Prevalence of Anxiety among Medical Students in a Public Sector Medical College in Pakistan

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Abstract

Objective: To investigate the prevalence of anxiety among medical students in all batches of Federal Medical and Dental College, Islamabad and to highlight the pros and cons of mass anxiety prevalence among medical students, in special regard to their:

- Health
- Ultimate success

Methodology: Cross-sectional study. The study will assess the psychological tendencies and behavior of medical students, to different situations according to their personality to measure their anxiety level. Data will be collected using BECK anxiety inventory (BAI) questionnaire.

Results: The highest prevalence of anxiety seen among medical students was at severe levels. Data is collected twice with a gap of one month. Initially, out of 100%, 54.1% suffered from severe anxiety, 38.3% from moderate anxiety and 7.7% from mild anxiety.

Conclusion: Our research shows that severe anxiety is the most common type prevalent in medical students in FM&DC. This can be justly labelled as a danger sign which can have drastic consequences. The reason for anxiety prevalent in them, include the on-going and increasing pressure on medical students. This anxious behavior eventually gets rooted deep into their personalities and the students' exhibit the similar behavior even in normal circumstances. This ultimately affects not only their working ability but also their outlook towards life and this considerably Increases risk of their vulnerability to certain health hazards which predominantly includes CVDs. So, this issue needs to be looked into on a broader scale and addressed properly.

Keywords: Anxiety; Depression; Beck Anxiety Index

Introduction

Anxiety is a nervous disorder marked by excessive uneasiness and apprehension, typically with compulsive behavior or panic attacks. Anxiety can be both, a cause or a consequence of stress. Whereas, stress refers to a state of mental or emotional strain or tension resulting from adverse or highly demanding situations. Anxiety and stress are considered to be part and parcel of medical education. Various studies have documented high stress levels among medical students [1-5]. Academic requirements, exam pressure, inability to keep up the pace, various psychological afflictions, on-going tension and excessive work load play a vital role in developing high levels of stress in medical students [6]. This eventually leads to decreased life contentment among students [7]. A lot of factors may be attributed to dis-

satisfaction from life and vulnerability to depression, with anxiety being the most common contender. Anxiety very frequently is seen to be associated with low mood, lack of appetite, irritability and decreased output at work. Anxiety during medical school can later result in decreased efficiency, particularly in terms of provision of proper health care to patients [8]. Anxiety is becoming more of an epidemic among medical students these days and it has very grave and far reaching consequences so it is important to highlight this aspect of academic setback. Researches have shown that emotional resilience and behavioral traits in different individuals have significant impact on their professional careers and health quotient. This also is attributed as a legitimate factor in professional descent. Also, stress can cause psychological impairment in medical students to such an extent, that even suicidal cases have been reported [9,10]. Medical students may get influenced by stress, to such an extent that they partake in unethical act of suicide. Since medical students are considered to be the future healers of society and anxiety is an emerging catastrophe to their health and efficiency, so this problem needs to be addressed in special regard to their psychological and mental well-being.

This study covers following vistas:

- This research will highlight the pros and cons of severe anxiety problems among medical students, in special regard to their health and ultimate success.
- Our objective is to assess the prevalence of anxiety among medical students of FM&DC.
- Moreover, as per the settings of the study (i.e. FMDC), students belong to versatile backgrounds and different cultures that defines their different mind-sets and their handling of stress. So, this research will envisage the anxiety dilemma among medical students on a broader scale and in a wider context. The study also explores the effects of socio-demographic factors on prevalence of anxiety and depression.
- This study encompasses comparative anxiety levels among medical students of FM&DC within a time period of a month.
- The aim is to reinforce the fact that overly anxious and impatiently eager personality tendencies make the individual less efficient and more prone to some severe health risks.

Methods

Study design: Longitudinal study

The study assessed the psychological tendencies and behavior of medical students in different situations according to their personality and measure their anxiety level.

Study setting: Medical students of Federal Medical and Dental College, Islamabad.

Duration: 3 months after submission of synopsis.

Reference scale: The data was collected twice using BECK anxiety inventory (BAI) questionnaire with a gap of one month.

The BAI consists of twenty-one questions about how the subject has been feeling in the last week, expressed as common symptoms of anxiety [15].

The BAI has a maximum score of 63.

- 0 - 7: Minimal level of anxiety
- 8 - 15: Mild anxiety
- 16 - 25: Moderate anxiety
- 26 - 63: Severe anxiety.

Sample size:

- Calculated using WHO calculator.
- Sample size for 400 students with confidence level of 95% and confidence interval of 5 is 196.

Sampling technique: Random sampling via standard questionnaire.

Sample collection

Inclusion criteria: Students studying at Federal Medical and Dental College, Islamabad after informed consent.

Exclusion criteria: Students who've been suffering from anxiety due to any particular and established medical disorder.

Data management and analysis

Informed consent was taken and got signed by all the participants on assurance of confidentiality. By distributing questionnaire, we were determining the reactions of different personality types under different circumstances and hence the overall impact on the health status and the attitudes towards their set targets/goals.

Study population: 400 students of FM&DC.

Data analysis technique: Microsoft Excel'13, and IBM SPSS Statistics v. 22.

Data collection instrument: Printed questionnaire were given to the students.

Literature Review

This project reports information on prevalence of anxiety and the associated hazards which are faced by medical students. In addition, relative anxiety levels are also assessed with a gap of one month which will substantiate the fact that medical students are more stressed even in the normal settings irrespective of any specific period.

This study specifically covers the medical students of diverse ethnic roots and their variable abilities to withstand different stressful conditions.

There are several studies which show the prevalence of anxiety and its negative impacts among medical students.

Medical students constitute a susceptible group that has a high prevalence of psychiatric morbidity comprising of anxiety and depression [11].

Medical students represent a highly educated population under significant pressures. They face a significant amount of pressure due to the sudden emotional transition from a naïve student to a young knowledgeable physician. During the transition to clinical settings in the third year, the student may experience a loss of external control and may counter this with an increase in depression and/or anxiety symptoms. Studies suggest that mental health worsens after students begin medical school and remains poor throughout training [12].

A cross sectional study was done on the students of Ziauddin Medical University. Using anxiety and depression scale it was found out that 60% students had anxiety and depression. The study findings highlight the need of psychiatric counseling and support services available to vulnerable students [13].

Presence of psychological morbidity in medical undergraduate students has been reported from various countries across the world. A substantial proportion of medical undergraduate students were found to be depressed, anxious and stressed revealing a neglected area of the students' psychology requiring urgent attention. Student counselling services need to be made available and accessible to curb this morbidity [14].

Medical students may experience test anxiety associated with 'high stakes' exams, such as Step 1 of the United States Medical Licensing Examination. Causes of test anxiety as reported by students were related to negative self-talk during preparation for the exam. Effects of anxiety had to do with emotional well-being, cognitive functioning, and physical well-being. Strategies included socializing with others and a variety of cognitive and physical approaches. Comparison of individuals' strategies with causes and effects showed some congruence, but substantial incongruence between the types of strategies chosen and the reported causes and effects of test anxiety [15].

A study was conducted to examine the prevalence of depression, anxiety and psychological distress of students in medical schools in the UK. Prevalence of 7.7 - 65.5% for anxiety, 6.0 - 66.5% for depression and 12.2 - 96.7% for psychological distress were recorded [16].

Many studies have shown that the prevalence of psychological distress among medical students during medical training is higher than that in general population. A few studies have shown that the prevalence of psychological distress among medical students before the onset of medical training was similar to general population [17].

Results

According to aims and objectives of our research 400 students of FM&DC with a cumulative sample size of 196 were selected to assess the prevalence of anxiety levels among them.

After analyzing and processing the data collected through questionnaire and survey, following results were obtained.

Level of anxiety

It was seen that severe level of anxiety is the most prevalent kind, seen in the medical students. Data is collected twice with a gap of one month.

Initially, out of 100%, 54.1% suffered from severe anxiety, 38.3% from moderate anxiety and 7.7% from mild anxiety.

Anxiety Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mild Anxiety	15	7.7	7.7	7.7
	Moderate Anxiety	75	38.3	38.3	45.9
	Severe Anxiety	106	54.1	54.1	100.0
	Total	196	100.0	100.0	

After one month level of anxiety was as follows.

Anxiety Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mild Anxiety	11	5.6	5.6	5.6
	Moderate Anxiety	68	34.7	34.7	40.3
	Severe Anxiety	117	59.7	59.7	100.0
	Total	196	100.0	100.0	

High levels of anxiety have been reported and documented.

So, it was seen that anxiety is one of the emerging dilemmas that adversely affects the life, health and career of the medical students.
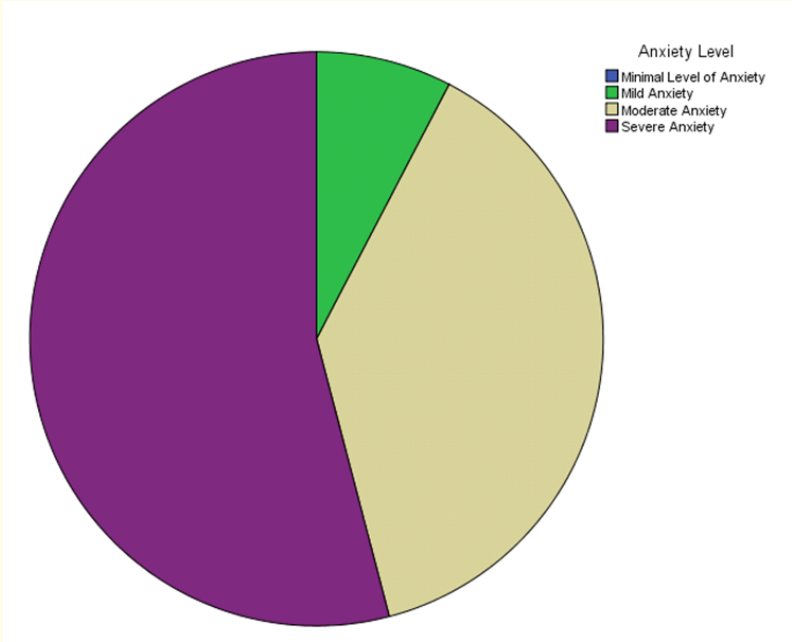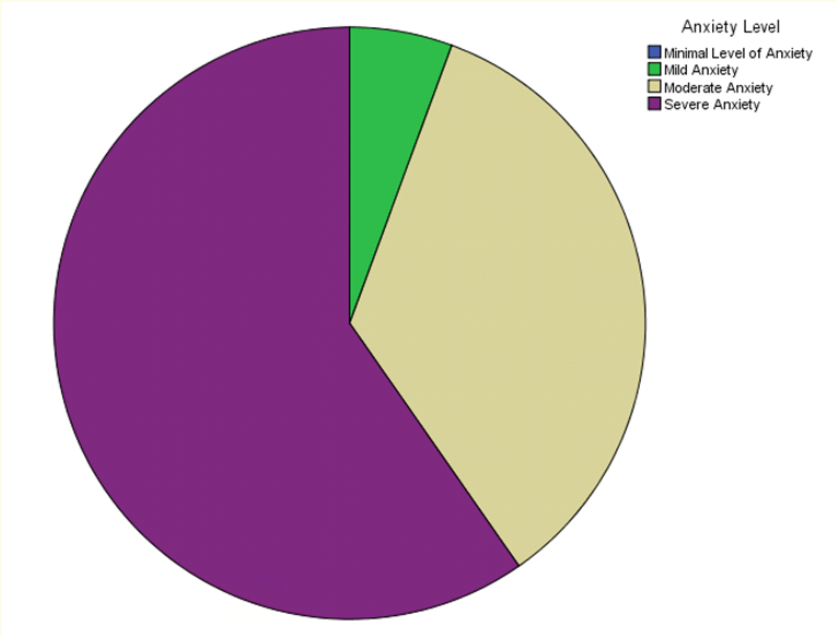
Figure 1: Initial prevalence of anxiety.

Figure 2: Prevalence of anxiety after one month.

Discussion

Anxiety, nowadays, can be ranked as one of the most threatening psycho-somatic disorders that affects all ages and genders. But it specifically is seen in its worst forms in medical students who are subjected to both, mental and physical exertion throughout their training.

Previous studies have suggested that medical students suffer from mild to moderate anxiety but latest surveys including this research on the anxiety and its relation to medical students reveal that constantly increasing levels of stress is evolving in medical students. Some reports have even documented a number of suicidal cases and other severe mental ailments attributed to anxiety.

Our research shows that severe anxiety is the most common type prevalent in medical students in FM&DC. This can be justly labelled as a danger sign which can have drastic consequences.

Our exclusion criteria consists of students suffering from any related and documented psychological or neurotic disorder. This highlights that students who participated in research suffered from anxiety irrespective of any known psychological issue. The reason for anxiety prevalent in them include the on-going and increasing pressure on medical students. This anxious behavior eventually gets rooted deep into their personalities and the students become anxious generally even in normal circumstances.

This ultimately affects not only their working ability but also their outlook towards life and this considerably Increases risk of their vulnerability to certain health hazards which predominantly includes CVDs.

So, this issue needs to be looked into on a broader scale and addressed properly.

Conclusion

Our research shows that severe anxiety is the most common type prevalent in medical students in FM&DC. This can be justly labelled as a danger sign which can have drastic consequences. The reason for anxiety prevalent in them, include the on-going and increasing pressure on medical students. This anxious behavior eventually gets rooted deep into their personalities and the students' exhibit the similar behavior even in normal circumstances. This ultimately affects not only their working ability but also their outlook towards life and this considerably Increases risk of their vulnerability to certain health hazards which predominantly includes CVDs. So, this issue needs to be looked into on a broader scale and addressed properly.

Bibliography

1. Bayram N and Bilgel N. "The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students". *Social Psychiatry and Psychiatric Epidemiology* 43 (2008): 667-672.

2. Dahlin M., *et al.* "Stress and depression among medical students: a cross-sectional study". *Medical Education* 39 (2005): 594-604.

3. Aktekin M., *et al.* "Anxiety, depression and stressful life events among medical students: a prospective study in Antalya, Turkey". *Medical Education* 35.1 (2001): 12-17.

4. Azhar MZ. "Psychological stress and treatment - research issues". *Medical Journal of Malaysia* 59.2 (2004): 143-145.

5. Firth-Cozens J. "Medical student stress". *Medical Education* 35 (2001): 6-7.

6. Shaikh BT., *et al.* "Students, stress and coping strategies: a case of Pakistani medical school". *Education for Health* 17 (2004): 346-353.

7. Kjeldstadli K., *et al.* "Life satisfaction and resilience in medical school--a six-year longitudinal, nationwide and comparative study". *BMC Medical Education* 6 (2006): 48.

8. Tyssen R., *et al*. "Factors in medical school that predict postgraduate mental health problems in need of treatment. A nationwide and longitudinal study". *Medical Education* 35 (2001): 110-120.

9. Dahlin ME and Runeson B. "Burnout and psychiatric morbidity among medical students entering clinical training: a three year prospective questionnaire and interview-based study". *BMC Medical Education* 7 (2007): 6.

10. Guthrie E., *et al*. "Psychological stress and burnout in medical students: a five-year prospective longitudinal study". *Journal of the Royal Society of Medicine* 91 (1998): 237-243.

11. Jadoon NA., *et al*. "Anxiety and depression among medical students: a cross-sectional study". *Journal of Pakistan Medical Association* 60.8 (2010): 699-702.

12. Ahmed I., *et al*. "Cognitive emotions: depression and anxiety in medical students and staff". *Journal of Critical Care* 24.3 (2009): e1-7.

13. Inam SN., *et al*. "Prevalence of anxiety and depression among medical students of private university". *Journal of Pakistan Medical Association* 53.2 (2003): 44-47.

14. Shawaz Iqbal., *et al*. "Stress, anxiety and depression undergraduate students and their socio-demographic correlates". *Indian Journal of Medical Research* 141.3 (2015): 354-357.

15. Encandela J., *et al*. "Characteristics medical students and congruence of strategies to address it". *Medical Education Online* 19 (2014): 25211.

16. Hope V and Henderson M. "Medical student depression, anxiety and distress outside North America: a systematic review". *Medical Education* 48.10 (2014): 963-979.

17. Yusoff MS., *et al*. "The impact of medical education on psychological health of students: a cohort study". *Psychology, Health and Medicine* 18.4 (2013): 420-430.