

An Examination of Depression, Anxiety, and Stress Related Issues Among Medical Students in Government Medical College, Datia (M.P.)Amrita Chauhan¹, Rajesh Singh², Jugendra Lahari³, Sachin Singh Yadav⁴, Ashish Saraswat⁵¹Assistant Professor, Dept. of Psychiatry, GMC, Datia (M.P.)²Senior Resident, Dept. of Psychiatry, GMC, Datia (M.P.)³Senior Resident, Dept. of Medicine, GMC, Datia (M.P.)⁴Associate Professor, Dept. of Community Medicine, GMC, Datia (M.P.)⁵Senior Resident, Dept. of Microbiology and Infectious Diseases, MLBMC, Jhansi (U.P.)

Received: 13-06-2023 / Revised: 28-07-2023 / Accepted: 20-08-2023

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Conflict of interest: Nil

Abstract:

Background and Objectives: Medical College is recognized as a stressful environment that often exerts a negative effect on the academic performance, physical health and psychological wellbeing of the student. Depression and anxiety among medical students is an area of increasing concern worldwide. This study aimed to assess the prevalence of depression, anxiety and its associated factors among medical students in Datia.

Methods: A cross sectional study was conducted at GMC, Datia (M.P.) during the period of February to May 2023. In Medical College, 120 students per year were enrolled for M.B.B.S and students from all four years were eligible to participate in this study. The minimum sample size was calculated to be 330 by using formula $n = \frac{4pq}{l^2}$, where prevalence of depression among medical students was taken 71% after getting through literature and 5% absolute precision.

Results: The present study showed that 60% females were depressed which is more in comparison to males (52%). 50% of females had mild to moderate degree of depression while among males it was 37%. But severe depression was more in males (16%) in comparison to females (13%). Among respondents males (68%) were more anxious than females (61%). But severe anxiety was found equal (22%) in both genders. The prevalence of depression was high among those medical students with family problems, staying in hostel, having substances abuse and family history of depression. It was found to be statistically significant ($p < 0.05$).

Conclusion; Among medical students, depression and anxiety are very common. This study raises the possibility that there are other risk factors that can predispose a medical student to psychological morbidity, such as anxiety and depression, in addition to academic pressures. Therefore, this vulnerable population needs early screening and psychiatric counseling.

Keywords: Depression, Anxiety, Medical Students, Drug Abuse, Stress.

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Introduction

Medical education is to produce knowledgeable, professional, and capable doctors who will treat the nation's sick, improve medical knowledge, and advance public health.[1] Medical schools are known for having stressful environments that frequently have a poor impact on students' academic performance, physical health, and psychological well-being. High rates of stress, anxiety, and depression are common in medical schools, and some students even drop out of the program altogether. But it's sometimes difficult for everyone to notice the dejected faces hidden under the white robes. According to the WHO, depression will be the second most widespread condition worldwide by 2020. It is very common.[2]

Unfortunately, not detecting these problems increases psychological morbidity, which has negative repercussions on people's lives and jobs.[3] An ailment known as a depressive disorder affects the body, mood, and thoughts. It has an impact on how someone feels about themselves, how they eat and sleep, and how they think.[4]

Medical students are an important source of future human capital, and depression in them can have a severe impact on patient care as well as productivity and quality of life. Through early detection and appropriate interventional treatments, it is crucial to prevent the negative impacts of depression on a person's educational success and career. However, India's public health system pays little attention to

the issue of depression among medical students. Numerous studies from several western nations as well as from other areas of the world have noted high rates of psychological illness among medical students, including anxiety and depressive symptoms. [5,6]

However, despite having one of the highest numbers of medical colleges and students, studies on Indian medical students are scarce. Age, gender, training year, and the scale used to quantify depression all affect the prevalence of depression among medical students. [7]Hence, there is a need to quantify the anxiety, depression and its associated factors among medical students for their counselling and rehabilitation.

Materials and Methods:

A cross sectional study was conducted at GMC, Datia (M.P.) during the period of February to May 2023. In Medical College, 120 students per year were enrolled for M.B.B.S and students from all four years were eligible to participate in this study. The minimum sample size was calculated to be 330 by using formula $n = \frac{4pq}{l^2}$ where prevalence of depression among medical students was taken 71% after getting through literature and 5% absolute precision. [8] Those eligible to participate in the study included all medical students who had spent more than six months in the institution and did not have any physical illness.

Methodology:

Students from each class from the first to the last year were randomly chosen and given a self-administered questionnaire. The study was conducted under the watchful eye of the institution's director, and individuals chosen to participate were then asked verbally for their agreement. Before the study began, subjects were given an explanation of its goals and assurances of confidentiality. After a lecture, the students were given the questionnaire to complete in class, and they gave it back to the author

that same session. To protect their identities, the respondents were requested not to write their names or any other identifying information on the survey. Since there were no interventions in this trial, there were no possible dangers to the participants.

The questionnaire asked about demographic information as well as aspects of depression and anxiety. Age, gender, and characteristics including drug usage, alcoholism, family issues, a history of depression in the family, and being away from home were all considered demographic variables. For the purposes of this study, every individual who had consumed alcohol at least once in the previous 12 months was deemed an alcohol user. The question of whether or not the family members were now experiencing any problems that were concerning the subject was used to evaluate the family issue.

The Depression Anxiety and Stress Scale (DASS), which was included in the same questionnaire, were also used to evaluate anxiety and depressive symptom severity. The 42 items on this self-report measure include 14 for depression, 14 for anxiety, and 14 for stress. Each item is scored on a scale of 0 to 3, with a maximum score of 126. Scores between 0 and 9 are regarded as normal, 10 to 13 as mild depression, 14 to 20 as moderate depression, 21 to 27 as severe depression, and 28 or more as extreme depression. In terms of anxiety, 0–7 is regarded as normal, 8–9 as mild, 10–14 as moderate, 15–19 as severe, and 20–plus as extremely high.

Statistical Analysis:

The statistical analysis was performed using SPSS for windows version 22.0 software (Mac, and Linux). The findings were present in number and percentage analyzed by frequency, percent. Chi-square test was used to find the association among variables. The critical value of P indicating the probability of significant difference was taken as <0.05 for comparison.

Results:

Table 1: Gender wise prevalence of depression and Anxiety

		Male N (%)	FemaleN (%)	Total
Depression	Normal	100(46)	37(37)	137
	Mild	49(21)	25(22)	74
	Moderate	36(16)	31(28)	67
	Severe	34(14)	13(12)	47
	Extremely severe	4(2)	1(1)	5
	Total	223	107	330
Anxiety	Normal	60(28)	32(30)	92
	Mild	52(21)	24(20)	76
	Moderate	58(24)	27(24)	85
	Severe	48(20)	21(19)	69
	Extremely severe	5(2)	3(3)	8
	Total	223	107	330

As per table 1 the present study showed that 60% females were depressed which is more in comparison to males (52%). 50% of females had mild to moderate degree of depression while among males it was 37%. But severe

depression was more in males (16%) in comparison to females (13%). Among respondents males (68%) were more anxious than females (61%). But severe anxiety was found equal (22%) in both genders.

Table 2: Depression and anxiety prevalence based on the study year

		I st year N (%)	II nd year N (%)	III rd year N (%)	IV th year N (%)	Total
Depression	Normal	37 (37)	39 (45)	39 (47)	28(40)	143
	Mild	15 (16)	18 (22)	23 (28)	16 (22)	72
	Moderate	20 (26)	15(19)	12 (15)	18 (22)	65
	Severe	14 (18)	12 (14)	7 (9)	10 (19)	43
	Extremely severe	4 (3)	0(0)	1 (1)	2 (1)	7
	Total	90	84	82	74	330
Anxiety	Normal	24 (27)	32 (38)	25 (31)	12(19)	93
	Mild	17 (18)	23 (27)	18 (21)	19 (26)	77
	Moderate	27 (30)	18(22)	20 (25)	18 (23)	83
	Severe	20 (18)	10 (12)	17 (21)	20 (30)	68
	Extremely severe	2 (2)	1 (1)	2 (2)	5 (4)	9
	Total	90	84	82	74	330

As per table 2 The prevalence of depression and anxiety was more among 1st year medical student (63%, 70%) and final year (64%, 83%).

Table 3: Association between depression and its inducing factors.

Variables		Depression		Chi square value	df	P-value
		Present N=187	Not Present N=143			
Age (years)	<20	99	87	2.49	1	0.21
	>20	88	56			
Gender	Male	120	103	2.21	1	0.11
	Female	67	39			
Year of study	I st	53	37	1.39	3	0.51
	II nd	45	39			
	III rd	43	39			
	IV th	46	28			
Substance use	Yes	90	36	4.11	1	0.01*
	No	98	106			
Family problems	Yes	100	47	3.89	1	0.01*
	No	88	95			
Staying in hostel	Yes	161	110	4.18	1	0.02*
	No	27	32			
Family history of depression	Yes	64	29	4.01	1	0.01*
	No	124	113			

As per table 3 the prevalence of depression was high among those medical students with family problems, staying in hostel, having substances abuse and family history of depression. It was found to be statistically significant ($p < 0.05$)

Discussion

Medical students' psychological health is crucial for themselves, the patients they encountered, and their future as doctors. The current educational process in medical training exposes students to a variety of stressors, some of which are endogenous like gender, personality features, etc. and others of which are exogenous like adaptation to the medical curriculum, vastness, etc. We made use of the DASS, a valid and dependable depression and anxiety screening instrument. According to several researches, depression prevalence rates can range from 15% to 70%.[9,10,11] In all, our respondents

reported 41.1% depression, of which 15.0% had mild depression and 26.1% had moderate-severe depression. compared to other research results from Singh A and colleagues' study (49.1%).

India discovered a greater incidence of depressive symptoms among medical undergraduates in a study by Kumar GS and colleagues (71.25%) in Mangalore, Karnataka, and in a medical college in the country's northern region. [12] Chan observed that about half of the medical students in Hong Kong who are Chinese are depressed. [11] Using the DASS instrument, a different study found that 39.4% of medical students suffer from depression.

[13] It's possible that this discrepancy results from the varying study settings, sample sizes, demographic features, depression assessment tools and cutoffs, and medical curricula in these nations. Our study revealed that the respondents' social relationships with their parents and friends deteriorated as their levels of depression rose, highlighting the need for medical educators to pay attention to creating stress-reduction strategies for their students while they are in medical school. According to this study, more men than women reported having anxiety, although women scored higher on depression.

According to this study's findings, which were in line with those of other studies, there were fewer depressed students in the third semester batch than in the senior batches. [2] According to our research, larger semester batches of students may have more depression symptoms as a result of information overload, a heavier exam load, and increased pressure to plan ahead and become a successful doctor with less time for leisure activities. The prevalence considerably rose as the study population grew. Another study, however, revealed that prevalence is noticeably greater among second-year medical students. [14]

Conclusion

Among medical students, depression and anxiety are very common. This study raises the possibility that there are other risk factors that can predispose a medical student to psychological morbidity, such as anxiety and depression, in addition to academic pressures. Therefore, this vulnerable population needs early screening and psychiatric counselling. The mental health status of the students we assessed showed a worrying picture. After this study, those whom we found to have probable depression were counselled and encouraged to meet counsellor & psychologist.

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