Research Article

Prevalence of depression among post graduate residents in a tertiary health care institute, Haryana

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Abstract

Background: Modern life is full of hassles, deadlines, frustrations, and demands. Chronic stressful life situations can increase the risk of developing depression. Depression is an illness that affects both the mind and the body and is a leading cause of disability, workplace absenteeism, decreased productivity, and high suicide rates. Globally, more than 350 million people of all ages suffer from depression. Depression may also sap the youthful energy of a medical student. It can make him dull and stifle his capacity to face the challenging situations that arise in medical profession.

Objective: To determine the prevalence of depression among post-graduate residents in a tertiary health-care institute and its correlates.

Materials and Methods: This cross-sectional study was undertaken among 120 post-graduate residents of Post Graduate Institute of Medical Sciences, Rohtak, Haryana during 1st June to 30th June 2013 using Beck Depression Inventory-II (BDI-II) questionnaire. The BDI is a 21-item self-administered instrument, rated on 4-point scale ranging from 0 to 3 and the total score being 63.

Result: Of the 120 residents, 73 (61%) were males and 47 (39%) females. Nearly two-thirds of them (62%) were above 30 years of age and the rest (38%) below 30 years. Overall prevalence of depression was found to be 17% (Borderline and above in Beck depression inventory II). The residents above 30 years of age group and those who were married had significantly less prevalence of depression. The residents with history of smoking and alcohol consumption had higher odds [1.500 (0.572–3.931)] of having depression compared to those who did not.

Conclusion: Our study found that nearly one-fifth residents were in depression. People with age <30 years, marital status (Unmarried), residents of clinical branch, and high workload were found to be significant risk factors for depression.

KEY WORDS: Residents, depression, beck depression inventory

Introduction

Depression is the leading cause of disability worldwide, and is a major contributor to the overall global burden of disease. Globally, an estimated 350 million people of all ages suffer from depression. It can cause the affected person to suffer greatly and function poorly at work, at school, and in the family.[1] The World Mental Health Survey conducted in 17 countries found that on average about 1 in 20 people was reported having an episode of depression in the previous year.[2,3]

At its worst, depression can lead to suicide. Almost 1 million lives are lost yearly due to suicide, which translates to 3000 suicide deaths every day. For every person who completes a suicide, 20 or more may attempt to end his or her life.[3]

For nearly half a century, stress in medical training has been a topic of concern. Common stressors include heavy workload, sleep deprivation, difficult patients, poor learning environments, financial concerns, information overload, and career planning. These stressors often exert negative effects on students' and residents' academic performance, physical health, and psychological well-being, making them more susceptible to depression.

Variable prevalence rates for depression among medical students and residents have been reported, ranging from 2% to 35%, with the highest rates among residents. Despite

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this range, there is more evidence to support that medical students and residents experience depression at higher rates than graduate students or young adults in the general public (8%–15%).[4,5] Thus, we undertook this study to determine the prevalence of depression among medical postgraduates studying in a premier medical institution in Haryana.

Materials and Methods

This cross-sectional study was undertaken among 120 post-graduate residents of Post Graduate Institute of Medical Sciences, Rohtak, Haryana during 1st June to 30th June 2013 using Beck Depression Inventory-II (BDI-II) questionnaire to assess the prevalence of depression. The BDI is a 21-item self-administered instrument, rated on 4-point scale ranging from 0 to 3 and the total score being 63.

Interpretation of scores obtained from Beck Depression Inventory: 1–10-These ups and downs are considered normal, 11–16, Mild mood disturbance;17–20, Borderline clinical depression;21–30,Moderate depression; 31–40, Severe depression; and over 40, Extreme depression. Those who did not give consent and those who were on some medication for psychiatric problems were excluded from the study. Post-graduate residents from all the clinical and para-clinical subjects were included regardless of their year of the course they were in. Confidentiality was ensured. The data were entered in Microsoft excel and analyzed using SPSS V. 20. Frequency tables were generated; risk estimate analysis was applied on the results obtained.

Result

Of the 120 residents,73 (61%) were males and 47 (39%) females. Nearly two-thirds of them (62%) were above 30 years of age and the rest (38%) below 30 years. Overall prevalence of depression was found to be 17% (Borderline and above in Beck depression inventory II)[Table 1].

The residents above 30 years of age group and those who were married had significantly less prevalence of depression as shown in Table 2.The residents with history of smoking and alcohol consumption had higher odds [1.500 (0.572–3.931)] of having depression compared to those who didnot [Table 3].The residents of clinical departments, those working for more than 72 h a week, and those without the support of supervisors had higher odds of having depression than the rest [Table 4].

Discussion

Of the 120 residents, 61% were males and 39%were females. Nearly two-thirds of them (62%) were above 30 years of age and the rest (38%) below 30 years. Overall prevalence of depression was found to be 17%.Similar findings were also noted by Surabhi Sidana et al. (21.5%) and Rab et al. (19.5%).[6,7]

However, studies conducted by Sahu et al. (28%), Haqqi et al.(29%), and Sherina et al. (36%)[2,8,9] had higher prevalence of depression than our study. This difference may be due to variation in the workload and inclusion of undergraduate students. It was also noted that the prevalence of depression among adult population in India was much lower than this study which varied from 11%[10] to 15%.[11,12] The higher prevalence in this study indicates that the level of stress is higher among the medical students.

In this study, men had a higher prevalence compared to women which is similar to study conducted by Haqqi et al.[2] However, in a study by Iqbal et al.[5] and Sherina et al.,[9] females had higher prevalence of depression than males. In our study age, marital status, history of smoking, and alcohol intake by medical students had significant association with depression. Although most of the studies found no significant association between the risk factors and depression (Ajit Singh et al.[13] and Surabhi Sidana et al.[6]), Schwenk et al.[14] and Karoglu et al.[15] found significant association between sex of medical students and depression.

Table 1: Prevalence of depression among the post graduate residents (using BDI-II scale)

Stage of Stage of depression	Number of residents
Normal ups and downs	57 (47.6%)
Mild mood disturbance	43 (35.9%)
Borderline	8 (6.6%)
Moderate	7 (5.8%)
Severe	4 (3.3%)
Extreme	1 (0.8%)
Total	120 (100.05)

Table 2: Association of sociodemographic profile of residents with depression

Characteristics		Depression			Odd's ratio	*P*-value
		Present	Absent	Total		
Age	<30 years	12	34	46	2.912 (1.087–7.802)	0.029
	>30 years	8	66	74		
Gender	Male	13	60	73	1.238 (0.454–3.373)	0.676
	Female	7	40	47		
Marital status	Married	6	57	63	0.323 (0.115–0.910)	0.027
	Unmarried	14	43	57		

Table 3: Association of present health status with depression among residents

Characteristics		Depression			Odd's ratio	*P*-value
		Present	Absent	Total		
Presently ill	Yes	11	35	46	2.270 (0.859–6.000)	0.093
	No	9	65	74		

Table 4: Associated factors with depression among residents

Characteristics		Depression			Odd's ratio	*P*-value
		Present	Absent	Total		
Subject	Clinical	15	45	60	3.667 (1.238–10.863)	0.014
	Non clinical	5	55	60		
Working hours per week	< 72 h	6	74	80	0.151 (0.052–0.433)	<0.001
	> 72 h	14	26	40		
Colleagues support	Yes	11	73	84	0.452 (0.169–1.211)	0.109
	No	9	27	36		
Supervisor support	Yes	8	82	90	0.146 (0.052–0.410)	<0.001
	No	12	18	30		
Enough time for academic work	Yes	10	68	78	0.471 (0.178–1.244)	0.123
	No	10	32	42		

The residents of clinical departments, those working for more than 72 h a week and those without the support of supervisors had higher odds of having depression than the rest. In a study carriedoutamong the medical trainees in Bangladesh, those residents with working hours more than 72 h per week, and without supervisors support had higher prevalence of depression which is very much similar to the finding from our study.[16]

Yousuf et al.[17] in their study found that age, religion, ethnicity, marital status, living status, speciality, lack of colleague'sand supervisor's support, enough time for academics, and smoking were important risk factors for depression. In an Indian study, religion, family history of chronic illness, history of parental loss, and unsuccessful love affairs appeared as important risk factors for depression among under-graduate medical students[8] whereas substance abuse, family history of depression, and anxiety and recent loss of a relative were important risk factors in Pakistan.[2]

The strengths of this study is that the study included the Beck depression Inventory questionnaire to assess the level of depression which is the most commonly and widely accepted tool for the same. The limitation is that our study did not differentiate the level of depression among the residents of different academic years of their study and also we included residents from a single medical institute which makes the generalization of the study difficult.

Conclusion

In conclusion, our study found that nearly one-fifth of the residents were in depression. Age <30 years, marital status (unmarried), residents of clinical branch, and high workload were found to be significant risk factors for depression. Support from the colleagues, seniors, and supervisors were more helpful for the residents in staying mentally healthy.

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