Prevalence of depression among students of medical college in UPUMS, Saifai – A cross-sectional study

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Abstract

Introduction and Objectives: Depression is a common mental disorder which is often unrecognised. Medical education is associated with various pressures and stresses which can lead to depression and represents a neglected public health problem in India. Consequently prevalence of depression is higher in medical students as compared to the general population.

Objectives:

1. To assess the prevalence of depression among medical students.
2. To find out socio-demographic correlates of depression.

Materials and Methods: This is a cross-sectional study among medical students from 1st year to final year of UPUMS, Saifai. Socio-demographic details were collected using pre-tested, semi-structured questionnaire and Beck depression inventory scale was used to assess the depression level. Data were analyzed using SPSS ver.23 software and appropriate statistical tests were applied. Level of significance was set at a $p<0.05$.

Results: Of the 300 medical students participated in the study, 123(41%) were males and 127 (42.33%) were females. The overall prevalence of depression was found to be 23 percent. This is more common in females i.e. (27%) than males (20%) other factors, including gender, loss of loved in the family, financial problem, and education of parents were not found to have any significant association with prevalence of depression in the study. It was also observed that students were reluctant to seek help for depressive symptoms.

Conclusion: Depression is quiet common among medical students, majority of the time it is unrecognised & it has a long term consequences on the overall development of the student.

Keywords: Depression, Medical students, Socio demographic correlates, BDI, MBBS.

Introduction

According to WHO, depression is defined as a common mental disorder characterised by sadness, loss of interest, feelings of guilt or low self-worth, disturbed sleep or appetite, feeling of tiredness and poor concentration.[1] Depression is highly common and it would be the second-most prevalent condition worldwide by 2020,[2] which is often unrecognised.

General people expect medical students to be better than their peers in other walks of life when it comes to health, and it hold true up to certain extent as far as medical illnesses are concerned.[4] When we look at stress and anxiety, however, this particular population seems to be on the receiving end of the spectrum.

Medical students are exposed to significant psychological and academic stressors like burden of vast academic course with an obligation to succeed, emotional, social, physical and family problems, and an uncertain future.[5] On Comparing with the general population, physicians and medical students already suffer with significantly greater frequency of stress and anxiety-associated mental disorders.[6,7] Multiple studies have been reported this high-stress levels in medical students, which.[8-13] which can contribute to substance abuse, broken relationship, suicide and attrition from the profession on personal level, and on professional level, studies suggest that student distress contribute to cynicism and may affect relationship with faculty, care of patients, and ultimately the culture of the medical profession.[14]

Methodology

Study Design: Cross-sectional Study

Study Period: 1st August 2017- 31st January 2018

Study Area: Uttar Pradesh University of Medical sciences, Saifai, Etawah

Study Subjects: Medical Students (MBBS) from first year to final year of Uttar Pradesh University of Medical Sciences, Saifai, Etawah.

Inclusion Criteria: Inclusion criteria were medical students of Uttar Pradesh University of Medical Sciences, Saifai.

Exclusion Criteria: Exclusion criteria were students who didn't give consent for the study.

Sample Size: By considering prevalence of 21.5%[15] and allowable error 5% the sample size is calculated and 300 students were taken for the purpose of study

$N= 4PQ/L^2$

Where P = prevalence

Q=100-P

L= allowable error,

N= (4x21.5x78.5)/ (5x5) =270.04=300

Method of Collection of Data

A total of 300 medical students from 1st year to final year, 75 students from each year were taken. Socio-demographic details were collected and beck depression inventory scale BDI[16] a psychometrically sound measure for screening depression among adolescents was used to assess the depression level after taking verbal consent from students. Data were collected after explaining them about

the study and each question. Privacy of the participants was maintained throughout the study and we have taken care that participant's identity is not disclosed at any point during the study.

Statistical Analysis

Data was entered using Microsoft Excel 2007 and was analyzed using statistical package for the social sciences software version 23 and appropriate statistical tests were applied. Level of significance was kept at a $p<0.05$.

Results

A total of 300 study subjects participated in the study 173 (57.6%) were males and 127 (42.3%) females. The age of the study population ranged from 19-30 yrs. Mean age (in yrs) 22.6± 4.2. The overall prevalence of depression among medical students was found to be 23% and among those with depression, majority (21.3%) had mild and moderate degree of depression while the prevalence of severe depression was 1.9 percent respectively. (Table 1)

The present study showed that the prevalence of depression was (27%) among females and (20%) among males but the correlation between depression and sex was not statistically significant (P-value >0.05). There was statistically significant association between other socio-demographic factors like (age, education of father) (Table 3).

The prevalence of depression was found 2.08 times more in students with increasing age and it was found to be statistically significant ($\chi2$ =5.6, df=1, Odds=2.08, $p<0.05$).

We also found highly significant association with the other factors like chronic illness, abused by parents, and family history of depression. (Table 3)

Table: 1 Grading of depression among study subjects

Grading of the subjects	Frequency
No Depression	
Normal	180 (60%)
Mild mood disturbance	50 16.6%)
Depression	
Borderline	28 (9.33%)
Moderate	36 (12%)
Severe	4 (1.33%)
Extreme	2 (0.6%)
Total	300 (100%)

Table 2: Socio-demographic profile of the study subjects

Socio-demographic characteristics	Male		Female	
Age	**No.**	**%**	**No.**	**%**
19-24yr	124	72%	115	90%
25-30yr	49	28%	12	9.4%
	173	100%	127	100%
Religion				
Hindu	143	83%	109	85.8%
Muslim	24	13.8%	17	13.3%
Others	6	3.4%	1	0.7%
	173	100%	127	100%
Hindi/English medium				
Hindi	87	57%	30	23.6%
English	86	49.7%	127	76.4%
	173	100%	157	100%
Family Type				
Nuclear	104	60%	96	76%
Joint	53	31%	16	12.6%
Three- generation	16	9.2%	15	12%
	173	100%	127	100%
Orphan hood				
Not orphan	165	95.4%	120	94.5%
Paternal orphan	8	4.6%	5	3.9%
Maternal orphan	0	0%	2	1.6%
	173	100%	127	100%

Table 3: Association of socio-demographic characteristics with depression

Age	**Depression (%)**	**No Depression (%)**		Chi-sq =5.64 df=1 Odds ratio=2.08 CI=1.1-3.8	**P-value**
*19-24yr	48 (20%)	191 (80%)	239 (100%)		
25-30yr	21 (34.4%)	40 (66%)	61 (100%)		
	69	231			**<0.05**
Gender				Chi-sq =1.7 df=1 Odds ratio=1.4 CI=0.8-2.4	
Male	35 (20%)	138 (80%)	173 (100%)		
Female	34 (27%)	93 (73.2%)	127 (100%)		**>0.05**
	69	231			
Education of Father				Chi-sq (yates)=16 df=2	(Yates) **<0.05**
Illiterate	2 (33%)	4 (67%)	6 (100%)		
*jst lit- high school	17 (53%)	15 (47%)	32 (100%)		
Intermediate-professional	50 (19%)	212 (81%)	262 (100%)		
Total	69	231			
Education of Mother				Chi-sq =0.9 df=2	**>0.05**
Illiterate	7 (30%)	16 (70%)	23 (100%)		
*just lit-high school	20 (24%)	63 (76%)	83 (100%)		
Intermediate-professional	42 (22%)	152 (78%)	194 (100%)		
	69	231			
Chronic illness				Chi-sq =9.6 Df=1 Odds ratio=0.28, CI=0.12-0.65	
Present	12 (48%)	13 (52%)	25 (100%)		
Absent	57 (21%)	218 (79%)	275 (100%)		
	69	231			**<0.05**
Loss of loved one				Chi-sq =1.03 df=1, odds ratio=0.72 CI=0.3-1.3	
Present	18 (28%)	47 (72%)	65 (100%)		
Absent	51 (22%)	184 (78%)	235 (100%)		**>0.05**
	69	231			
Financial problem				Chi-sq =1.03 df=1, odds ratio=1.4 CI=0.7-2.8	
Present	12 (18%)	53 (82%)	65 (100%)		
Absent	57 (24%)	178 (76%)	235 (100%)		**>0.05**
	69	231			
Abused by parents				Chi-sq (yates)=5.1 df=1	(Yates) **<0.05**
Present	5 (63%)	3 (37%)	8 (100%)		
Absent	64 (22%)	228 (78%)	292 (100%)		
	69	231			
Family history of Depression				Chi-sq =22 df=1, Odds ratio=0.14 CI=0.05-0.3	
Present	14 (70%)	8 (40%)	22 (110%)		**<0.05**
Absent	55 (25%)	223 (80%)	278 (105%)		
	69	231			

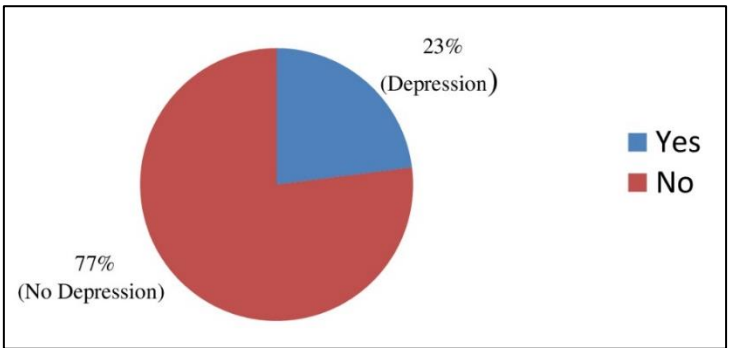

Fig. 1: Overall Prevalence of depression

Discussion

Medical profession is one of the most Nobel professions since past and nowadays medical students are increasing every year. This study presents the report of 300 undergraduate medical students in Uttar Pradesh University of Medical sciences, Safai, Etawah, India, where this type of study was never done before.

We have used the reliable and valid depression screening tool, BDI scale. The overall depression reported by our respondent was (23%) of which majority had mild (9.3%) and moderate (12%) degree of depression. The prevalence of severe and significant depression was (1.9%) respectively. Using same BDI scale findings of the study done by Kirte RC et al (22.1%)[17] in a Medical college in Raichur is consistent with the results of present study and another study done by Singh et al (49.1%) in Medical college in Northern India and by Kumar et al (71.25%) in Mangalore, Karnataka found higher proportion of depressive symptoms among medical undergraduates.[18,19] Other studies in different parts of the world also showed wide range of variation of depression among medical trainees, from 2.2% up to 85% of the students.[5,7,20-26] Reasons are different for each study like varied demographic characteristics, different sample sizes, different scales used to assess depression and cut-offs used were also different. We found statistically significant association between prevalence of depression and family history of depression which is similar to result of a study in a medical college of Mangalore, Karnataka by Kumar et al.[19] In our study we found that prevalence of depression was 1.4 times more among those with financial problem in the family than those without having it but the association was not statistically significant. This emphasizes that for medical education there should be some strategies for fees reduction during medical training so that students as well as parents do not get overburdened.

Conclusion

This study provides an idea of magnitude of depression among medical students with some of its associated factors which can be further evaluated by quantitative and qualitative methods, as this is a cross-sectional study, it is hard to identify the direction of influence and causal inferences from our study. Depression is highly prevalent among medical students and our findings point the importance of screening of this vulnerable group and taking appropriate measures to prevent complication of depression and overall development of the student. However using a valid scale to assess the depressive symptoms of the students increases the validity of the study but due to insufficient sample size results are not generalised. By providing a healthy environment, proper counselling and encouraging extracurricular activities we can prevent serious consequences to the future doctors.

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Conflict of Interest: None declared

Ethical Approval: The study was approved by the Institutional Ethics Committee of Uttar Pradesh University of Medical Sciences, Saifai, Etawah.

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