

Exam Anxiety in Professional Medical Students

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Abstract

➤ *Background:*

A professional student of any medical college in his /her life undergoes various stresses. The stress related to academics is one of them. For any student examination is often a tiresome and stressful experience. These students mostly suffer from exam anxiety.

➤ *Aims and Objectives:*

This study was undertaken to assess the level of exam anxiety and methods used for its alleviation by professional medical students before examination.

➤ *Methods:*

This study was carried out in 387 MBBS students of Government Medical College, Chandrapur. Based on the scale suggested by Nist and Diehl, a prevalidated questionnaire consisting of ten questions was asked with five possible options ranging from never [1] to always[5]. The level of exam anxiety was categorized depending on score of 10 to 19 as no anxiety, 20 to 35 as healthy anxiety and above 35 as unhealthy anxiety. The questionnaire also stated how exam anxiety affected the performance of the student. It also included various relieving methods used by them, how frequently they used these methods and how these methods affected their performance. This questionnaire was given individually to all medical students after taking their informed consent. The data was collected from them and data analysis was done by using appropriate statistics.

➤ *Results:*

36 (9%) students had unhealthy anxiety, 269 (70%) students had healthy anxiety and 82(21%) students had no anxiety. 133 (34%) perceived that stress didn't have any effect on their performance, in 82(21%) students, the performance was improved but 172(45%) students had their performance deteriorated due to stress. To alleviate exam stress, most common method used was contacting family and friends by 336(86.8%) students followed by listening music by 325(84.0%) students, followed by sleeping in 301(77.8%) students.

➤ *Conclusion:*

Most of the professional MBBS students experience some degree of anxiety during exams and used different relieving methods to cope up with it. Although some anxiety can be healthy as it keeps one alert, active and focussed but excess anxiety may be harmful to one's physical, mental and/or social health.

Keywords:- Medical Students, Exam Anxiety, Stress Level, Relieving Methods .

I. INTRODUCTION

Medical education is a noble profession that gives esteemed place in society and service to mankind. Medical students score excellent ranks in their entrance exam and start their professional career with strong aspiration and determination. In the overall growth of a medical student a growing concern nowadays is the students' mental health.⁽¹⁾

A professional medical student in his /her life undergoes various stresses. The stress related to academics is one of them.⁽²⁾ Although an optimal level of stress can enhance learning ability, too much stress can cause physical and mental health problems⁽³⁾, reduce student self esteem and may affect students academic achievement.^(4,5)

Examinations are important and necessary part of any professional curriculum. For any student examination is often a tiresome and stressful experience. Many students find themselves weighed down by parental expectations, comparisons and peer pressure.⁽⁶⁾

Exam anxiety among medical professional is a problem of prime importance.⁽⁷⁾ It manifests as various somatic, cognitive and behavioural symptoms before and during exams. Various factors like extensive curriculum, competitive environment, need to get good marks, huge syllabus and frequency of theoretical and practical evaluation that has to be grasped in short period of time, financial issues, high parental expectations, etc have been reported to put tremendous amount of stress among medical students during and before examination periods.^(8,9)

Medical students have used various coping mechanisms to alleviate stress; the coping strategies applied by students may determine the effect of stress on mental and physical health and may determine whether stress has a positive or negative influence. The margin between healthy and unhealthy stress is very narrow and our strategies and resources should be aimed so that the students remain on the healthy side. The need of an hour is to understand the mental state of students and provide them with early guidance and support for them to realize their aims and achieve full potential in stress free healthy environment.

II. MATERIAL & METHODS

The present study is an observational cross sectional study, held in 387 medical professional students of Government Medical College, Chandrapur. The study duration was of one year that is, June 2018 to June 2019.

A suitable questionnaire was prepared which consisted of four parts.

Based on the scale suggested by Nist and Diehl, a prevalidated questionnaire consisting of ten questions was asked with five possible options ranging from never [1] to always [5]. Depending on the responses given, the scores were calculated ranging from 10 to a maximum 50. The level of exam anxiety was categorized depending on score of 10 to 19 as no anxiety, 20 to 35 as healthy anxiety and above 35 as unhealthy anxiety. The second part of

questionnaire stated whether stress improved or deteriorated the performance of the student or had no effect. Third part of the questionnaire included various methods used by the students to alleviate the exam anxiety. Fourth part includes how frequently they used these methods to relieve their stress and how the relieving methods affected their performance.

After approval of the study protocol by the Institutional Ethical Committee, this questionnaire was given before the university examination to all medical students after taking their informed consent. The filled questionnaires were collected from them and data analysis was done by using Epi info7 software. Descriptive statistics (percentage and mean) were used to summarize characteristics of the study subjects.

III. RESULTS

Question	Never	Rarely	Sometimes	Often	Always
I have trouble sleeping night before exam	83(21.4%)	72(18.6%)	99(25.6%)	49(12.7%))	84(21.7%)
I have visible signs of nervousness such as sweaty palms, shaky hands, palpitations and so on right before the exam	92(23.7%)	78(20.2%)	87(22.5%)	68(17.6%))	62(16%)
I feel anxious and have a nervous feeling in my stomach before a exam	83(21.3%)	78(20.2%)	73(18.9%)	51(13.2%))	102(26.4%))
I feel nauseated before a exam	224(57.9%))	73(18.9%)	40(10.3%)	19(4.9%)	31(8%)
I panic before and during exam	89(23%)	89(23%)	94(24.3%)	55(14.2%))	60(15.55%)
I read through the test and feel that I do not know any of the answers	106(27.4%))	104(26.9%))	107(27.6%))	41(10.6%))	24(6.2%)
My mind goes blank during the exam	106(27.4%))	117(30.2%))	107(27.6%))	42(10.8%))	15(3.9%)
I have trouble choosing or deciding answers	64(16.5%)	116(30%)	160(41.35)	28(7.2%)	19(4.9%)
I make mistakes on the easy questions or put answers in the wrong places	64(16.5%)	144(37.2%))	135(34.9%))	30(7.8%)	14(3.6%)
I recollect the answers once I come out of the examination hall	58(15%)	76(19.6%)	126(32.6%))	55(14.2%))	72(18.6%)

Table 1:- Questionnaire to Assess Stress Level (n=387)

Majority of students 99(25.6%) responded that they have trouble sleeping night before exam sometimes. Only 92(23.7%) students said that they never have visible signs of nervousness such as sweaty palms, shaky hands, palpitations and so on right before the exam. Maximum students 102(26.4%) felt anxious and had a nervous feeling in stomach before any exam. Except 89(23%) all students panic before and during exam. 224(57.9%) students don't feel nauseated before a exam. 106(27.4%) students

responded that they read through the test and feel that I do not know any of the answers as well as their mind goes blank during the exam. 160(41.35%) students said that they sometimes have trouble choosing or deciding answers. Only 64(16.5%) students replied that they never make mistakes on the easy questions or put answers in the wrong places. Except 58(15%) all students recollect the answers once they come out of the examination hall.

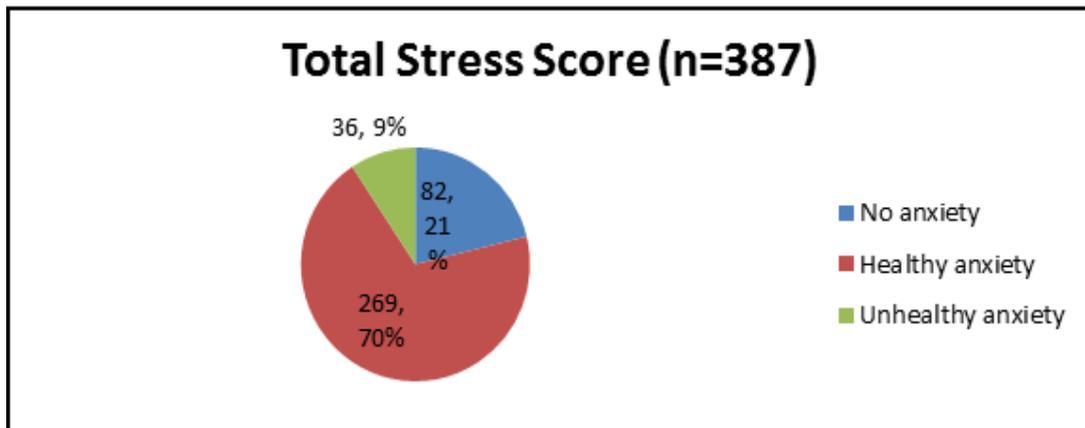


Fig 1:- Total Stress Score

36 (9%) students had unhealthy anxiety, 269 (70%) students had healthy anxiety and 82(21%) students had no anxiety.

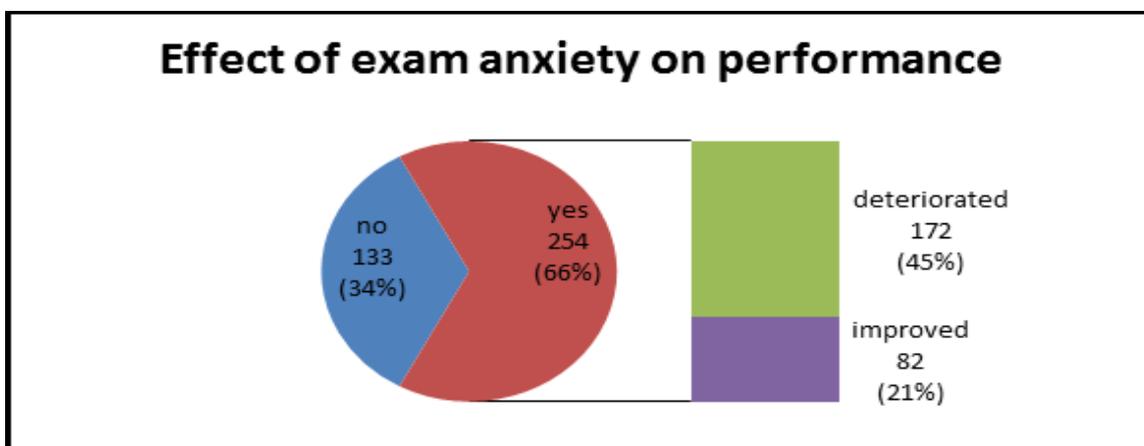


Fig 2:- Effect of Exam Anxiety on Performance of Students (n=387)

Out of 387 students, 133 (34%) perceived that stress didn't have any effect on their performance while 254(67%) felt that stress affected their performance. Out of

them, 82(21%) students said that there was improvement in performance due to anxiety but 172(45%) students had their performance deteriorated.

Sr. no	Methods to alleviate exam stress	No		Yes	
		Number	%	Number	%
1	TV	254	65.6	133	34.4
2	Music	63	16.3	325	84.0
3	Contacting family and friends	51	13.2	336	86.8
4	Sleeping	86	22.2	301	77.8
5	Using beverages	311	80.4	76	19.6
6	Getting break from studies	96	24.8	291	75.2
7	Internet browsing	187	48.3	200	51.7
8	Playing games	162	41.9	225	58.1
9	Exercise	214	55.3	173	44.7
10	Yoga	243	62.8	144	37.2
11	Others			24	6.2

Table 2:- Relieving Methods used by Students (n = 387) to Combat Exam Stress

To alleviate exam stress, most common method used was contacting family and friends by 336(86.8%) students

followed by listening Music by 325(84.0%) students, followed by Sleeping in 301(77.8%) students.

	Never	Rarely	Sometimes	Often	Always
Whether these methods practised decreased level of stress	4(1%)	13(3.3%)	117(30.2%)	163(42.1%)	90(23.3%)
how frequently you practice this method to relieve your stress level;	2(0.5%)	22(5.7%)	89(23%)	149(38.5%)	125(32.3%)

Table 3: Effect of Relieving Methods on Level of Stress

These methods practised decreased level of stress in most of the students except in 4(1%) students. 363(94%)

students practised this method frequently to relieve their stress level.

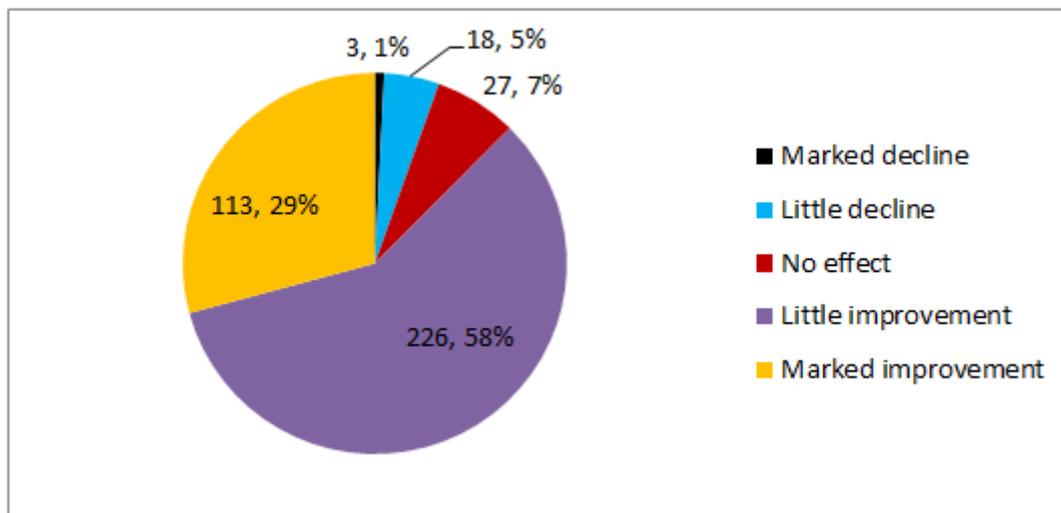


Fig 3:- Effect of the Method Practised on the Performance of Students

After practicing these relieving methods, 113(29%) students had marked improvement. Little improvement was found in performance of 226(58%) students. These methods did not affect 27(7%) students at all. Whereas 18(5%) and 3(1%) students showed little and marked decline in their performance on using these methods.

IV. DISCUSSION

Exam anxiety is an emotional phenomenon experienced by students prior to and during examination. According to research workers, some anxiety is a sign of one’s concern towards exam and is beneficial to students as it keeps them active, alert and focussed. However excessive worry can be demotivating and can lead to deteriorating performance, if not managed properly.^(10, 11) Our study reported 9% of professional medical students showed unhealthy anxiety, 70% of them had healthy anxiety and rest 21% had no anxiety before their university examination. The findings of this study are consistent with those of previous studies ^(2, 3, 7, 11, 12, 13) suggesting most of the professional students of medical colleges experience some degree of exam anxiety.

Stress is highly subjective as every individual have different stressors and even different responses to same stressors. Out of 387 students, 133 (34%) perceived that stress didn’t have any effect on their performance while 254(67%) felt that stress affected their performance. Out of

them, 82(21%) students said that there was improvement in performance due to anxiety whereas 172(45%) students had their performance deteriorated. So stress relieving methods need to be practiced by the students. Our attempt was to find out the coping methods used by the students. Students adopted a variety of strategies to relieve their anxiety. 86 % of students contacted their family and friends to alleviate the exam stress. 84% of them adopted relieving method like listening to music, 34.4% adopted watching T.V., 19.6% used beverages, 75.2% got break from study, 44.7 % did exercise, 51.7% had internet browsing, 58.1% liked playing games, and 37.2% performed yoga / meditation. These coping strategies applied by students may be used in combination or single.

Based on these findings, appropriate suggestions and counselling to students were given so that they would better combat their anxieties. Emphasis was given to do regular study, revising the subject before exams, develop effective time managing skills, discussing problems, forming healthy student teacher relationship, etc. It is essential to improve the evaluation system so as to make the examination less stressful. Incorporation of regular tests and question banks could help to alleviate students fear and anxieties associated with exams.^(11, 14) Early interventions should be introduced for stress management in students entering medical education system. This would help them to overcome exam anxiety more efficiently.

V. CONCLUSION

Most of the professional MBBS students experience some degree of anxiety during exams and used different relieving methods to cope up with it. Although some anxiety can be healthy as it keeps one alert, active and focussed but excess anxiety may be harmful to one's physical, mental and/or social health. Since medical professionals are future health care providers, they need to be physically as well as mentally sound to provide efficient services to the needy.

REFERENCES

- [1]. Jafari N, Loghmani A, Montazeri A. Mental health of medical students in different levels of training. *Int J Prev Med.* 2012 Mar;3(Supp 11): S107-S112.
- [2]. Mittal R, Kumar R. Exam stress in MBBS students and the methods used for its alleviation. *Int J Med & Dent Sci.* 2018 Jan;7(1).
- [3]. Niemi, P.M. & Vainiomaki, P.T. (1999) Medical students' academic distress, coping and achievement strategies during the pre-clinical years, *Teaching & Learning in Medicine*, 11(3), pp. 125-134.
- [4]. Linn, B.S. & Zeppa, R. (1984) stress in junior medical students: relationship to personality and performance, *Journal of Medical Education*, 59, pp. 7-12.
- [5]. SILVER, H.K. & GLICKEN, A.D. (1990) Medical student abuse: incidence, severity and significance, *Journal of American Medical Association*, 263(4), pp. 527-532.
- [6]. Soliman M. Perception of stress and coping strategies by medical students at King Saudi University, Riyadh, Saudi Arabia. *Journal of Taibah University Medical Sciences.*2014;9(1):30-35.
- [7]. PahwaB, Goyal S,Srivastava K,Saldanha D, Bhattacharya D. A study of exam related anxiety amongst medical students. *Industrial Psychiatry Journal.*2008;17(1):46-48.
- [8]. Chauhan HM, Shah HR, Chauhan SH, Chaudhary SM. Stress in medical students:A cross sectional study.*IJBAR.*2014;5(6): 291-294.
- [9]. Solanky P, Desai B, Kavishwar A, Kantharia S.L.Study of psychological stress among undergraduate medical students of government medical college,Surat. *International Journal of Medical Sciences and Public Health.*2012;1(2):38-42.
- [10]. Saravasan C, Kingston R, Gin M.Is test anxiety a problem amongst medical students: A cross sectional study on outcome of test anxiety amongst medical students? *International journal of psychological studies.*2014;6(3):24-31.
- [11]. Grewal Simran1, Nagpal Sangeeta, Walia Lily. Evaluation of examination anxiety status and its associated factors among first professional medical (MBBS) students. *International Journal of Interdisciplinary and Multidisciplinary Studies*, 2015, Vol 2, No.8, 1-11.
- [12]. Sujatha B, Subhalakshmi S. Effect of stress on exam going first year medical students of Tirunelveli. *International Journal of Medical Research & Health Sciences* 2016;5(1):118-21.
- [13]. Saipanish R. Stress among medical students in a Thai medical school. *Med Teach* 2003;25:502-6.
- [14]. Ray I, Joseph D. Stress in medical students. *JK Science.*2010;12(4):163-164.