Prevalence of Stress, Anxiety and Depression among Medical Undergraduate Students of Kashmir - A Cross-Sectional Study

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ABSTRACT

Introduction: Considerable degree of psychological morbidity has been reported among medical students ranging from stress, interpersonal problems and suicidal ideation to psychiatric disorders. The objective of this study was to determine the level of stress, anxiety and depression among medical undergraduate students of Government Medical College Srinagar using DASS-21 scale.

Material and methods: A cross-sectional study including undergraduate medical students was conducted after approval from instituitional ethical committee. Depression, Anxiety and Stress Scale (DASS-21) having 21 statements to assess the level of stress, anxiety and depression among participants was used. As there were no earlier estimates of prevalence of stress among medical students in Kashmir, so prevalence of 50% was assumed. With 95% confidence limits and 5 % non-response rate, sample size of 403 was calculated. After obtaining informed consent, 400 students were included in the study. The data was entered into Microsoft Excel and descriptive statistics were obtained.

Results: Most of the students (55%) who participated in the study were females. About 67.5% were in the age-group of 17-19 years, mostly belonging to rural areas(77.5%). Students from all academic years participated with majority from 1st and 2nd years. Only 2.5% students had a single parent or were orphans with majority (75%) satisfied with their social life. About 25% were not satisfied with their academic performance. Prevalence of depression, anxiety and stress was found to be 40%,50% and 37.5% respectively in medical students.

Conclusion: A substantial proportion of medical students are suffering from stress, anxiety and depression revealing their mental health issues which require urgent attention.

Keywords: Anxiety, Depression, Medical, Students, Stress, Undergraduates, Kashmir

INTRODUCTION

Mental health is regarded as an essential component of health by the World Health Organization. A person could be termed depressed if he/she shows a variable combination of low mood; loss of interest or pleasure; feelings of guilt; low self esteem; disturbed appetite; disturbed sleep; or disturbed concentration.[1] The American Psychological Association characterizes anxiety and stress[2,3] by feelings of tension, worried thoughts, and physical changes. Anxiety is more related to autonomic arousal, skeletal muscle tension, and situational aspects, whereas stress is more related to irritability, impatience, and difficulty in relaxing.

Undergraduate medical education comprises strenuous study and training for 5–6 years. The curricular objectives are dynamic due to expanding knowledge and evolving therapies. During this period, medical students should acquire adequate professional knowledge, skill, and attitudes in order to prepare themselves to deal with lifelong professional challenges independently. However, the demands of the learning and training might adversely affect the student's physical and mental health. Medical education can impose significant psychological stress on undergraduates.[4] Considerable degree of psychological morbidity has been reported among medical students ranging from stress, interpersonal problems and suicidal ideation to psychiatric disorders and they tend to have greater psychological distress than the general population.[5]

Therefore, this study was aimed to know about the level of stress, anxiety and depression among medical undergraduate students of one of the premier medical colleges of the state i.e. Government Medical College Srinagar. As no such study had been done till date, so this would definitely give us an idea regarding the mental health of our future doctors. The objective of this study was to determine the level of stress, anxiety and depression among medical undergraduate students of Government Medical College Srinagar using Depression, Anxiety and Stress Scale (DASS-21).

MATERIAL AND METHODS

The study was a cross-sectional study conducted over a period of 2 months i.e. February 2017-March2017 .The study participants included undergraduate students of Government Medical College Srinagar.

Statistical Methodology: As there were no earlier estimates of prevalence of stress among medical students in Kashmir, so prevalence of 50% was assumed. With 95% confidence limits and 5 % non-response rate, sample size of 403 was calculated.

After approval from the instituitional ethical committee, the data was collected using a pretested semi-structured

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questionnaire. After implied and verbal consent from the participants, about 400 students were included in the study. The questionnaire used for the study had 2 sections.The first section had questions related to socio-demographic profile such as gender, age, residence, religion, academic years, social life, place of stay, academic performance, parental status and smoking history. The second section included Depression, Anxiety and Stress Scale (DASS-21) having 21 statements to assess the level of stress, anxiety and depression among participants. The DASS- 21 is a 21 item self report questionnaire designed to measure the severity of a range of symptoms common to both Depression and Anxiety. In completing the DASS, the individual is required to indicate the presence of a symptom over the previous week. Each item is scored from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time over the past week).[6] The essential function of the DASS is to assess the severity of the core symptoms of Depression, Anxiety and Stress. Accordingly, the DASS allows not only a way to measure the severity of a patient's symptoms but a means by which a patient's response to treatment can also be measured. The scale to which each item belongs is indicated by the letters D (Depression), A (Anxiety) and S (Stress). For each scale (D, A and S) sum the scores for identified items. Because the DASS- 21 is a short form version of the DASS (the Long Form has 42 items), the final score of each item groups (Depression, Anxiety and Stress) needs to be multiplied by two (x2).[7] The minimum score is zero and the maximum score is 42. The final score of DASS can be categorized as in Table 2. Studies have shown that the DASS-21 score have validity in the measurement of the degree of depression, anxiety and stress in the person. It also has high reliability in terms of usage in a clinical and non-clinical setting.[8,9] The data was entered into Microsoft Excel and descriptive statistics were obtained.

Variable	Number(N)	Percentage(%)
Gender		
Male	180	45
Female	220	55
Age(in years)		
17-19	270	67.5
20-22	130	32.5
Residence		
Rural	310	77.5
Urban	90	22.5
Religion		
Islam	360	90
Hinduism	38	9.5
Buddhism	2	0.5
Academic years		
First	130	32.5
Second	100	25
Third	80	20
Fourth	90	22.5
Place of stay		
Hostel	310	77.5
Home	90	22.5
Parental status		
Married	390	97.5
Orphan/ single parent	10	2.5
Smoking		
Yes	50	12.5
No	350	87.5
Academic performance Satisfied		
Yes	280	70
No	100	25
Not sure	20	5
Social life Satisfied		
Yes	300	75
No	75	23.75
Not sure	25	6.25

Table-1: Socio-demographic profile of respondents (n = 400)

RESULTS

A total of 400 undergraduate students of Government Medical College Srinagar participated in the study. Table 1 shows socio-demograhic profile of participants. Most of the students (55%) who participated in the study were females. About 67.5% were in the age-group of 17-19 years, mostly belonging to rural areas (77.5%)and more than two-thirds were hosteliers. About 90% of participants were Muslims by religion, 9.5% Hindus and 0.5% were Buddhists. Students from all academic years participated with majority from 1st and 2nd years. Only 2.5% students had a single parent or were orphans with majority (75%) satisfied with their social life. About 25% were not satisfied with their academic

Severity	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	28+	20+	34+

Table-2: DASS-21 severity score

Variables	Number(n)	Percentage(%)
Depression		
Normal	240	60
Mild	60	15
Moderate	88	22
Severe	12	3
Extremely severe	0	0
Anxiety		
Normal	200	50
Mild	150	37.5
Moderate	40	10
Severe	8	2
Extremely severe	2	0.5
Stress		
Normal	250	62.5
Mild	110	27.5
Moderate	30	7.5
Severe	7	1.75
Extremely severe	3	0.75

Table-3: Prevalence of Depression, Anxiety and Stress among undergraduates (n=400)

performance. Out of 400 students, 50 were smokers and all smokers were males.

Table 2 shows DASS-21 severity score as explained earlier. Table 3 shows the prevalence of stress, anxiety and depression in undergraduate medical students. The prevalence of depression was found to be 40% with majority (27%) having mild and moderate depression. The prevalence of anxiety and stress in students was 50% and 37.5% respectively. However, out of 400 students, 12 students had severe depression.

DISCUSSION

In our study, the prevalence of depression, anxiety and stress was found to be 40%,50% and 37.5% respectively in medical students of Government Medical College Srinagar. Similarly, a study from Orissa reveals a high prevalence of psychiatric morbidities in medical students with prevalence of depression, anxiety and stress as 51.3%, 66.9% and 53% respectively.[10] A study by Nasir etal . from Saudi Arabia also shows presence of mental illnesses in medical students with prevalence of depression, anxiety and stress as 43%, 63% and 41% respectively.[11]

The strength of the study is that it is one of the few studies in Kashmir which gives us an idea about burden of mental health disorders in medical undergraduate students i.e. our future doctors. The generalisability of study findings is limited as it involves only one medical school of Kashmir. Furthermore, detailed study in all medical colleges of state needs to be carried out to determine the risk factors associated with stress, anxiety and depression in medical students.

CONCLUSION

A substantial proportion of medical students are suffering from stress, anxiety and depression revealing their mental health issues which require urgent attention. Students counselling services need to be made available in medical colleges. Further studies need to be conducted in future to identify socio-demographic factors and other factors related to academic curriculum in medical colleges so that remedial measures can be suggested at an earliest, otherwise not only medical fraternity will suffer but also society would be affected on a large scale.

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