Original Article

Depression and use of antidepressants among undergraduate medical students

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ABSTRACT

Background and Objectives: Depression is one of the most prevalent conditions worldwide. Medical students are known to be the victims of tremendous stress. The objective of this study was to assess the prevalence of depression and the use of antidepressants among undergraduate medical students.

Materials and Methods: A descriptive cross-sectional questionnaire based study was carried out among the undergraduate basic science medical students of first and second year of Janaki Medical College, Janakpurdham, from May 2021 to September 2021. Depression levels were assessed using Zung Depression Scale.

Results: Among 111 students 22% were depressed, 17.7% were depressed among first year students while 26.5% were depressed among second year students. 23.9% males and 17.5% females were depressed while only 5.4% were on antidepressant drugs. Both year students gave higher ratings to academic stress and financial problems as stressors.

Conclusion: The prevalence of depression was higher, seen especially in second year students. Therefore, there is a need for counseling services to them.

Keywords- Depression, Medical students, Zung Depression Scale.

INTRODUCTION

According to World Health Organization (WHO), depression occurs across the globe and affects an estimated 350 million people [1], and it was the second-most prevalent condition worldwide by 2020 [2]. Medical students are known to be the victims of tremendous mental stress [3]. Various stressors in the life of a medical student include homesickness, heavy workload, sleep deprivation, difficult patients, financial concerns, information overload and career planning [4]. These stressors often have a negative impact on the students' academic performance, physical health, and psychological well-being, making them more susceptible to depression [5, 6].

In recent years, depression has been recognized as a major morbidity in medical schools, and the various factors that have been seriously affecting their academic performance and quality of life have been appreciated [7]. The prevalence of depression

among private medical students, however, has been estimated to be 19% in USA [8], 49.1% in India [9], and 60% in Pakistan [10]. Although few studies have been carried out in different medical colleges of Nepal, there is paucity of studies in medical colleges of Terai region of Nepal. Therefore, the objectives of this study were designed to determine the prevalence of depression, its severity and some of the factors associated with it.

MATERIAL AND METHODS

Descriptive cross-sectional study design was adopted for this study. A total of 111 undergraduate medical students from first (14th batch) and second year (15th batch) of Janaki Medical College were enrolled for this study. The study was carried out for 5 months from May 2021 to September 2021. Ethical approval was taken before conducting the study (Ref: 23/2077-078). All the students were briefed about the purpose of study and informed consent was taken from them. A proforma was prepared as an instrument for data collection. The proforma contained questionnaire regarding personal data (age, sex, year, religion), Zung Depression Scale and stress inducing factors along with data related to the use of antidepressants. The questionnaire was distributed to the participants for data collection.

To assess the severity of depression, Zung Depression Scale was used, which consists of 20 item questionnaires (10 positive questions and 10 negative questions) with scores ranging from 1-4 (per item). Answers obtained were scored one to four for each question with total score of 20 to 80 [11]. A Score less than 50 was considered to represent a case with no depression while a score ≥50 was considered to represent a case with depression. The total score was determined by adding all the scores, less than 50 was considered normal while those ranging from 50-59, 60-69 and more than 70 was indicative of mild, moderate and severe depression respectively. The stress inducing factors that were selected were academic stress, home sickness, lack of leisure time, future concern, relationship disharmony and financial problems. Statistical analysis of entered data was done using SPSS statistical software version 20. p- value less than 0.05 was considered statistically significant.

RESULTS

A total of 111 students participated in the study, 62 (55.9%) from first year (batch-15) and 49 (44.1%) from second year (batch-14). Among them 64% were males and 36% were females. The mean age with standard deviation was 20.71±1.23 (Table-1).The origin of residence nearby college was 21.6% and outside college was 78.4%. Overall 22%

Table 1. Socio-demographic characteristics associated with depression among medical students (n = 111).

Characteristics	Total students , n=111(%)	Normal n=87, (%)	Depressed n=24, (%)	p-value
Age				
Mean ±SD	20.71±1.23	20.59±1.27	21.17±1.07	**0.042**
Gender				
Male	71(64.0)	54(76.1)	17(23.9)	0.453
Female	40(36.0)	33(82.5)	7(17.5)	
Religion				
Hindu	105(94.6)	83(79.0)	22(21.0)	0.474
Others(Muslim, Christian ,Buddhism)	6(5.4)	4(66.7)	2(33.3)	
Year of Education				
Second	49(44.1)	36(73.5)	13(26.5)	0.264
First	62(55.9)	51(82.3)	11(17.7)	
Origin of Residence				
Nearby College (Janakpurdham)	24(21.6)	72(82.8)	15(17.2)	**0.033**
Outside college (Other than Janakpurdham)	87(78.4)	15(62.5)	9(37.5)	

of the medical students were depressed. 23.9% of the male students were depressed which was higher than that of the females 17.5%. Second year students were found to be more depressed (26.5%) than the first year students (17.7%). 21% of the students were mildly depressed while 1% of them had moderate depression (Figure- 1).
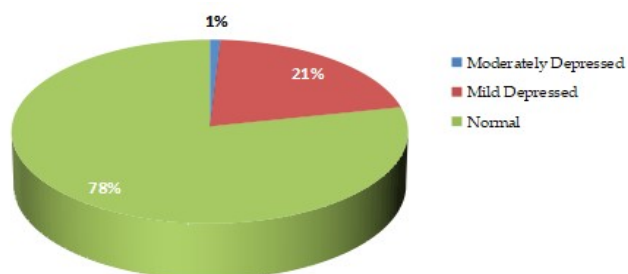
females were depressed in second year (Figure-2).

Figure-1: Level of Depression among medical students by Zung Self-Rating Depression Scale
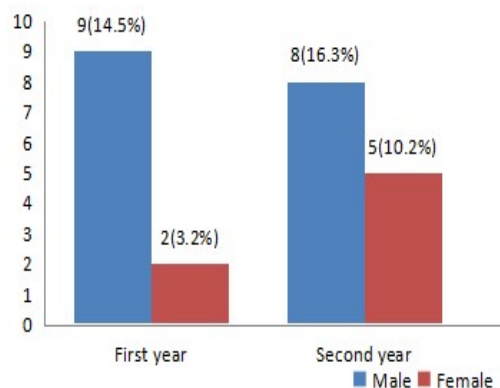
Figure-2: Prevalence of depression among medical students

The highest depression score among first year students while it was 65 in second year students out of 80. Among first year students, 14.5% males and 3.2% females were depressed while 16.3% males and 10.2%

The ratings given by first and second year students to different stressors are given in Table 2. Academic stress and financial problems were the major stressors (Figure 3)

Overall 5.4% students had taken

Table 2. Self-perceived behavior associated with depression among medical students (n = 111).

Characteristics	Total students , n=111 (%)	Normal n=87, (%)	Depressed n=24, (%)	p-value
Academic Stress				
No	17(15.3)	10(58.8)	7(41.2)	**0.033**
Yes	94(84.7)	77(81.9)	17(18.1)	
Home Sickness				
No	79(71.1)	63(79.7)	16(20.3)	0582
Yes	32(28.8)	24(75.0)	8(25.0)	
Lack of leisure time				
No	79(71.2)	60(75.9)	19(24.1)	0.329
Yes	32(28.8)	27(84.4)	5(15.6)	
Future concern				
No	41(36.9)	32(78.0)	9(22.0)	0.949
Yes	70(63.1)	55(78.6)	15(21.4)	
Relationship disharmony				
No	87(78.4)	69(79.3)	18(20.7)	0.650
Yes	24(21.6)	18(75.0)	6(25.0)	
Financial problems				
No	91(82.0)	75(82.4)	16(17.6)	**0.027**
Yes	20(18.0)	12(60.0)	8(40.0)	

antidepressant drugs (Figure 4). 17.2% students residing nearby college were found to have depression whereas 37.5% students far from college had depression which was statistically significant with p-value (0.033).
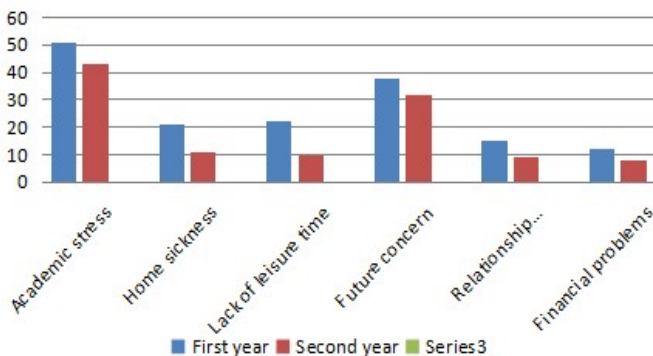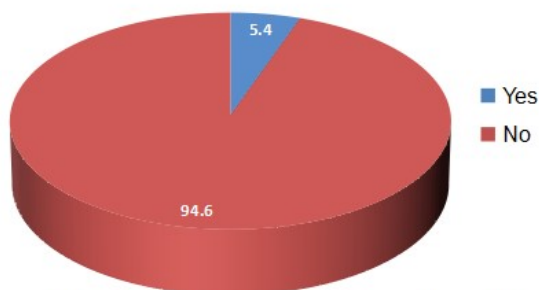

Figure-3: Stress inducing Factors

Figure-4: Use of antidepressants among undergraduate medical students

DISCUSSION

The prevalence of depression was found to be 22% in our undergraduate medical students. Basnet B et al. [12] at BP Koirala Institute of Health Sciences, in their study reported a prevalence of 24.78% which is in proximity with our findings. Also, this finding is comparable with the results of study done by Dhami et al. where it was 24.3% [13]. Moreover, our findings are coherent with findings of studies at Manipal, Nepal (20%) [7] and USA (15.2%) [8].

First year students were less depressed (17.7%) compared to second year students (26.5%). The possibility is that second years students have more loads of curriculum than the first year. This could also be related to stress related to internal and final assessments and their results.

Depression was higher in male (23.9%) than the female (17.5%) medical students, which is in line with the study of Dhami et al. [12] where males (16.5%) and females (7.8 %) had depression. This might be due to enrollment of more number of male students in MBBS program.

Both first and second year students reported academic stress as their principal stress inducing factor which is similar to the study done by Dhami et al. [12] and Basnet et al. [13]. Even studies from India and Pakistan reported academic stress as major stressor. The prospect might be that the curriculum of MBBS in different universities across the world is almost similar. Also financial problem was important stress inducing factor in our study which was in contrary to the studies of Dhami et al. and Basnet B at al [12, 13].

Majority of the medical students belonging to middle class family could be a reason for this. The prevalence of use of antidepressants in our study was 5.4% which was higher than a similar study done by Dhami et al (3.6%) [12]. The possibility is that, they might have the unusual loads of the curriculum, symptoms of depression, social anxiety disorder and anxiety disorders as well as other conditions.

CONCLUSION

The high prevalence of depression in medical students especially in the second year students and more in males, suggests that the students should be supported by counseling services which may help them to cope with stresses. The symptoms of depression and stress inducing factors should be identified at an early stage to prevent psychological morbidity.

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