Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublisher.com/sjams/

OPEN ACCESS

Medicine

Prevalence of Psychiatric Morbidity in Students of a Medical College in Northern State of Sub Himalayan Region: A Cross-Sectional Study

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DOI: 10.36347/sjams.2019.v07i08.051 | **Received:** 20.08.2019 | **Accepted:** 27.08.2019 | **Published:** 30.08.2019

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Abstract **Original Research Article**

Mental disorders have become very common and may vary from mild anxiety to severe depression. It has become a major contributor to the overall morbidity worldwide among all other major health concerns. It has become a major concern due to increased prevalence in India, particularly among the younger population. We undertook this study to determine the prevalence and correlates of depression among medical college students of Indira Gandhi Medical College, Shimla, using the SRQ-20 Questionnaire. Data was collected and analyzed. Mean age of the study participant's was20.0±1.6 years. The prevalence among the study participants came out to be 16.42%, which was more in females (18.34%) as compared to males (14.53%).Among the factors analyzed MBBS year and health condition (acute or chronic) had a significant effect on the outcome where as other factors such as subjects in sr. Secondary, locality of residence, health condition in parents, surgery in past had no significant association. Keeping this in mind, need for behavioral therapy during MBBS years and after any health condition diagnosis seems imperative.

Keywords: Psychiatric Morbidity, Himalayan Region, depression among medical college students.

INTRODUCTION

Mental disorders have become very common and of importance to public health in India. These disorders may vary from mild anxiety to severe depression in the various socio-economic classes of the society due to various reasons such as demanding job, stressful environment, bullying in school & colleges, peer pressure etc. and these stressful stimuli affect each individual's body differently resulting into reactions and outcomes.

Globally it has been observed that depression has emerged as a leading cause and major contributor to mental disability, and as much as 322 million people are living with depression. It is also very vital to mention here that nearly half of these people live in the South-East Asia Region and Western Pacific Region, which includes India [1]. Moreover India is witnessing significant changes including globalization, urbanization, migration, and modernization, coupled with rapid socio-demographic transition, enabling depression to increase in the coming years. In the current scenario, India is becoming a home to an estimated 57 million people (18% of the global estimate) affected by depression and as per NMHS (2015-16) in India, one in 20 (5.25%) people over 18 years of age have ever suffered (at least once in their lifetime) from depression[2].

Himachal Pradesh is also not untouched to such conditions like depression and stress which are making the hilly youth flustered and rising mental health problems have attracted our attention to go into the details of the possible reasons and problems responsible [3]. So it was felt that the need of the hour to take care of this problem and facilitate their help seeking behavior as early as possible.

Keeping in mind the vulnerability of the youth towards depression, as this is the stage of life they have to be focused in various fields of their life e.g. different career choices, social acceptance, along with their transition to adulthood. For the present study, medical students were found to be appropriate because of their young age and exposure to psychological stresses of academics and social life sometimes gradually falling prey to the suicidal tendency. So, in this regard and the upward trend gave us the lead to kind of assess the factors. Though these kind of studies have been done in the past, yet something to be done for the hilly youth, eventually giving way to planning of this study.

METHODOLOGY

The present study was conducted among the undergraduates of different years starting from the year of entry to the pre-final year in Indira Gandhi Medical College situated in Shimla, himachal Pradesh which was cross-sectional in design , using Self reporting questionnaire (SRQ-20), having questions of detailed socio-demographic information such as age, gender, academics ,parent's profession and health conditions, personal history regarding smoking, alcohol consumption as a tool to assess the burden of depression. Cut off score of 10 was taken (≥10) for both male and female participants for labeling it as psychiatric morbidity [4]. The purpose of the study was explained to the participants.

Statistical analyses were performed using the Epi Info version7.2.2.1. Descriptive analyses were computed in terms of mean and standard deviation for continuous variables and frequency with percentage for nominal variables**.** Pearson's chi-square, chi-square with yate's correction and Fischer Exact value was used to compare categorical variables.

RESULTS

A total of 341 study participants were included in the study with the mean age of 20.0±1.6 years. Both males and females were present in nearly equal proportion. Though, majority (94.1%) of them were residents of Himachal Pradesh yet equal proportions from urban and rural background. In respect to stream in the senior secondary examination, only a small proportion (13.8%) had taken mixed stream as their subject and as much as 48.09% of participants had both working parent's whereas1.75% had no working parents. Majority of the participants were nonsmoker (96.48%) and non-alcoholic (89.74%).

Table-1: Sociodemographic characteristics of study participants

Sociodemographic characteristics		N	%
Gender	**Male**	**172**	**50.43**
	Female	**169**	**49.57**
State	**Himachal**	**321**	**94.13**
	Non	**20**	**5.87**
Locality	**Urban**	**177**	**51.91**
	Rural	**164**	**48.09**
Parent's profession	**Both working**	**164**	**48.09**
	One working	**171**	**50.14**
	None working	**6**	**1.75**
Chronic Health Condition	**Yes**	**23**	**6.47**
	No	**318**	**93.53**
Surgery in past	**Yes**	**24**	**7.04**
	No	**317**	**92.96**
Smoker	**Yes**	**12**	**3.52**
	No	**329**	**96.48**
Alcohol	**Yes**	**35**	**10.26**
	No	**306**	**89.74**

As shown in (Table 2) Participants were divided into two groups based on prevalance psychiatric morbidity. Females were affected more 18.3% with depression as compared to 14.3% males but the result was not statistically significant.

Table-2: Psychiatric morbidity according to Gender

Table 2			
Subject(n)	**Depression(n)**	**Prevalence % (95%CI)**	**P value(95% CI)**
Male (n=172)	25	14.53(9.6-20.7)	0.34(0.74-2.34)
Female (n=169)	31	18.34(12.8-25.0)	
Total (n=341)	56	16.42(12.9-20.7)	

Table-3: Pattern of Psychiatric Morbidity among the students of MBBS according to the year

MBBS BATCH	Subjects without depression(n)	%	Subjects with depression(n)	%
1st year	65	74.71	22	25.29
2nd year	79	90.80	8	9.20
3rd year	58	82.86	12	17.14
4th year	83	85.57	14	14.43

Table-4: Associated risk factor for psychiatric morbidity

Exposure variable		Subjects without depression(n)	Subjects with depression(n)	P value(95% CI)
Locality	Rural	137	27	0.98(0.56-1.76)
	Urban	148	29	
Chronic Health Condition	Absent	269	49	**0.04**(0.99-6.65)
	Present	15	7	
Any Health condition in parents	Absent	198	33	0.12(0.88-2.85)
	Present	87	23	
Any recent health condition	Absent	257	45	**0.03**(1.04-4.82)
	Present	28	11	

Table 4 & 5 show Difference in the prevalence of depression between subjects suffering from any chronic health condition compared to those who did not have was statistically significant. Recent health condition also had a statistically significant impact on the development of depression. Locality and health condition in the parent had no effect on the prevalence of depression. There was a statistically significant difference in the year of MBBS on the prevalence of depression whereas the employment of parents had no difference in the prevalence.

Table-5: Univariate analysis of Risk factor for Psychiatric Morbidity

Exposure variable		Subjects without depression(n)	Subjects with depression(n)	P value
MBBS year	1st year	65	22	0.035
	2nd year	79	8	
	3rd year	58	12	
	4th year	83	14	
Parent's profession	Both parents not employed	4	2	0.52
	One parent employed	144	27	
	Both parents employed	137	27	

There was a statistically significant difference in the year of MBBS on the prevalence of depression whereas the employment of parents had no difference in the prevalence.

DISCUSSION

Quite a few studies have been done so far to assess the prevalence of depression in the community. This study was aimed at appraising the prevalence of depression among the medical students of Indira Gandhi Medical College, Shimla. In a study conducted by Zoccolillo M *et al*. the incidence of major depression or probable major depression by DSM-III criteria during the first two years of medical school was 12%[5] which is less than the result of our study (16.42%).

In our study the prevalence of depression was found to be more among females(18.34%) than males (14.53%),but it was found not to be statistically significant, Where as in a study done by Williamson A, D'Este C, Clapham K, *et al*. female participants had a better mental health as compared to male participants, but that was also not statistically significant[6].In another study done in Haryana by Kishore J. *et al*. psychiatric morbidity was found to be more among females as compared to males[7].

In a survey done in Himachal Pradesh, adolescent and youth health survey, prevalence of psychiatric morbidity was found to be 15.54%[8], which is in concordance with our study (16.42%)

Our study has indicated that chances of having psychiatric morbidity is more in case the participant is having any chronic health condition in the past (p value -0.04)which is also indicated by a study done Mousavvi s. *et al*. [9] and Khuwaja *et al*. [10]

Our results have shown that year of study of medical students have a significant association with the prevalence of depression(p value-0.035).The study conducted by Sidana S *et al*. had also shown similar results(p value of<0.001)[11].

CONCLUSION

Depression is prevalent among the college going students which could be attributed to the stress due to year of MBBS, health condition in the subjects. Gender, locality of residence, state, profession of parents and h/o surgery in past had no effect on the development of depression in the subjects. Based on the results it can be advised that students in different years of their carrier should be given behavior therapy, in addition to that behavior therapy should also be advised in case the students are suffering from any chronic health condition with equal emphasis on students of both genders.

Acknowledgement

We acknowledge all the study participants for sparing their time and participating in this exercise.

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