

# RESEARCH AND REVIEWS: JOURNAL OF MEDICAL AND HEALTH SCIENCES

## Factors Associated With Depression among Adolescents.

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### Research Article

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#### ABSTRACT

Depression among medical students is an area of increasing concern worldwide. This study aimed to assess the prevalence of depression and its associated factors among medical and engineering students. A cross sectional study was conducted with a sample size of 1275 students (731 males and 544 females) studying in first, second, third and fourth years in both the colleges, during 2013. Depression was screened based on the data collected using a questionnaire prepared on the basis of a standardized depression scale with 21 items, Beck's Depression Inventory 1(BDI 1). The overall prevalence of depression was found to be 64.9%. Staying away from home, smoking, alcoholism, part time job and commitment were associated with depression among the study subjects. Depression is highly prevalent among students in this area. Our findings point to the importance of broad screening and psychiatric counseling of this vulnerable population.

#### INTRODUCTION

According to World Health Organization (WHO), depressive disorders are the fourth leading health problem in the world. Major depressive disorder is estimated to be the second disabling disease of mankind in 2020 [1, 2]. Recent studies have shown that greater than 20% of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression [3].

The period of youth is a time of contradictions when a person goes through many changes and experiences such as emotional, behavioral, sexual, economic, academic, and social, and as well as efforts of discovering one's identity with psychosocial and sexual maturation. During this period, the mental health of university youth constitutes one of the important components of social health.

Major depression often appears during the adolescent years, and early onset depression interferes with a child's psychological, social, and academic functioning, placing him or her at greater risk for problems such as substance abuse and suicidal behavior [4,5].

Depression is a syndrome characterized by a group of symptoms with changes in one's mood (sadness, guilt), behavior (isolation), thought and perception patterns (less concentration, less self-esteem), with physical complaints (sleep, hunger, sex) and high risk of suicide.

Depression occurs with people of genders, any age or social class. However, the first episode usually occurs during adolescence and early adulthood, and it is more common among women, especially due to hormone changes [6,7]. Recent studies have addressed genetics, molecular biology, as well as image, hormone and metabolism research with a view to finding etiologic explanations for this pathology [7,8].

The perceived burdens on an individual could independently influence mental health or could be conceptualized as stressors. In general, stress occurs when there are demands on an individual that exceed his or her coping capabilities.

Studies have found that 3-9% of teenagers meet criteria for depression at any one time, and at the end of adolescence, as many as 20% of teenagers report a lifetime prevalence of depression. Studies have found that 3-9% of teenagers meet criteria for depression at any one time, and at the end of adolescence, as many as 20% of teenagers report a lifetime prevalence of depression. Since this is the major problem among students which is leading to increased dropouts from studies & increased suicide rate among students, and Comparisons between medical students and students from other undergraduate training programs as to the existence of depressive and anxiety symptoms are scarce in numbers<sup>9</sup>, so we tried to evaluate some risk factors which may lead to depression, and the methods adopted by students to overcome when they are under stress & also tried to evaluate the mental status of 1275 Medical & Engineering students and compared the outcomes of our study between medical and engineering students in the month of may 2010 at Bellary by using "Beck's depression inventory" a 21 item instrument.

## METHODOLOGY

The intent of the study was to assess the prevalence of depression among medical and engineering students. The participants were selected randomly from the Vijayanagar Institute of Medical Sciences and from the Bellary Engineering College, medical and engineering colleges in the district of Bellary, Karnataka, respectively.

A cross sectional study was conducted with a sample size of 1275 students (731 males and 544 females) studying in first, second, third and fourth years in both the colleges, during 2013.

Depression was screened based on the data collected using a questionnaire prepared on the basis of a standardized depression scale with 21 items, Beck's Depression Inventory 1 (BDI 1), which includes factors like sadness, guilt feeling, suicidal ideation, changes in appetite and sleep pattern etc. It was designed to document a variety of depressive symptoms the individual experienced over the preceding two weeks. The reasons behind choosing a multiple-choice questionnaire (BDI) are to limit the responding time, and to elicit more specific and objective answers.

The permission for the study was obtained by making a petition prior to collecting data by contacting and receiving approval from the Principals of respective institutions. Questionnaires were distributed in a class at one-time, followed by a full explanation of the reasons for the implementation of the study. Participants were assured of the confidentiality of their responses and provided informed verbal consent. Signed consents were also taken from the respondents. Special attention was paid to ensure that the students clearly understand the instructions about answering the questionnaire. In addition, they were asked not to write their name or student number on the questionnaire in order to encourage them to provide more open and honest answers. The students were given enough time to complete and return BDI. The filled forms were collected in the same session. Repeated anonymous sampling was avoided to prevent duplicate sampling of individual participants.

## RESULTS

Table 1 gives the frequency of depression in study population of 1275 students, in which 827 (64.9%) were depressed and remaining 448 (35.1%) of them were without any depressive symptoms.

It was found that out of 552 students upto the age of 19 years, 337 (61.1%) of them were depressed and 215 (38.9%) of them were normal. among 723 students aged above 19 years, 490 (67.8%) of them showed depressive symptoms and 233 (32.2%) of them were showed no depressive symptoms.

Among 731 males it was found that 463 (63.3%) of them were depressed and 268 (36.7%) of them were without any depressive symptoms and among 544 females 364 (66.9%) of them were depressed and remaining 180 (33.1%) of them were normal.

The above table depicts the relation of occurrence of depression with residence. Out of 538 students residing in hostel, 304 (56.5%) students are depressed and 234 (43.5%) are normal. among 669 students residing in homes, 474 (70.9%) are depressed and 195 (29.1%) are normal. Major population of P.G. residents 21(72.4%) are depressed out of 29, whereas 8(27.6%) are normal. Among 39 students who

go for other residences like relatives home, etc., 28(71.8%) suffer from depression and 11(28.2%) are normal. Therefore, out of total study sample of 1275 students, 827(64.9%) are depressed and 448(35.1%) are normal.

The table describes that very small population of students (17) are involved in part-time jobs in which 11(64, 7%) have depressive symptoms and 6(35.3%) students are normal. Among total study sample of 1275, 1258 students are not involved in part-time job. Among these, 816(64.9%) have depressive disorder and 442(35.1%) are normal.

Depressive symptoms also stems from poor financial status. Among 330 students who have educational loans, 230(69.7%) students have depressive symptoms and remaining 100 (30.3%) students are normal. 945 students have no educational loans in which 597(63.2 %) students are depressed and 348(36.8%) students are not depressed. Therefore, students with low economic conditions are more prone to depressive disorder.

Love commitments has role in depression causation .Among 251 students who are committed with their respective boy/girlfriends, 183 (72.9%) students are depressed and 68(27.1%) students are not depressed. In spite majority of student population (1024) is not involved in commitments, 644(62.9%) students are depressed and 380(37.1%) are normal.

**Table 1: Depression and profile of students**

Variables	Frequency	Percentage
Depression		
Yes	827	64.9
No	448	35.1
Age		
Up to 19 years	337	61.1%
Above 19 years	490	67.8%
Gender		
Male	463	63.3%
Female	364	66.9%
Course		
Medical	76	29.6%
Engineering	751	73.8%
Residence		
Hostel	304	56.5%
Home	474	70.9%
P.G	21	72.4%
Others	28	71.8%
Part time job		
Yes	11	64.7%
No	816	64.9%
Education loan		
Yes	230	69.7%
No	597	63.2%
Commitment		
Yes	183	72.9%
No	644	62.9%
Smoking		
Yes	74	77.1%
No	753	63.9%
Alcohol		
Yes	93	76.9%
No	732	63.5%

The above table suggests that the habit of smoking stems for depression. Among total study sample of 1275, 96 students smoke, out of which 74 (77.1%) students developed depressive disorder and 22 smokers are normal. in spite 1179 students do not smoke, 753(63.9%) students are depressed and remaining 426 (36.1%) students are normal.

The table depicts occurrence of depressive symptoms in alcoholics and non alcoholics. Majority of students, 93 (76.9%) among 121 who intake alcohol develop depression while 28 (23.1%) students are

normal. whereas 1152 student do not take alcohol in which 732(63.5%) have developed depressive symptoms and remaining 420 non alcoholics are normal

## DISCUSSION

Our study found that 64.9% of students are depressed and the spectrum of depression revealed that 6.6% are in severe Depression Prevalence rates of depression are estimated to range from 15% to 66% in various studies <sup>[10,11,12]</sup>. Among Chinese medical students in Hong Kong found that around half of the medical students are depressed <sup>[12]</sup>. In contrast, a study done in Pakistan found that the prevalence rate varied from 49% to 66% among medical students <sup>[13]</sup>. Another study has shown that 39.4% of the medical students are depressed by using the instrument Depression Anxiety Stress Scale <sup>[14]</sup>. A study among adolescents in India showed the prevalence among college going girls as 29% <sup>[15]</sup>. Another study done in Iran among high school and Pre- University students found out that 34% of them were depressed according to cut- off score of BDI <sup>[15]</sup>.The present study has shown that the prevalence of depression is higher among medical students compared to the above studies.

## CONCLUSION

Screening for depression can help identify students who would benefit from additional supportive and coping strategies and resources.

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