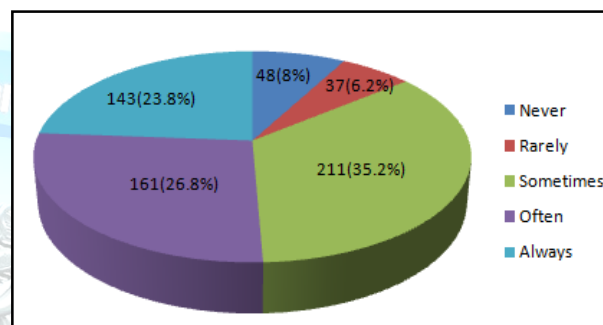


Fig.1 Stress felt before examination

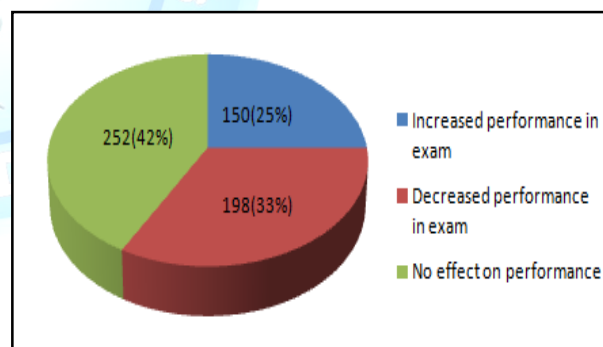


Fig.2 Effect on Performance

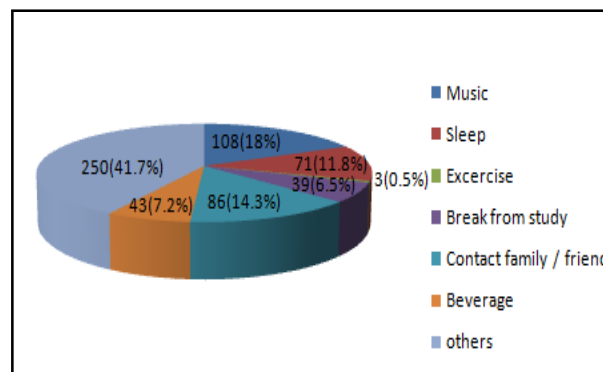


Fig.3 Method Practiced to relieve the level of stress

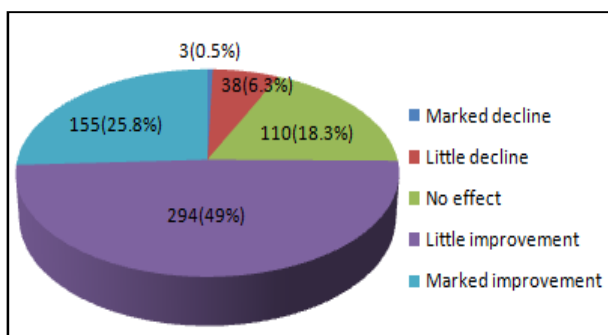


Fig.4 Performance affected by the method practiced

When asked whether these methods practiced decreased their level of stress; 3(0.5%) responded never, 22(3.7%) rarely, 143(23.8%) sometimes, 286(47.7%) often and 146(24.3%) said that it

always decreased the stress level. When asked how frequently they practiced this method to relieve their stress level; 23(3.8%) responded rarely, 104(17.2%) sometimes, 275(45.8%) often and 198(33%) said they always practiced these methods to decrease their stress level. 155(25.8%) felt that there was marked improvement in their performance due to practiced method, 294(49%) had little improvement and 110(18.3%) had no effect on their performance. 3(0.5%) reported declined in their performance and 38(6.3%) reported little decline. (Fig.4) Stress level was calculated, 145(24.2%) felt no anxiety during examination, 432(72%) felt healthy anxiety and 23(3.8%) felt unhealthy anxiety level. (Table1, Fig.5)

Table 1: Level of stress rated on Likert's Scale (n=600)

Question	Never	Rarely	Sometimes	Often	Always
I have trouble sleeping night before exam	101(16.7%)	142(23.7)	173(28.8%)	108(18%)	76(12.7%)
I have visible signs of nervousness such as sweaty palms, shaky hands, palpitations and so on right before the exam	169(28.2%)	188(31.2%)	130(21.7%)	73(12.2%)	40(6.7%)
I feel anxious and have a nervous feeling in my stomach before a exam	136(22.7%)	141(23.5%)	138(23%)	110(18.3%)	75(12.5%)
I feel nauseated before a exam	308(51.3%)	133(22.2%)	98(16.3%)	45(7.5%)	16(2.7%)
I panic before and during exam	167(27.8%)	207(34.5%)	147(24.5%)	35(5.8%)	44(7.3%)
I read through the test and feel that I do not know any of the answers	168(28%)	191(31.8%)	142(23.7%)	56(9.3%)	43(7.2%)
My mind goes blank during the exam	184(30.7%)	207(34.5%)	166(27.7%)	35(5.8%)	8(1.3%)
I have trouble choosing or deciding answers	125(20.8%)	204(34%)	198(33%)	59(9.8%)	14(2.3%)
I make mistakes on the easy questions or put answers in the wrong places	141(23.5%)	185(30.8%)	194(32.3%)	64(10.7%)	16(2.7%)
I recollect the answers once I come out of the examination hall	100(16.7%)	120(20%)	197(32.8%)	124(20.7%)	59(9.8%)

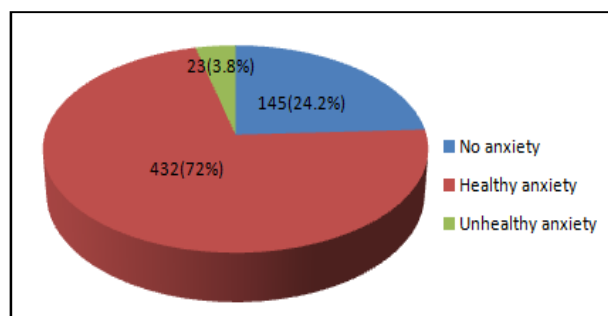


Fig.5 Total stress score: 10-19 No anxiety; 20-35 Healthy anxiety; More than 35 Unhealthy anxiety

Discussion

Studies revealed that medical students experience a relatively high level of personal distress, with adverse consequences on academic performance, competency, professionalism, and health. According to a study^[13,14] conducted at various professional colleges in Karachi, 54.6% medical students have stress level in high range compared to 20.6% of engineering, 20.6% of arts and 32% of commerce students in the same category. Our study reported 23.8% students always felt stressed, 26.8% often, 35.2% sometimes, 6.2% rarely and 8% never felt stressed before examination. Although some degree of stress is accepted as a normal part of medical training and can be a motivator for some individuals, not all students find the stress manageable. Our study reported 3.8% unhealthy anxiety, 72% healthy anxiety and 24.2% no anxiety before examination in medical students. 42% reported that this level of stress did not affect their performance in examination while decrease in performance was reported by 33% and improved performance was reported in 25%. Sujatha et al, reported mild degree anxiety in 45.99% of students, moderate degree anxiety in 37.99% and severe degree anxiety in 15.99% during examinations.^[15] In another study conducted at Coimbatore in 50 students 40% had moderate examination anxiety, 36% low anxiety and 24% with the severe examination anxiety. This study supports many of the findings of previous studies,^[15,16,17,18,19,20,21] in that majority of the medical students experience some level of anxiety during exams.

Medical students have used various coping mechanisms to deal with stress; the

coping strategies applied by students may determine the effect of stress on psychological and physical health and may determine whether stress has a positive or negative influence. Students adopt a multitude of methods to alleviate their stress, 41.7% adopt methods like watching TV or listening to music and contacting family and friends or listening to music, sleeping and exercising or various other combinations of the methods, 18% adopt listening to music, 14.3% contacted friends or family, 11.8% went to sleep, 7.2% used beverages, 6.5% got break from study and 0.5% done exercise. Other study reported 9.02% internet browsing, 33.8% listening to music, 15.79% nothing, 12.03% playing games, 10.53% sleeping & spending time with friends, 7.52% watching movies and 0.75% yoga/meditation.^[22]

Stress is an unavoidable part of everyday existence. Some stress can be healthy as it keeps you on your toes and hone your skills but excess stress may be damaging to one's health both physically or mentally. Stress is highly individualized as people have different stressors and even different responses to same stressors. We have tried to find out the coping methods used by the students and their perceived efficacy. This may help us to provide resources and counseling to students so that they can better combat their anxieties. The line between healthy and unhealthy stress is very thin and our strategies and resources should be aimed so that the students stay on the healthy side. The demand of the time is to understand the psychology of students and provide them with early guidance and support for them realize their dreams and achieve full potential in stress free conducive environment.

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