



ASSESSMENT OF DEPRESSION AMONG MEDICAL STUDENTS OF PRIVATE UNIVERSITY IN BHOPAL, INDIA

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ABSTRACT

Introduction: Medical students repeatedly experience different stresses which render them more vulnerable to psychological problems that may affect their emotional, psychosocial and physical health. Objectives of the study were to determine the prevalence of depression and associated factors leading to depression among medical students at People's University.

Method: This was a cross-sectional study conducted in Peoples University using Theoretical Depressive Experiences Questionnaire (TDEQ) there were 440 students participated in the study with duration of 1 month.

Results: The participation rate was 90% (396 students). The mean age of participants was 21 ± 2 years, and more than half (62% i.e. 246 students) were males. The prevalence of depression among students was 31 % (123 students).

Conclusions: Symptoms of moderate severity were the predominant among students with the studied psychological illnesses. A substantial proportion of medical students had ongoing psychiatric problems that were associated with multiple social, behavioural, and educational factors. Interventions addressing the mental health of medical students should be initiated.

Key words: Depression, medical students, psychological illnesses.

INTRODUCTION

Today, stress in medical education has become a global phenomenon. Young adulthood is characterized as an identity-forming period in which individuals experience social and physical changes, as well as various conflicts in emotional, behavioural, sexual, economic, academic, and social areas.¹ A number of studies have focused on the mental health of young medical students as medical school is considered to be a time of significant psychological distress for physicians in training.² Some aspects of training may have unintended negative effects on medical students'

mental and emotional health.³ These studies have reported high prevalence rates of psychiatric disorders, such as anxiety and depression, among medical students.^{1,4-6}

Several studies suggest a high prevalence of depression and anxiety among medical students with levels of overall psychological distress consistently higher than in the general population and age matched peers.^{7,8} In a study conducted in the UK, psychiatric morbidity was found in 16% cases, whereas prevalence rate of depression was found to be in the range of 14-24%.⁹ Similarly, in Turkish medical students, this

prevalence was calculated to be 21.9%.¹ In another study, 335 undergraduate Chinese medical students were assessed for depressive symptoms and nearly half of them were found to be depressed with 2% having severe depression.⁴ Anxiety and depression were found to be present in 70% and 60% according to two Pakistani studies respectively.^{5,6} Stressors specific to medical school for development of anxiety and depression were information and input overload, financial indebtedness, lack of leisure time and pressure of work and career choices.^{10,11} Associated non-academic risk factors for development of anxiety and depression were female gender,⁷ having family history of depression and anxiety,^{1,5} loss of close relative in past one year⁵ and substance abuse.^{5,12}

This study was, therefore, carried out to determine the prevalence of depression among all medical students at People's University and to identify their associated factors.

METHOD

The cross sectional study was carried out in the Medical College hostels of Peoples University, the study was conducted for the period of one month and sample size of 440 medical student were assess for mental status by using Theoretical Depressive Experiences Questionnaire (TDEQ).

A Predesigned and pretested structured proformas was prepared using Theoretical Depressive Experiences Questionnaire (TDEQ). Total 440 student were studied those who staying in the hostel. Out of 440 participants only 396 given consent for participation in the study, around 10% of student refuse to provide required information and withdraw himself. Thereafter motivational sessions were given to students irrespective of their participation in study. Theoretical Depressive Experiences Questionnaire (TDEQ). A wide range of different measures have been used for addressing psychological distress and depressive symptomatology among medical students. We used the TDEQ scale (Theoretical Depressive Experiences Questionnaire) as an instrument developed by Viglione and colleagues¹⁹. This instrument addresses the theoretical conceptualization of depressive typology proposed by Blatt (1974)²⁰ by analysing selected items on the Depressive Experiences Questionnaire (DEQ)²¹ in a 21 item modified version.²²

Principal component analysis of these 21 items revealed only 5 anaclitic items and 7 introjective items. Anaclitic depressive experience is characterised by discomfort and interpersonal separation, whereas Intro-jective depressive experience is characterised by negative self-evaluation with respect to self-imposed standards.

Anaclitic depression is marked by dependency, helplessness, fears of abandonment, and feelings of being lonely, weak, depleted and unloved. When threatened with loss, a person with anaclitic depression may cling to others or desperately search for a substitute. Introjective depression on the other hand is characterised by self-criticism, a sense of failure to live up to standards, guilt, inferiority and concerns about approval, recognition, and being unlovable.²²

The five possible responses for each question range from 'none of the time' to 'all of the time' and were scored from 1 to 5 respectively. All the questions were collated to obtain a total score. The total score was interpreted as follows: a score of less than 20 was considered not to represent depression of any level while a score of 20-24 represented mild depression, 25-29 represented moderate depression, and 30- 50 represented severe depression.

Study subjects: All the male and female medical students in the five academic years of the PCMS & RC, Bhopal including interns.

Collection of data: Completed questionnaires were collected two months before the examination period so that the actual examination stress and depression would not affect the responses of the students. Responses to additional questions relating to academic year, sources of depression, medical illness in the past four weeks, regularity in classes etc. were also collected. The students were allowed to respond in their own time and privacy. The participation in the study was entirely voluntary. Institutional ethical committee permission was obtained before conduction of the study and confidentiality of data was obtained by not mentioning the name of the subjects and informed consent.

RESULTS

In total, 396 (90%) of approximately 440 students participated in the study, their mean (\pm 2SD) age was 21 (\pm 2) years. The characteristics of the study subjects are shown in Table 1. The prevalence of depression of all levels was about 31%,

and the prevalence of severe and extremely severe depression was 6%. The proportion of male and female students who had depression was almost same (32% and 30% respectively) [$\chi^2=0.127$, $p >0.005$]. The prevalence of depression was the highest among the first-year students (41.5%), followed by the interns (37%), second year (34%), and forth-year (22%), and third-year students (19%). There was a highly significant association between the year of the study and the depression levels (χ^2 test=17.3, $p=0.002$). There was highly significant association also observed between the regularity of class attendance in the academic course (yes/no) and the level of depression among the students. The distribution of depression levels was significantly related to a student being either regular or irregular in attending the academic course work ($\chi^2=8.787$, $p=0.003$). (Table 1). Table 2 shows grading of depression among students according to TDEQ scales.⁷¹ students had mild depression.

Table 1: Distribution of depression among students according to study variables

Study Variable	Depression (N=396)		
	Present (n=123)(%)	Absent (n=273)(%)	χ^2 value; P value
Gender			
Male (n= 246)	78 (32)	168 (68)	0.127;
Female (n= 150)	45 (30)	105 (70)	>0.05
Year of study period			
First	49 (41.5)	69 (58.5)	17.3;
Second	11 (34)	21 (66)	0.002
Third	24 (19)	102 (81)	
Fourth	8 (22)	28 (780)	
Internship	31 (37)	53 (63)	
Regularity in attendance			
Yes	117 (34)	231 (66)	8.787;
No	6 (12.5)	42 (87.5)	0.003

Table 2: Grading of depression according to TDEQ scales among medical students

Category of Depression (n=396)	Number (n= 123) (%)	Chi-square, P value
Mild	71 (17.92)	$\chi^2 = 34.6$,
Moderate	28 (7.07)	$P=0.0005$
Severe	24 (6.06)	

DISCUSSION

A mild prevalence of depression among medical students is a cause of concern as it may impair behaviour of students, diminish learning, and ultimately affect patient care after their graduation. The overall prevalence of depression in the

study is seen in 31% of students which corresponds with 20.9 %¹³ and 21 %⁴ in two other studies. However, this percentage is quite low as compared to the findings of Khan et al. (70%) and Inam, et al. (60%).^{5,6} This could be either due to the different instruments used in other studies or it could be a real difference.

Depression was present in 123 (31%) of students which is in line with the findings of 39.9% in an Indian study.¹⁵ An interesting finding of the present study was that the level of depression decreased as the year of study progressed, then again increased after completion of studies and beginning of internship.

In many studies including this one, the presence of anxiety and depression was higher in first year medical students as compared to 3rd and 4th year medical students.^(5,6,16) The reason might be that stress is associated with a new study environment and greater degree of work load with obligations to succeed^{5,7,13}

This finding could be explained by many factors. First, that this is a cross-sectional and not a cohort study to be sure that the stress and depression is really decreasing in the study subjects. This finding could be just due to chance as the study shows the increase of depression in different groups and not the same student groups. Another explanation could be that the students may have been able to develop coping mechanisms with the help of the students’ support system. Also, usually low failure rates in later years of courses make students more confident and less depressed. Another factor could be that our medical education is free of charge for the students in the governmental medical colleges. In many countries, medical students are plagued by financial worries, which is an important cause of their stress.

The increased depression in internship might be due to stress of competitive exams and selection for future post-graduation courses to get better knowledge. Also, to get a secured job and established private practice as medical practitioner. Some students can also have depression of leaving the college and friends after a long study duration of five years.

The present study showed highly significant association of depression with regularity of attendance in the courses. However no gender difference was observed.

Female gender was significantly correlated with development of anxiety and depression in West-

ern studies which reported psychological distress higher among female students.^{1, 7} similarly, in the Pakistani study, such demographic variables did not affect the prevalence of anxiety and depression.⁶

The changes relating to becoming a medical student appear to have a significant impact on the psychological status of students during the first year in their study. Therefore, with early identification and effective psychological services, possible future illnesses may be prevented. As the study findings showed a high level of depression among the first-year and internship students, we suggest supporting them and taking care of this group by the student support system. This will also help them cope well with stress and depression in the later years. It is very important to target stress and depression prevention strategies at students who have any level of psychological depression to prevent the development of more serious conditions. Wellness and mental health programmes are also needed to help students make smooth transition between different learning environments with changing learning demands and a growing burden on their mental and physical capacity.

LIMITATIONS

This cross-sectional study was based on self-reported information provided by students. Therefore, there is some potential for reporting bias which may have occurred because of the respondents' interpretation of the questions or desire to report their emotions in a certain way or simply because of inaccuracies of responses. Another longitudinal study could be carried out with a cohort of students to investigate the levels of depression and stress among students in all the five years of undergraduate medical years and the associated factors.

CONCLUSIONS

Symptoms of mild to moderate severity of depression were the predominant among students with the studied psychological illnesses. The findings of the study suggest that the level of depression was not dependent on gender of students. The depression level in the initial three years of the course was higher than the last two years of the course. A substantial proportion of medical students had ongoing psychiatric problems that were associated with multiple social,

behavioural, and educational factors. The study finds had highly significant association between regularity of attendance in the course on one hand and the presence of depression on the other hand. The findings of high level of depression among the medical students in the initial years also suggest that, when students are admitted to the medical school, special care must be taken to find out obvious psychiatric problems or psychological stress among them.

RECOMMENDATION

Interventions addressing the mental health of medical students should be initiated, therefore, the depression among students of the People's University points to the need for establishing counselling and preventive mental health services as an integral part of routine clinical services being provided to the medical students.

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