

Study of Incidence of Depression, Anxiety and Stress Among the First Year Medical Students in Government Medical College

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Abstract

To study the incidence of depression, anxiety and stress in first year MBBS students of government medical college Jammu. Materials and Methods: the study was conducted on 120 first year MBBS students of Govt. Medical College Jammu after informed consent and ethical clearance. All of them were asked to fill DASS - 21 questionnaire without disclosing their identity. Only 118 students responded by filling up the form. The DASS - 21 questionnaire forms so obtained were analyzed, statistically and tabulated. The mean scores for depression was 6.66 ± 5.82 , (range-0.00-21), Anxiety was 5.16 ± 3.79 (range-0.00-19.00) and stress was 7.88 ± 5.03 (range-0.00-21). The scores are more in male hostler and student less than 19 years of age. Medical studies are highly demanding and cause stress, depression and anxiety to medical students and so should be rescheduled and made student friendly

Key Words

Medical students, Depression, Anxiety, Stress, DASS.

Introduction

Mental health is regarded as an essential component of health by WHO as depression occurs across the globe and affects an estimated 350 Million people. Suicide which is the worst complication of depression is the second most common cause of death among the individuals aged 15-29 years (1). The American Psychological Association characterizes anxiety and stress by feelings of tension, worried thoughts and physical change (2, 3). A person could be termed depressed if he/she shows a variable combination of low mood, loss of interest or pleasures, feelings of guilt, low self esteem, disturbed appetite, disturbed sleep; or disturbed concentration (4)

Medical Education is perceived as being stressful, as it is characterized by many psychological changes in students. Studies have shown that medical students experience high level of stress during their undergraduate course and this may have a negative effect on cognitive

functioning and learning of students in medical college (5). Demands of learning and training might adversely affect the student's physical and mental health. So student constantly suffer from depression anxiety and stress (6). It has been reported that healthy students develop depression and stress after commencing their medical education (7).

Results of studies suggest that mental health worsens after students begin medical school and remain poor thought training (8). Stress during medical college can lead to problems later in professional life compromising patient care (9). Stress has been reportedly associated with anxiety depression and psychological symptoms having a negative impact on student's academic performance (10)

The hectic schedule, course burden and ancillary courses are being considered as potential reasons for the

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psychological pressure. This led us to design the present study to explore the mental health status in our students and to provide baseline data to take initiative for future studies and for authorities to safeguard the well being of future GMC Jammu Doctors.

Materials and Methods

A cross sectional questionnaires based study was conducted in 118 students of first prof including MBBS and BDS students of GMC Jammu. The response was sought in self reported, anonymous fashion. All participants were included after verbal informed consent. Depression, anxiety and stress were assessed using DASS - 21 questionnaires. The students were given printed, written information and procedure of DASS - 21 questionnaires. The identity of students was undisclosed and no signature of participants was necessary.

The ethical approval was obtained from intuitional ethical committee.

Results

A total of 118, First year MBBS students responded to the survey questionnaire and were included in the study. The mean age of the study subjects was $18.83 \pm .77$ years (range 17-22 years). 53 males (44.9%) and 65 female (55.1%) students participated in the study. 51.7% students were staying in hostels and 48.3% were day scholars.

Table 1 shows that approximately two third of the students were normal. 3.4% students showed severe depression and anxiety and the rest had mild to moderate depression and anxiety.

The mean scores for Depression in the study group was 6.66 ± 5.82 (Range-0.00 to 21), Anxiety 5.16 ± 3.79 (Range-0.00 to 19.00) and Stress 7.88 ± 5.03 (Range-0.00 to 21). Table 2 shows that mean scores for Depression, Anxiety and Stress were more among male students as compared to female students although this difference in scores was not statistically significant ($p > 0.05$) for all the three variables studied.

Table 3 shows that scores of Depression, Anxiety and Stress were more in hoteliers as compared to day scholars. There was a statistically significant difference in Stress scores of the two groups ($t=2.10, p=0.037$)

Table 1: Distribution of study population for different levels of severity of Depression, Anxiety and Stress.

Variable	No	%
Depression		
Normal	87	73.7
Mild	12	10.2
Moderate	15	12.7
Severe	4	3.4
Extremely severe	0	0.0
Anxiety		
Normal	87	73.7
Mild	16	13.6
Moderate	11	9.3
Severe	4	3.4
Extremely severe	0	0.0
Stress		
Normal	100	84.7
Mild	17	14.4
Moderate	1	0.8
Severe	0	0.0
Extremely severe	0	0.0

Table 2: Mean difference in Depression, Anxiety and Stress scores among different sexes

	Males n=53	Female n=65	t	p
Depression scores Mean \pm SD	7.15 ± 6.12	6.26 ± 5.59	0.823	0.412
Anxiety scores Mean \pm SD	5.22 ± 4.11	5.12 ± 3.55	0.146	0.884
Stress scores Mean \pm SD	8.16 ± 4.81	7.66 ± 5.22	0.544	0.587

Table 3: Mean difference in Depression, Anxiety and Stress scores among students staying in hostels and day scholars.

	Hoteliers n=61	Day scholars n= 57	t	p
Depression scores Mean ±SD	7.03±5.77	6.26±5.59	0.821	0.476
Anxiety scores Mean ±SD	5.26 ± 3.52	5.07±4.10	0.444	0.785
Stress scores Mean ±SD	8.81±5.12	6.89±4.77	2.10	0.037*

*statistically significant ($p < 0.05$)

Table 4: Mean difference in Depression Anxiety and Stress scores among students of different sexes staying in hostels and day scholars.

Variable	Hoteliers	Day scholars	t	p
Males				
Depression scores Mean ±SD	7.08±6.01	7.27±6.50	-0.107	0.915
Anxiety scores Mean ±SD	5.17±3.92	5.33±4.57	-0.134	0.894
Stress scores Mean ±SD	8.22±4.83	8.05±4.92	0.123	0.903
Females				
Depression scores Mean ±SD	6.96 ± 5.55	5.79±5.64	0.821	0.415
Anxiety scores Mean ±SD	5.38±2.96	4.94±3.92	0.481	0.632
Stress scores Mean ±SD	9.61±5.49	6.35±4.66	2.56	0.013*

*statistically significant ($p < 0.05$)

where as scores of Depression and Anxiety did not show any statistically significant difference among the two groups.

Among males 35 were staying in hostel and 18 were day scholars and among females 26 were staying in hostels and 39 were day scholars. Among males Depression and Anxiety scores were slightly more in day scholars although no statistically significant difference was observed. Female students staying in hostels had significantly high scores for stress as compared to day scholars ($p < 0.05$) (Table 4).

Table 5 shows that students of ages less than 19 years had more scores of Depression and Stress as compared to those of other age groups and this difference was statistically significant ($p = 0.004$ & 0.18)

Table 5: Mean difference in Depression, Anxiety and Stress scores among students of different age groups using Anova.

Variables	<19years (n=38)	19years (n=62)	>19years (n=18)	F	p
Depression scores Mean ±SD	9.21±6.76	5.41±4.91	5.55±5.10	5.84	0.004*
Anxiety scores Mean ±SD	5.47±3.83	5.17±3.97	4.50±3.14	0.397	0.673
Stress scores Mean ±SD	9.73±5.24	7.17±4.85	6.44±4.25	4.13	0.018*

*statistically significant ($p < 0.05$)

Discussion

Depression, anxiety and stress have become significant issues in medical students. The tough medical course and tight schedule is the underlining cause. The prevalence of emotional diseases is more common in medical students as compare to other university students (11).

In the present study 120 students were given DASS -

21 questionnaire, out of which only 118 responded and 2 students did not fill it. All the students were in age group of 17-21 years. Amongst them 60 students were 19 years old, 32 were 18 years old, 17 were 20 years old and 2 each were 17 and 22 years old.

In the present study 73.7% of the students had no depression or anxiety and 84.7% has no stress. Mild and moderate levels of depression, anxiety and stress were seen in less than 14.5% of the students. Only 3.4% of the students have severe depression and anxiety but severe form of stress was not reported in our study (table-1).

The result of our study are much less than previous study Bulent et al (12) where mild and moderate level of depression were seen in 30.5% and severe depression were seen in 8.5% of students. Mild and moderate anxiety and stress were present in 35.8% of the students in the same study.

Higher incidence of depression is reported by authors like Sedana et al (13) and Aghakhani et al (14) where it is 29.1% and 52.6% respectively. Some authors like Goebert D et al (15) found range of depression between 14- 24 %. These scores are closer to the present study.

We also observed the incidence of depression, anxiety and stress more in males as compared to females, although it was statistically insignificant (table 2). This is not in accordance with researchers like Al-Nagger RA (16) & Maureen et al (17) who found higher levels of depression among females students.

Higher prevalence in males is seen in some previous students like Vaz et al (18). However in some studies like that of Silva et al (19) no sexual dimorphism was seen. More incidences in females in present study may be because of them being more emotional and more inclined to decrease their emotional state. Our study revealed that the scores of depression, anxiety and stress is related to the living conditions of the students that is the scores are more in hostel dwellers than day scholars (table-3). This is in accordance to study of Kulsoom b and Afsar NA (20) Who found the level of depression,

anxiety and stress more in students who lived alone though it was not statistically significant? In the present study the stress scores were statistically significant but the scores of depression and anxiety were not statistically significant. Female students staying in hostel had a significantly high score for stress as compared to day scholars (table 4) like Kulsoom B & Afsar NA (20) have the same observation.

In the present study the scores of depression and stress were more in students who were less than 19 years of age. This difference was also statistically significant (table 5). This is not in agreement to Kunwer D et al (21) who found no association of depression, Anxiety and Stress with age.

Authors like Dahlem et al (5) inferred that first year MBBS students were more liable to undergo depression, anxiety and stress as compared to 2nd, 3rd and 4th year MBBS students. This observation goes hand in hand with our study in which we found that younger age are more susceptible to emotional pressure. Workers like Bulent et al (12) also found that depression with increasing years.

Conclusion

Medical students undergo a certain level of depression, anxiety and stress during their course. This is dependent on sex (more in females) living conditions (more in students staying in hostels than day scholars) and age (more in younger age groups). The burden of tough course and busy schedule are the root causes of depression, anxiety and stress. A student friendly and humanitarian approach in medical education can decrease the number of emotional diseases. This would be beneficial for complete health of future Doctors and the community on a large scale.

References

1. Roberts LW, Warner TD & Trumpower D. Medical students evolving perspectives on their personal health care: clinical and educational implications of a longitudinal study. *Compr Psychiatry*. 2004,
2. Anxiety [webpage on the internet]. American psychological association. Available from: <http://www.apa.org/topics/anxiety/index.aspx>.

3. stress [webpage on the internet]. American psychological association. Available from: <http://www.apa.org/topics/stress/>.
4. Marcus M, Yasmay MT, Ommeren MV, Chisolm D, Saxena S. Depression, A global public health concern. Geneva: World Health Organisation. Available from: www.who.int/mental_health/management/depression/who_paper_depression_wfmh_2012.pdf.
5. Dahlin M, Joneborg N, Runeson B. Stress and depression among medical students: a cross sectional study. *Med Educ.* 2005, 39, 594-604.
6. Henning K, Ey S, Shaw D. Perfectionism, the imposter phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Med Educ.* 1998, 32, 456-464.
7. Yousoff MS, Rahim AFA, Baba AA, Ismail SB, Mat Pa MN and Esa AR. The impact of medical education on psychological health of students: a cohort study. *Psychol Health Med.* 2013, 18, 420-30.
8. Rosal MC, Ockene IS, Ockene JK, Barret SV, Ma Y and Hebert JR. a longitudinal study of students depression at one medical college. *Acad Med.* 1997, 72, 542-6.
9. Jadoon NA, Yaqoob R, Raja A, Shehzad MA and Zeshan SC. Anxiety and depression among medical students: A crosssectional study. *J Pak Med Assoc.* 2010, 60(8), 699-702.
10. Elias H, Ping WS and Abdullah MC. Stress and academic achievement among undergraduate students in university Putra Malayasia. *Proc Soc Behav Sci.* 2011, 29, 646-655.
11. Khan MS, Mahmood S, Badshah A, Ali SU and Jamal Y. prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. *J Pak Med Assoc.* 2006, 56, 583-6.
12. Bulent E, Alis O and Nazan B. depression and anxiety among medical students: examining scores of the beck depression and anxiety inventory and the depression anxiety and stress scale with student characteristics. *Cogent Psych.* 2017, 4, 1-12.
13. Sidana S, Kishore J, Ghosh V, Gulati D, Jiloha RC and Anand T. Prevalence of depression in students of a medical college in New Delhi: A cross-sectional study. *Australas Med J.* 2012, 5(5), 247-50.
14. Agakhani N, Sharif-Nia H, Eghtedar PS, Jasemi M and Zadeh MM. Prevalence of depression among students of Urmia University of Medical sciences (Iran). *Iranian J Psy Behav Sc.* 2011, 5, 131-35.
15. Goebert D, Thompson D, Takeshita J, Beach C, Bryson P, Ephgrave K and Tate J. Depressive symptoms in medical students and residents: A multischool study. *Academic Med.* 2009, 84, 236-41.
16. Al-Naggar RA. Prevalance and associated factors of phobia and social anxiety among university students. *Asean J Psych.* 2012, 13(2), 263-6.
17. Maureen O, Talukdar D, Sanchez R, Obaleye AO and Medavarapu S. Prevalance of clinical depression among medical students and medical professionals: A systemic review study. *Arc Med.*
18. Vaz RF, Mbajiorgu EF, Acuda SW. A preliminary study of stress levels among first year medical students at the university of Zimbabwe. *Cent Afr J Med.* 1998, 44, 214-19.
19. Silva V, Costa P, Pereira I, Faria R, Salgueira AP, Costa MJ, Sousa N, Cerqueira JJ and Morgada P. Depression in medical students: insights from a longitudinal study. *BMC Med Edu.* 2017, 17, 184, 1-9.
20. Kulsoom B and Afsar NA. Stress, anxiety and depression among medical students in a multiethnic setting. *Neuro Psycth Dis Treatment.* 2015, 11, 1713-22.
21. Kunwar D, Risal A and Koirala S. Study of depression, anxiety and stress among the medical students in two medical colleges of Nepal. *Kathmandu Univ Med J.* 2016, 53(1), 22-6.