

Prevalence of Depression and Use of Antidepressant in Basic Medical Sciences Students of Nepalgunj Medical College, Chisapani, Nepal

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ABSTRACT

Introduction : According to WHO, depression would be the second-most prevalent condition worldwide by 2020. The prevalence of depression is increasing in medical colleges because of stressful, competitive environment, long hours of trainings and studying. It is important for medical educators or teacher to know the magnitude of depression in students and factors causing it. The present study was carried to assess the prevalence of depression, use of antidepressant and to find out their stressors among preclinical students of Nepalgunj Medical College, Chisapani, Nepal.

Aims and objective : To assess the prevalence of depression, use of antidepressant and to find out their most common stressor among preclinical students

Materials and methods : The descriptive cross sectional study was carried in preclinical students of Nepalgunj Medical College, Chisapani, Nepal, The data was collected with questionnaires which comprised of personal data (age, sex, year of study, religion and home country) and Zung Depression Inventory scale was used to rate the depression.

Results : Among 218 students, the prevalence of depression was 24.3%. Male students are highly depressed (16.5%) then female (7.8%). First year student are more depressed (26.5%) then second year (22.4%). The depression score of the preclinical medical student was 44.67 ± 5.68 (mean \pm SD). Majority of the students (>50%) found on academic stress and 3.6% of the total students were on antidepressants

conclusion : As the prevalence of depression is high in medical students there is need for the counselling services to the students in the medical college to control this morbidity.

Key words: Zung Depression Inventory, Depression, stress inducing factors, Medical students

INTRODUCTION

Depression is highly common affective disorder. According to WHO, it would be the second-most prevalent condition worldwide by 2020¹. The prevalence of depression among medical students in public universities has been estimated to be 10.4% in Greece², 15.2% in USA³, 21.7% in Malaysia⁴, 24% in UK⁵, 29.1% in India⁶ and 43.8% in Pakistan⁷, whereas The prevalence of depression among private medical students has been estimated to be 19% in USA⁸, 49.1% in India⁹, and 60% in Pakistan¹⁰. In Europe, around 30% of medical students suffer from depression or anxiety¹¹. Similarly reported by Brazilian

studies, 20 to 50% of medical students were found to present with mood disorders^{12,13}. Medical schools are known to be stressful environments for students and hence medical students have been believed to experience greater incidences of depression and it affects almost one-third of medical students globally but treatment rates are relatively low¹⁴. In order to maintain a good academic result in a highly competitive environment students put them under a lot of stress which seriously affecting their academic performance and quality of life^{15,16}. Medical training is notoriously stressful and competitive, requiring long hours of studying, training and staying awake starting in medical school and has two to five times more likely to have depression than the general population¹⁷. There is a need for the counselling services to be made available to the students in the medical college to control this morbidity. It is important for medical educators or teacher to know the magnitude of depression in students and factors causing it, which not only affect their health and academic achievement but also has serious consequences like suicide¹⁸ so, there is need for the counselling services to be made available to the students in the medical college to control this morbidity. The present study was carried to assess the

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prevalence of depression, use of antidepressant and to find out their stressors among preclinical students of Nepalgunj Medical College, Chisapani, Nepal.

AIM AND OBJECTIVES

- To assess the prevalence of depression among preclinical students
- To find about most common stress inducing factor and to know the status of antidepressant use.

METHODS

The Study was a descriptive cross sectional study carried in 218 preclinical students of first year (batch-2017) and second year (batch-2016) at Nepalgunj Medical College, Chisapani, Nepal, in April 2018. Students were briefed about the purpose of the study and proforma were distributed among all after informed consent. The study was approved by the Institutional Ethical Committee. The questionnaires which comprised of personal data (age, sex, year of study, religion and home country), Zung Depression Inventory and stress inducing factors. The instrument used for collecting the data was a proforma containing Zung self-rating scale for depression¹⁹ with some additionally required information regarding the use of antidepressants

The Zung self-rating depression scale was developed by Zung WWK in 1965 for the assessment of perceived feelings of individuals regarding their emotional status. It consists of 20 items with scores ranging from 1-4 (per item). The total score is determined by adding all the scores, than 50 are considered normal while those ranging from 50-59, 60-69 and more than 70 are indicative of mild, moderate and severe depression respectively.

Stress inducing factors: After in-depth literature review and peer consultation, five most important stress inducing factors were selected. The students were asked to strike the factors they thought to be important from the following¹⁰

- Academic stress
- Home sickness
- Relationships
- Hectic lifestyle
- Future concerns

Data were entered into Microsoft excel and analyzed using SPSS statistical software.

RESULT

Total 218 students were included in the study, 102 from first year (batch-2017) and 116 from second year (batch-2016). Out of total students 69.7% were male and 30.2% were female students. Majority of the students were Nepalese 61.4% followed by Indian 38.5%. High percentage (81.8%) of student's parent were non-medical by occupation and only 18.8% parent were medical related. The mean age with standard deviation of the total students was 20.22±1.18 and that of first year and second year students was 20.01±1.19 and 20.31±1.14 respectively (Table-1)

Parameters		First year	Second year	First+ Second year
		Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)
Sex	Male	71(69.6%)	81(69.8%)	152(69.8%)
	Female	31(30.4%)	35(30.2%)	66(30.2%)
Nationality	Nepalese	62(60.8%)	72(62.1%)	134(61.5%)
	Indian	40(39.2%)	44(37.9%)	84(38.5%)
Parent occupation	Medical	26(25.5%)	15(12.9%)	41(18.8%)
	Non-medical	76(74.5%)	101(87.1%)	177(81.2%)
Age	Minimum	18	18	18
	Maximum	24	25	25
	Mean ±SD	20.01±1.19	20.31±1.14	20.22±1.18

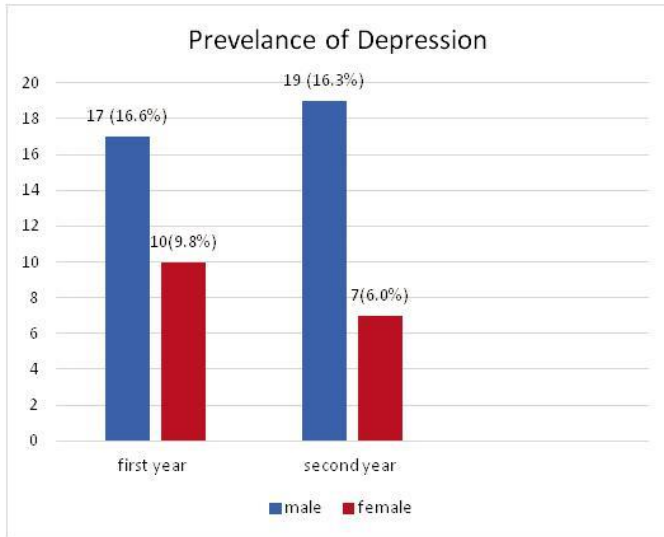
The depression score of the preclinical medical student was 44.67± 5.68 (mean ±SD). Highest depression score for first year was 58 and for second year was 65. (Table-2)

Year	Depression score		
	Minimum	Maximum	Mean ±SD
First	30	58	44.65±5.69
Second	29	65	44.71±5.70
First + Second	29	65	44.67±5.68

Male students are highly depressed (16.5%) then female (7.8%). First year student are more depressed (26.5%) than second year (22.4%). The Prevalence of depression was 24.3%.

(Table-3)

Year	Male student	Female student	Total
First year (102)	17 (16.6%)	10(9.8%)	27(26.5%)
Second year (116)	19 (16.3%)	7(6.0%)	26(22.4%)
Total (218)	36 (16.5%)	17 (7.8%)	53(24.3%)



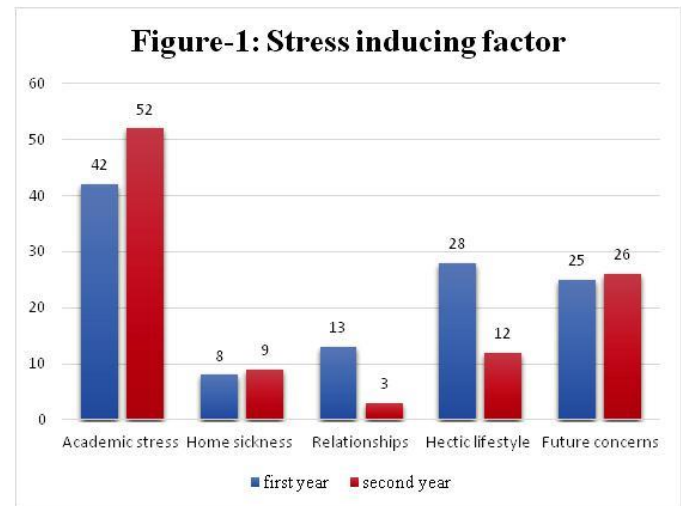
In the first year 27 students have mild depression, among them 17 male and 10 female. In the second year 25 students have mild depression among them 18 male and 7 female students. Only one student have moderate depression in second year. Nepalese student found to be depressed then Indian in both year.

(Table-4)

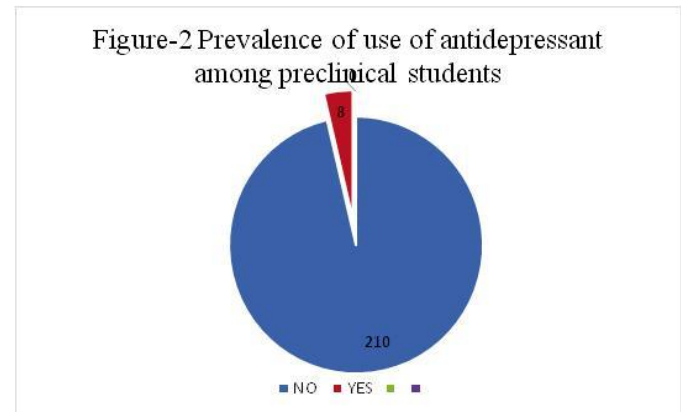
Depression scale		Normal	Mild	Moderate	Severe	Total
First	Male	54	17	0	0	71
	Female	21	10	0	0	31
Total		75	27	0	0	102
Second	Male	62	18	1	0	81
	Female	28	7	0	0	35
Total		90	25	1	0	116
First	Nepalese	45	17	0	0	62
	Indian	30	10	0	0	40
Total		75	27	0	0	102
Second	Nepalese	57	14	1	0	72
	Indian	33	11	0	0	44
Total		90	25	1	0	116

Majority of the students found on academic stress followed by hectic life style and future concern but more than 50% of second year student were on academic stress then first year students while significant number of students hectic life style in first year

(Figure-1)



Only 3.6% of the total student were taking antidepressants.



DISCUSSION

The prevalence of depression in basic medical science students was 24.3% which is very similar with the study of Basnet B et al²⁰ (24.78%). This finding is also comparable with the results of similar study done in Malaysia (21.7%)⁴, in UK(24%)⁵ and in India (29.1%)⁶ but more in comparison to findings of studies from Manipal, Nepal (20%)²¹, in Greece (10.4%)² and in USA (15.2%)⁸ and less in comparison in Pakistan (43.8%)¹⁰.

In our study, the prevalence of depression was found to be more in the first year 26.5% than the second year 22.4%). This finding could be due to students' just entering medical school after high school. Similar studies reported that prevalence of depression to be found more in preclinical medical students

The present study male students are highly depressed (16.5%) then female (7.8%) whereas in study by Basnet B et al²⁰ 53.7% male and 46.3% female were depressed. This may be due to more male students got admission in medical field than female in Nepal. First year student are more depressed (26.5%) then second year (22.4%) which is very less with the study of Basnet B et al²⁰ is 57% and 50% respectively. Among those with depression, a majority had mild and moderate degree of depression with mean score (44.67±5.68). The prevalence of severe and profound depression was 7.5% and 6.7%, respectively.

Majority of the students found on academic stress followed by hectic life style and future concern, Even studies from Pakistan and India reported academic stress as most troublesome stressors.^{23,24} This may reflect cultural similarities, working environments and similar background.

CONCLUSION

Depression along with academic stress is high in medical students. There is need for the counselling services to the students in the medical college to control this morbidity.

REFERENCES

- 1) World Health Organization. Mental and neurological disorders. Fact sheet No. 265; 2001.
- 2) S. Mancevska, L. Bozinovska, J. Tecce, J. Pluncevik-Gligoroska, and E. Sivevska-Smilevska, "Depression, anxiety and substance use in medical students in the Republic of Macedonia," Bratislavske Lekarske Listy, vol. 109, no. 12, pp. 568–572, 2008. V
- 3) J. Tjia, J. L. Givens, and J. A. Shea, "Factors associated with undertreatment of medical student depression," Journal of American College Health, vol. 53, no. 5, pp. 219–224, 2005.
- 4) M. S. B. Yusoff, A. F. A. Rahim, and M. J. Yaacob, "The prevalence of final year medical students with depressive symptoms and its contributing factors," International Medical Journal, vol. 18, no. 4, pp. 305–309, 2011.
- 5) M. E. Dahlin and B. Runeson, "Burnout and psychiatric morbidity among medical students entering clinical training: a three year prospective questionnaire and interview-based study," BMC Medical Education, vol. 7, article 6, 2007.
- 6) S. Sidana, J. Kishore, V. Ghosh et al., "Prevalence of depression in students of a medical college in New Delhi: a cross-sectional study," Australasian Medical Journal, vol. 5, no. 5, pp. 247–250, 2012.
- 7) N. A. Jadoon, R. Yaqoob, A. Raza, M. A. Shehzad, and Z. S. Choudhry, "Anxiety and depression among medical students: a cross-sectional study," Journal of the Pakistan Medical Association, vol. 60, no. 8, pp. 699–702, 2010.
- 8) M. S. Hendryx, M. G. Haviland, and D. G. Shaw, "Dimensions of alexithymia and their relationships to anxiety and depression," Journal of Personality Assessment, vol. 56, no. 2, pp. 227–237, 1999.
- 9) A. Singh, A. Lal, and A. Shekhar, "Prevalence of depression among medical students of a private medical college in India," Online Journal of Health and Allied Sciences, vol. 9, no. 4, pp. 8–12, 2010.
- 10) S. N. Inam, A. Saqib, and E. Alam, "Prevalence of anxiety and depression among medical students of private university," The Journal of the Pakistan Medical Association, vol. 53, no. 2, pp. 44–47, 2003.
- 11) Coumaravelou Saravanan and Ray Wilks, "Medical Students' Experience of and Reaction to Stress: The Role of Depression and Anxiety," The Scientific World Journal, vol. 2014, Article ID 737382, 8 pages, 2014. doi:10.1155/2014/737382
- 12) Haldorsen H, Bak NH, Dissing A, Petersson B. Stress and symptoms of depression among medical students at the University of Copenhagen. Scand J Public Health. 2014; 42(1):89-95.
- 13) de Rezende CHA, Abrão CB, Coelho EP, da Silva Passos LB. Prevalência de sintomas depressivos entre estudantes de medicina da Universidade Federal de Uberlândia. Rev Bras Educ Med. 2008; 32(3):315-23.
- 14) Bassols AM, Okabayashi LS, Silva ABd, Carneiro BB, Feijó F, Guimarães GC, et al. First- and last-year medical students: is there a difference in the prevalence and intensity of anxiety and depressive symptoms? Rev Bras Psiquiatr. 2014; 36(3):233-40.
- 15) Puthran R, Zhang MW, Tam WW, Ho RC Prevalence of depression amongst medical students: a meta-analysis. Med Educ. 2016 Apr 50(4):456-68. doi: 10.1111/medu.12962.
- 16) Wolf TM, Kissling GE. Changes in life-style characteristics, health and mood of freshmen medical students. J Med Edu 1984;59:806-14.
- 17) Sreeramareddy CT, Shanker PR, Binu VS, Mukhopadhyay C, Ray B, Menezes RG. Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. BMC Med Edu 2007;7:26.
- 18) Lisa S. Rotenstein, Marco A. Ramos, Matthew Torre, et al Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. JAMA. 2016;316 (21):2214-2236. doi:10.1001/jama.2016.17324

- 19) Zung WWK. Self-rating depression scale. *Arch Gen Psychiatry* 1965;12:63-70
- 20) Basnet B, Jaiswal M, Adhikari B, Shyangwa PM. Depression among undergraduate Medical Students. *Kathmandu Univ med J* 2012;39 (3):56-59.
- 21) Sreeramareddy CT, Shanker PR, Binu VS, Mukhopadhyay C, Ray B, Menezes RG. Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Med Edu* 2007;7:26.13
- 22) Abdulghani HM. Stress and depression among medical students: a cross sectional study at a medical college in Saudi Arabia. *Pak J Med Sci* 2008;24(1):12-7.
- 23) Guthrie E, Black D, Bagalkote H, Shaw C, Campbell M, Creed F. Psychological stress and burnout in medical students: a five –year prospective longitudinal study. *Jr Soc Med* 1998;91(5):237-43.
- 24) .Shaikh B, Kahloon A, Kazmi M, Khalid H, Nawaz K, Khan N, et al. Students, stress and coping strategies: a case of Pakistani medical school. *Educ Health* 2004;17(3):346-53.