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Prevalence of stress, anxiety and depression amongst 1st year medical students in a medical college

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ABSTRACT

Introduction: There is a high psychological morbidity that is reported in undergraduate medical students. This can range from stress, anxiety, interpersonal problems, suicide to psychiatric disorders. The objective of our study was to assess the prevalence of depression, anxiety and stress amongst the first year undergraduate students in a medical college.

Materials and Methods: A cross sectional study was undertaken after approval from institutional ethical committee which included the 150 undergraduate medical students of 1^{st} year. A semi structured performa which included socio demographic profile was used along with Depression, Anxiety and Stress Scale (DASS 42) for assessment.

Results: Most of the participated students were females (57.5%). All of the students (100%) were residing in hostel and were unmarried. Stress was reported by majority (86.7%) of the students with few reporting low social support (7.3%). Single responses to causes of stress were in majority (74.6%). Prevalence of depression, anxiety and stress was 56%, 68.7% and 61.3% respectively.

Conclusion: A considerable number of undergraduate medical students are affected and suffer from anxiety, stress and depression. There is an urgent need to address the issue and give more attention towards mental health of students.

1. Introduction

As per the World Health Organisation mental health is an important aspect of our health. A person is diagnosed as having depression is he/she reports of low mood, decreased interest in pleasurable activities, disturbed sleep, agitation, fatigability, feelings of guilt, disturbed appetite and decreased concentration. [1,2] As per the American Psychological Association, anxiety and stress can be characterised by worrying thoughts, tension and physical changes. Where stress can be related to irritability and impatience and anxiety is related to situations, autonomic and muscular tensions. [3,4]

Medical education at undergraduate level is quite hectic and strenuous. It's a long duration curriculum of study and training lasting 5-6 years. The study is very dynamic owing to the evolving objectives and expanding knowledge. During this course of time period the students are required to obtain a good level of theoretical knowledge, skills, professional know how and a good attitude to able to deal with the highly competitive and professional life of being a doctor independently. The rigorous demands of medical education along with the training and learning can lead adverse effects on the mental and physical health of students. Significant psychological pressure and stress can be caused on medical undergraduate students as a

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result of the medical education.[5] Psychological comorbidity of a significant and considerable level has been reported amongst medical students with a range from interpersonal problems, stress and suicidal ideas to psychiatric disorders. Also in comparison with the general population the medical students seem to have higher levels of psychological distress.[6]

Medical education is challenging with lots to study and lots to learn along with acquiring the proficiency in attaining new skills to be a future doctor. Thus this study aims to know the levels of stress, anxiety and depression amongst the undergraduate 1^{st} year medical students of Gian Sagar Medical College.

This study aims to find the level of stress, anxiety and depression amongst 1^{st} year MBBS students in a medical college.

2. Materials and Methods

It is a cross sectional study that was conducted over a 1 month period. The sample size consisted of 150 undergraduate MBBS 1^{st} year students studying at Gian Sagar Medical College and Hospital. After taking approval from the institutional ethical committee, informed consent from participants was obtained for further assessment. 1^{st} year MBBS students from 18-23 year age group were included in the study. After taking consent students were given a semi structured performa to fill which included socio-demographic profile such as age, gender, residence, substance use and any past psychiatric illness history.

The second performa was the Depression, Anxiety and Stress Scale (DASS-42). This scale has 42 questions to assess the stress, anxiety and depression. This is a self-reporting instrument. DASS-42 has three components that are used to measure depression, anxiety and stress independently. Each one of items measures the frequency of symptoms in the past week on a 4-point scale, with a score of 0, 1, 2, and 3.

Scores can be determined by adding scores acquired for all of the relevant items. Based on summative scores, depression can be categorised as normal (0–9), mild (10–13), moderate (14–20), severe (21–27), and extreme (28+). Similarly, anxiety can be categorised as normal (0–7), mild (8–9), moderate (10–14), severe (15–19), and extreme (20+). Similarly stress can be categorised as normal (0-14), mild (15-18), moderate (19-25), severe (26-33) and extremely severe (34+). The cut-off scores from the results collected for anxiety stress and depression were evaluated using DASS scale that have been previously validated (7).

The data was compiled systematically and then subjected to statistical analysis. All the Data Analysis was done using SPSS (Statistical Package for the Social Sciences) version 23.0 IBM.

3. Results

Table 1: Socio-demographic profile of respondents (n = 150)

Variable	Number (N)	Percentage (%)
Gender		
Male	64	42.7
Female	86	57.3
Age(in years)		
18-20	134	89.3
21-23	16	10.7
Residence		
Hostel	150	100
Non hostel	0	0
Marital status		
Unmarried	150	100
Married	0	0
Substance Use		
Yes	2	1.3
No	148	98.7
History of psychiatric illness		
Yes	12	8
No	138	92
Family History of psychiatric illness		
Yes	15	10
No	135	90
Social Support		
Good	64	42.7
Intermediate	75	50
Low	11	7.3
Stress		
Yes	130	86.7
No	20	13.3

Total of 150 first year undergraduate MBBS students studying in a medical college participated in this study. The students were provided with the DASS 42 scale and a semi structured questionnaire, the results of the socio demographic profile of the participants is shown in Table 1 . The majority of the participants in the study were females (57.3%). Most of the participants involved were of the age group between 18-20 years (89.3%) and all of them were unmarried (100%). All of the participants were residing in the hostel (100%). Majority of the participants had never used any substance (98.7%) with a few reporting any substance use (1.3%). Out of the 150, 8% reported having history of any prior psychiatric illness whereas 92 % had no prior history of psychiatric illness. Family history of psychiatric illness was reported only in 10% with 90 % reporting as having none. Out of the 150, 50% reported intermediate social support, 42.7% reported good social support and 7.3% reported low social support. Majority reported to having stress (86.7%).

The prevalence of stress, anxiety and depression in the undergraduate students is shown in Table 2. On the DASS 42 scale, prevalence of depression was reported to be 56% with the percentage of it being 16.7% mild, 16.7%

Table 4: Demonstrates single vs multi responses given by students

Responses	Single Response	130	86.7%
	Multi Responses	20	13.3%

Table 2: Prevalence of Stress, Anxiety and Depression in students (n=150)

Scale	Variables	Number (n)	Percentage (%)
DASS-D	Normal	66	44
	Mild	25	16.7
	Moderate	25	16.7
	Severe	17	11.3
	Extremely severe	17	11.3
DASS-A	Normal	47	31.3
	Mild	9	6
	Moderate	43	28.7
	Severe	28	18.7
	Extremely severe	23	15.3
DASS-S	Normal	58	38.7
	Mild	22	14.7
	Moderate	35	23.3
	Severe	23	15.3
	Extremely severe	12	8

moderate, 11.3% severe and 11.3% extremely severe. The prevalence of anxiety was 68.7% with percentage being 6% mild, 28.7% moderate, 18.7% severe and 15.3% extremely severe. The prevalence of stress was reported in 61.3% with 14.7% being mild, 23.3% moderate, 15.3% severe and 8% extremely severe.

Table 3: Causes of stress

Cause of Stress	Number (n)	Percentage (%)
No	20	13.3
Academics only	109	72.7
Familial only	1	0.7
Personal only	0	0
Academics + Familial	3	2
Academics+ Personal	13	8.7
Familial + Personal	0	0
Academics+ Personal + Familial	4	2.7
	150	100

Table 3 shows the reason and causes of stress amongst the students. While 13.3% had reported no stress, majority 72.7% had reported academics as the only reason of stress and 0.7% as only familial reason. Academics and familial combined were reported by 2%, academics and personal by 8.7% and all three academics, familial and personal by 2.7%. No responses were present for only personal or for familial and personal.

Table 4 shows that majority (86.7%) had single reason responses as compared to multi reasons responses (13.3).

4. Discussion

Our study of the undergraduate students showed the prevalence of depression, anxiety and stress to be 56%, 68.7% and 61.3% respectively. These findings were similar to the ones conducted by Irfa Naqshbandi et al. where the prevalence was found to be 40%, 50% and 37.5% for depression, anxiety and stress respectively.[7,8] Similarly a study conducted on medical students by Iqbal S et al. revealed prevalence of depression, anxiety and stress to be 51.3%, 66.9% and 53% respectively.[9] Similarly in a study done by Taneja N et al. it was seen that 60 (32.0%), 75 (40.1%), and 82 (43.8%) students were affected by depression, anxiety, and stress, respectively.[10] Another study conducted by Dr Subhrajyoti Naskar et al. showed prevalence of depression, anxiety and stress in medical students to be 57.15%, 64% and 62.86%.[11]

Stress amongst students may restrict their professional progress and development.[12,13] It can cause a detrimental effect on their academic performance and growth, this effect has increased during the pandemic.[14] It can further affect the patient care and safety. Most of the studies done on medical undergraduates suggest that they are affected by depression anxiety and stress.[15,16] There is a need to handle their stress and counsel them regarding the associated factors that may lead to stress in the life of a medical student.

The findings of this study have to be seen in light of some limitations. A larger study sample could be taken to see the prevalence of depression, anxiety and stress in undergraduate medical students. There is a lot of scope and a need to look into the mental health of medical students. A multi centric study can be conducted to assess the depression, anxiety and stress faced by the medical students in different regions. Further a study can be conducted amongst different professional study undergraduate students to foresee the difficulties they face and to assess their mental health issues.

We can conclude that further detailed studies need to be taken up in medical colleges to assess and determine the reasons, risk factors and conditions that can lead to depression, anxiety and stress in medical students.

5. Source of Funding

None.

6. Conflict of Interest

None.

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