Original Research Article

A Study to assess Depression levels in MBBS Students

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ABSTRACT

Background and Objectives: Medical education can be quite stressful and studies all over the world have consistently shown a high prevalence of depression in medical students. In India, the prevalence of depression was around 39%. It was observed that the prevalence of provisionally diagnosed depressive disorder and major depressive disorder in medical students was 21.5% and 7.6%, respectively. Our plan is to assess the depression level in the students and according treatment will be given

Methods: The study duration of this project was 18 months. The data for this study has been collected from I year, II year and III year medical students of MIMER Medical College and B.S.T.R.H, Talegaon Dabhade. The Study design and Set-up was a cross-sectional, questionnaire-based study. Using stratified random sampling, 200 students were selected who agreed to volunteer in the project.

Results: In our study, the prevalence of depression was found to be more in 1st year than the 2nd and 3rd year. This finding could be due to students' just entering medical college after high school. The other causes maybe language problem, vast syllabus, fear of failure, tight schedule and tough topics.

Conclusion: Interaction between students and faculties should be encouraged so that the signs of stress can be detected and addressed at the earliest. Prevention strategies should take into considerations the wide variety of factors that are inducing stress among students.

Keywords: Depression, stress, MBBS students.

INTRODUCTION

Depression is one of the four major diseases in the world and is the most common cause of disability from diseases [1]. It causes severe symptoms that affect how you feel, think and handle daily activities, such as sleeping, eating, or working. To be diagnosed as depression, the symptoms must be present for at least two weeks. Some forms of depression are slightly different, or they may develop under unique circumstances, such as:

1. **Persistent depressive disorder** is a depressed mood that lasts for at least 2 years
2. **Perinatal depression** is characterized by relatively mild depressive and anxiety symptoms that typically clear within two weeks after the delivery.
3. **Seasonal affective disorder** is onset of depression with seasonal variation.
4. **Bipolar disorder** is characterized by episodes of extremely low moods followed by extreme high-euphoric state called "mania" [2].

Depression has been varied from 1.7 to 74 per thousand population, and widespread problem across the country [3]. College students are exclusive group of people that are enduring a critical transitory period in which they're going from adolescence to adulthood and can be one of the most stressful times in a person's life [4]. The major cause of anxiety can be due to reasons such as trying to fit in, maintain good grades,

plan, and being away from home [5]. As a reaction to this stress, some students get depressed. They find that they cannot get themselves together. They may cry all the time, skip classes, or isolate themselves without realizing they're depressed [6].

The report on Global Burden of Disease estimates the point prevalence of the unipolar depressive episodes to be 1.9% for men and 3.2% for women and the one-year prevalence is estimated to be 5.8% for men and 9.5% for women. It estimated that by the year 2020 the burden of depression will increase to 5.7% of the total burden of the disease if the current trends for demographic and epidemiological transition continue. It would then be the 2nd leading cause of disability- adjusted life years (DALYs), second only to ischemic heart disease [7].

Depression among medical students is extremely prevalent. Medical students are confronted with significant academic, psychological and existential stressors [8]. Consequently, prevalence of depression is higher in medical students compared to general population. It has been observed that mental health worsens after students begin medical school and remain poor throughout training. On a personal level, this distress can contribute to substance abuse, broken relationships, suicide and attrition from the profession. On a professional level, study suggests that student distress contributes to cynicism and subsequently may affect students' care of patients, relationship with faculty and ultimately the culture of medical profession [9].

Medical education can be quite stressful and studies all over the world have consistently shown a high prevalence of depression in medical students [10]. In India, the prevalence of depression was around 39%. It was observed that the prevalence of provisionally diagnosed depressive disorder and major depressive disorder in medical students was 21.5% and 7.6%, respectively [11].

Academic performance had a significant association with depression in medical students. The stigma associated with poor academic performance may be a contributing factor. On the other hand, students with excellent academic performance maybe facing pressures due to the competitive nature of medical education [12].

It is also seen that Medical students are reluctant to seek help from mental health services. Although 14.7% students admitted having experienced depressive symptoms, only 4.7% had ever consulted a counselor [13]. In a prior study to find prevalence of depression and use of mental health services amongst medical students, it was seen that only 22% of depressed students were using mental health counseling services. The most frequently cited barriers to using these services were lack of time, lack of confidentiality, stigma associated with using mental health services, cost, fear of documentation on academic record, and fear of unwanted intervention. Our plan is to assess the depression level in the students and according treatment will be given [13].

METHODOLOGY

This Observational Question based Cross-Sectional Study was approved by institutional ethical committee (IEC). The study duration of this project was 18 months. The data for this study has been collected from I year, II year and III year medical students of MIMER Medical College and B.S.T.R.H, Talegaon Dabhade. The Study design and Set-up was a cross-sectional, questionnaire-based study. Using stratified random sampling, 200 students were selected who agreed to volunteer in the project.

Patient Health Questionnaire – 9 (PHQ-9)

This scale is used to measure the severity of depression along with the diagnosis of depression. It is a self-administered tool. Patient Health Questionnaire 9 is widely used in research and clinical practice to assess depression. It was derived from the original instrument viz., Primary Care Evaluation of Mental Disorders (PRIME-MD) The PHQ-9 contains 9 items. Each item has score ranging from 0 to 3 on the LIKERT scale. The TOTAL score is 27 [14]. The PHQ-9 has a sensitivity of 88% and a specificity of 88% for major depression when the cut-off score of 10 is taken [15].

Patient Health Questionnaire (PHQ-9), was used to make a provisional diagnosis of depression. It is a self-administered questionnaire which will assist in screening, evaluating and provisionally diagnosing depression. Based on the PHQ-9 Depression Score of each student, Mild depressive students were given

assisted counseling. Moderate to Severely depressive students were given treatment by the Department of Psychiatry, MIMER Medical College and B.S.T.R.H Talegaon (D)

Interpretation of Total Score

TOTAL SCORE	DEPRESSION SEVERITY
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately Severe depression
20-27	Severe depression

The total Study population was 200, out of which:
1st year medical students; between age group 17-19 years Total – 72.
2nd year medical students; between age group 18-20 years Total – 82.
3rd year medical students, between age group 21-22 years. Total – 46.

RESULTS

Table 1 – Gender wise distribution of students

Year	Male	Female	Total
1st	32	40	72
2nd	33	49	82
3rd	18	28	46

Table 2 – Prevalence of Depression amongst MBBS students
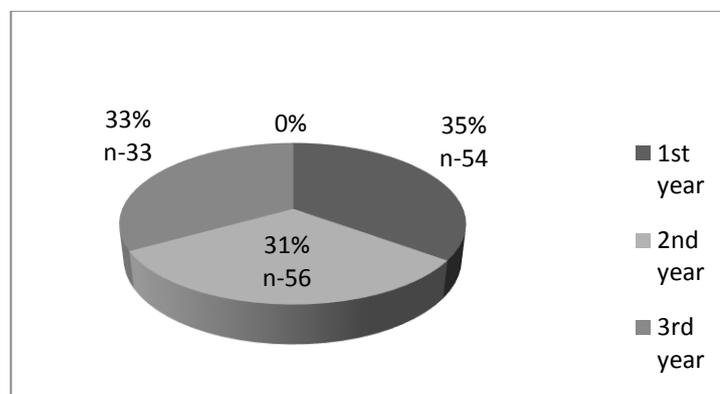
Table 3 – Depression severity amongst 1st, 2nd and 3rd year MBBS students

Year	Mild	Moderate	Moderate Severe	Severe
1st Year	26 (32.5%)	14 (31.11%)	5 (50%)	4 (50%)
2nd Year	41 (51.25%)	16 (35.56%)	3 (30%)	2 (25%)
3rd Year	13 (16.25%)	15 (33.33%)	2 (20%)	2 (25%)
Total	80	45	10	8
Percentage	40%	22.5%	5%	4%

DISCUSSION

Medical Education renders significant amount of stress to the students. The proportion of stress among MBBS students is different for different year. In this study also 31.5% of the medical students had substantial amount of stress which is comparable to the other studies conducted at Brazil (40.2%), Iran (44%) and Malaysia (41.9%) [16]. The substantial stress is estimated in those students whose PHQ-9 score is above 10. The severe stress was just 4%. Medical Students go through not only the stress imposed by medical education but also routine everyday life stressors which may explain the level of severe stress noted among medical students. This increased level of stress and consequently depression indicates a decrease of psychological health in our students which may impair students' behavior, diminish learning and ultimately affect patient care [17].

In our study prevalence of depression in 1st year versus 2nd year versus 3rd year is as following1st year:24.5%, 2nd year:31%, 3rd year:16%. In our study, the prevalence of depression was found to be more in 1st year than the 2nd and 3rd year. This finding could be due to students' just entering medical college after high school. The other causes maybe language problem, vast syllabus, fear of failure, tight schedule and tough topics. Medical Council of India also suggests foundation course of 2 months duration after admission to prepare a student to study medicine effectively. [18]. Also, it is seen that the prevalence of depression is lowest for 2nd year students. This is probably due to long span of the 2nd year and ample time for studies and to adjust with the surroundings. The prevalence of depression is 71% for 3rd year students which is more than 3rd year but less than 1st year. Generally, it is seen that as the prevalence of depression to be found less in the clinical years than the non-clinical years [19]. Both the first and third year students reported academic stress and hectic life cycle as their principal stress inducing factors. Even studies from India and Pakistan reported academic stress and exam as the most troublesome stressors. But in the done in the Britain, students did not report of overload as their major source of stress [20].

In our study prevalence of Depression in Male versus Female students is as following - Depressed females - 76%, Depressed male - 65%. Another finding of our study is that a gender difference regarding the association with depression was noted where female students reported a marginally higher prevalence of depression than in men. Other similar studies done by Davidson also report depression to be more in female students [21]. This gender Variation in depressive status in medical students could be reflection of usual trend of high prevalence of depression in females as in general population [22]. The finding of similar female: male prevalence ratios in developed countries and globally suggests that the differential risk may primarily stem from biological sex differences and depend less on race, culture, diet, education and numerous other potential social and economic factors [23].

In our study the prevalence of Depression in Hostelite versus Localite is as following i.e. Hostelite - 70% and Localite - 73%. Hostelite- The students residing in the hostel and Localite – The students residing in the nearby locality in rented apartments or those living in their respective homes. It is noted that localities have slightly higher prevalence of depression than that of the hostelites. The probable reason maybe the transport through local trains which is very hectic and tiresome. They miss out the jolly life of the hostelites which can be the major reason of the higher prevalence of stress in them.

CONCLUSION

Interaction between students and faculties should be encouraged so that the signs of stress can be detected and addressed at the earliest. Prevention strategies should take into considerations the wide variety of factors that are inducing stress among students. Allowing flexible learning options in the curriculum may offer a variety of options including clinical electives, laboratory posting or community exposure in areas that students are not normally exposed as a part of regular curriculum. This can be the reason of low prevalence of depression in 2nd year students. This will also provide opportunity for students to do project, enhance self-directed learning, critical thinking and research abilities.it is possible that few students have already an inherent tendency of taking stress and their entry in MBBS course maybe be aggravating it. Such students should be identified by psychological screening tests at the time of their entry only. Compulsory recreation facilities should be provided within the campus for the students as it is proved that

inadequate social activity and impaired psychological health are interlinked and that leisure activities can reduce stress among students. Relaxing exercises, yoga and meditation should be studied to relieve stress among medical students

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