Section: Academic Medicine

Original Research Article

EXPLORING THE PREVALENCE AND FACTORS ASSOCIATED WITH DEPRESSION AMONG MEDICAL STUDENTS: INSIGHTS FROM A TERTIARY CARE INSTITUTE FROM NORTHERN INDIA

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Received : 30/05/2024
Received in revised form : 18/07/2024
Accepted : 02/08/2024

Keywords:
Depression; Medical student; Risk factors; Examination performance; Uttarakhand

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DOI: 10.47009/jamp.2024.6.4.225

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2024; 6 (4); 1132-1134

Abstract

Background: Depression constitutes a significant component of the global disease burden, impacting communities worldwide. Medical students, in particular, face heightened vulnerability due to the rigorous demands and performance pressures inherent in their studies. Despite this, the factors contributing to depression among medical students remain inadequately understood. Notably, in India, there exists a dearth of data regarding the prevalence of depression among medical students and its consequential effects. Therefore, the present study aims to estimate the prevalence and predisposing factors associated with depression among Uttarakhand region medical students. **Materials and Methods:** A cross-sectional study was conducted among medical students at a tertiary care institute in Uttarakhand. The assessment of depression and related factors was accomplished through the administration of the Beck Inventory questionnaire for diagnosis and a structured questionnaire. **Result:** The study shows a high prevalence of depression (n=108; 71%), comprising of mild (n=53; 49.1%), moderate (n=38; 35.2%) and severe (n=17; 15.7%) depression. It was observed that 80% (n=86) of those suffering from depression were third year students. The risk factors positively associated with depression included non-participation in sports, failure in past examinations and lack of close friends with whom participants could comfortably share their emotions. **Conclusion:** The prevalence of psychological distress among medical students is significant. Steps are urgently needed to eliminating unnecessary stress in their environment.

INTRODUCTION

Depression, a major psychiatric morbidity characterized by anhedonia (lack of pleasure), low energy, feeling of guilt or worthlessness, lacking/ abnormal sleep and appetite as well as poor concentration in various areas is assigned first among the disease conditions tackled/generalized under mental health Gap Action Program (mhGAP) promoted by WHO.[1] It can affect people of any gender, age and background - teenagers are not the only group who experience serious depression. This fact about teenage depression is further compounded by the alarming rates of homicidal and suicidal tendencies among teens.[2] Everyone agrees suicide prevention is a worldwide priority.

Depression looks like changes to lifestyle - found in any individual, at nearly every age. Suicide was the most common cause of death, with over 16 deaths per hour and one person every third minute dying from suicide across the globe,[3] specially medical students at risk for experiencing high levels of stress.[4] Secondly, suicide - a fatal symptom of depression- is the world's number two killer for 15-29 year-olds. This is specially chilling in the case of medical schools where suicide rates stigma lose high.

That said, suicides can be avoided and that is why there will always have to make a combined effort in terms of creating awareness among the people with

all their minds. Depression, by the WHO 2012 statistics is suffered at least once in a lifetime by around 350 million individuals worldwide, with severe cases result an estimated number of annual suicides (approximately 800.000).[1] Depression not only causes individuals to suffer, but also affects their academic and professional performance.[5] Given the enormous academic and psychosocial demands placed on medical students, depression in these future practitioners is particularly alarming being highly detrimental to both their personal wellbeing and quality of patient care.[6]

In India, limited data on depression prevalence among medical students underscores the need for research and intervention. Similarly, in Cameroon, studies focus on understanding depression prevalence, risk factors, and its impact on academic performance among medical students.[7] The medical community grapples with higher rates of stress, anxiety, and depression compared to the general population, highlighting the urgent need for mental health support and student-centred education reforms.[8]

Mental health concerns are prevalent not only among students but also among the general population, exacerbated by socioeconomic challenges and conflicts, particularly in regions like India.

MATERIALS AND METHODS

The present study was conducted at a tertiary care, teaching institute from Uttarakhand from June to October 2023. The study participants comprised of medical students of the institute after obtaining due informed consent. Permission was granted by the faculty head after explaining the study's goals and satisfactorily addressing the queries. Participants who did not complete the questionnaire and those that did not provide informed consent were excluded from the study.

The study was a questionnaire based study, comprising of the Beck test that consisted of 21 multiple-choice questions scored from 0 to 3. Apart from the Beck's test, a standard questionnaire was administered to collect demographic information and information on risk factors related to depression. The questionnaire was developed and tested through a pilot study to ensure data accuracy. The study calculated the prevalence of depression among students and its distribution by factors such as ethnicity, age, economic status, urban/ rural residence, and marital status.

According to Beck inventory questionnaire, a score of 10 is considered to be borderline between depression and normal state of mental wellbeing. The student who scored less than 10 was considered of healthy psychological state of mind. The person scoring more than 10 was considered as suffering from depression. The participants were categorized into normal, mild, moderate, and severe depression categories.

Various risk factors were studied using the questionnaire included the participants' failure in past examinations, perception of financial background of the participants, participation in sports and presence or absence of close friends and companions. The financial status was investigated as a dependent variable. Participants classified their financial status as either "enough" or "not enough". Based on their socialization quotient, participants were asked whether they had a companion with whom they could share their emotions. Their participation in sports and failure in the past examinations was also assessed with closed questions. The data collected was entered in Microsoft Excel and statistical analysis was conducted using SPSS ver. 22 (IBM Corp., USA).

RESULTS

A total of 153 participants were included in the study that included 78 (51%) males and 75 (49%) females. The age of the participants in the present study varied from 18 to 33 years, among which, 90 belonged to the 21-24 years age group, 34 were from the 25-55 years age group and the rest 29 were from the 18-20 years age group.

Majority of the students were from urban areas (n=118; 77%) and the rest were from rural areas (n=35; 23%). One hundred twenty four (81%) were single and the rest 29 (19%) were married. One hundred thirty six (89%) reported the presence of a close friend/ companion in their life while the rest 17 (11%) did not have a close friend or companion to share their emotions.

The work profile of the participants was ascertained and it was observed that majority of the participants were not working (n=133; 87%) and the rest were working (n=20; 13%) in some capacity on part time basis. One hundred participants reported that they feel that they belong to a financially stable background while the rest 53 reported that they do not have a financially stable background.

Sixty eight (44%) played sports while the rest 84 (56%) did not play sports. The rate of failure in academics was assessed and it was observed that 30 participants had experienced failure in one or more summative/ final examinations whereas the rest 118 (77%) did not experience even a single failure or reattempt in the examinations.

Analysis of the depression score revealed that 108 (71%) were suffering from some degree of depression. Among these 108, 53 (49.1%) mad a mild depression, 38 (35.2%) had a moderate depression while the rest 17 (15.7%) had severe depression. The average depression score was 17.2, with a mean score of 17.9 in females and 16.6 in males.

The presence of various factors were assessed and it was observed that 80% (n=86) of those suffering from depression were third year students. The risk factors significantly associated with depression included failure in past examinations and lack of close friends with whom participants could

ISSN (O): 2687-5365; ISSN (P): 2753-6556

comfortably share their emotions (Table 1). Participants who were participating in sports activities regularly had a significantly lower association with depression.

Table 1: Risk factors among medical students.

Factor		n	Depression		P-value
			Yes n (%)	No n (%)	
Marital status	Single	124	87 (70)	37 (30)	
	Married	29	21 (72)	8 (28)	
Close friend/ companion	Yes	136	92 (68)	44 (32)	<0.01
	No	17	16 (94)	1 (6)	
Financial background	Stable	100	67 (67)	33 (33)	
	Not stable	53	41 (75)	12 (25)	
Failure in past examinations	Yes	30	28 (94)	2 (6)	<0.01
	No	123	80 (64)	43 (36)	
Participation in sports	Yes	68	42 (62)	26 (38)	<0.05
	No	85	66 (79)	18 (21)	

DISCUSSION

The prevalence of depression observed in the present study was 71%, with rates of mild, moderate, and severe depression at 35%, 25%, and 11%, respectively. This rate was notably higher (3.5 times) than the global prevalence of depression among medical students. Furthermore, it exceeded rates in Pakistan (35%), Greece (43.9%), Iran (43%), Herat (67.2%), and Kabul (65.7%).

The prevalence of depression was slightly higher among females, aligning with the findings reported in the medical literature [REF].

Sharma et al had done Cross Sectional Study on 440 students by using Theoretical Depressive experience Questionnaire (TDEQ) the response rate of the people was 90% and the prevalence of depression among students was 90%.[9] Sabawale et al had done a Cross Sectional Study at Medical School in Mainland China in 2012. A total of 348 students have respondent to the survey. The rate of depression and suicidal ideation are high in Medical students in mainland in china.[10]

CONCLUSION

Addressing the prevalence of depression among medical students requires a multifaceted approach. By increasing awareness regarding depression for both parents and students prior to university enrolment, one can foster preventive steps and early intervention. Implementing modern programs within universities to target factors contributing to educational stressors is essential. Establishing counselling units will provide vital support systems. Regular psychiatric health assessments of students can identify at-risk individuals for timely intervention. Encouraging students to seek help from psychiatric specialists when experiencing depression related symptoms promotes proactive mental health care. These recommendations collectively aim to create a supportive environment that prioritizes the long term well-being of medical students.

Key message

1. High prevalence of depression among medical students, especially third year medical students.
2. Lack of close friends, failure in examinations important risk factors associated with depression among the study participants.
3. Steps aimed at reducing stress and improving the mental health of the medical students are urgently needed.

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ISSN (O): 2687-5365; ISSN (P): 2753-6556