



Prevalence of depression and its associated factors among students of a medical college in Bihar

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Abstract

Medical training is full of stress and this has been a topic of concern for nearly half a century. Various stressors in the life of a medical student include homesickness, heavy workload, sleep deprivation, difficult patients, financial concerns, information overload and career planning. Hence based on the above literature findings this study was planned to determine the prevalence of depression, its severity and some of the factors associated with the course of study.

A self-administered questionnaire, Patient Health Questionnaire (PHQ-9), based on PRIME-MD Today (Primary Care Evaluation of Mental Disorders), was used to provisionally diagnose depression and its grading. PHQ-9 assists in screening, evaluating and provisionally diagnosing depression.

More than half of the students were found to have some degree of depression in our study. The prevalence of depression was found to be highest in the 1st year students when compared to their seniors. As the years of stay in the college increased the prevalence of depression was found to decrease.

Keywords: depression, medical students, Bihar, etc.

Introduction

Depression (major depressive disorder or clinical depression) is a common but serious mood disorder. It causes severe symptoms that affect how you feel, think, and handle daily activities, such as sleeping, eating, or working. To be diagnosed with depression, the symptoms must be present for at least two weeks. According to the World Health Organization (WHO), depression is the most common illness worldwide and the leading cause of disability. They estimate that 350 million people are affected by depression, globally.

Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behavior, tendencies, feelings, and sense of well-being. A depressed mood is a normal temporary reaction to life events such as loss of a loved one. It is also a symptom of some physical diseases and a side effect of some drugs and medical treatments. Depressed mood is also a symptom of some mood disorders such as major depressive disorder or dysthymia ^[1].

Factors

▪ **Life events:** Adversity in childhood, such as bereavement, neglect, mental abuse, physical abuse, sexual abuse, and unequal parental treatment of siblings can contribute to depression in adulthood. Childhood physical or sexual abuse in particular significantly correlates with the likelihood of experiencing depression over the life course ^[2]. Life events and changes that may precipitate depressed mood include (but are not limited to): childbirth, menopause, financial difficulties, unemployment, stress (such as from work, education, family, living conditions etc.), a medical diagnosis (cancer, HIV, etc.), bullying, loss of a loved one, natural disasters, social isolation, rape, relationship troubles,

jealousy, separation, and catastrophic injury. Adolescents may be especially prone to experiencing depressed mood following social rejection, peer pressure and bullying ^[3].

- **Personality:** High scores on the personality domain neuroticism make the development of depressive symptoms as well as all kinds of depression diagnoses more likely, and depression is associated with low extraversion. Other personality indicators could be: temporary but rapid mood changes, short term hopelessness, loss of interest in activities that used to be of a part of one's life, sleep disruption, withdrawal from previous social life, appetite changes, and difficulty concentrating ^[4].
- **Gender identity and sexuality:** Studies have shown that those who are marginalized due to either their gender identity or sexual orientation (such as those that identify as LGBT) are more prone to depression ^[5].
- **Medical treatments:** Depression may also be iatrogenic (the result of healthcare), such as drug induced depression. Therapies associated with depression include interferon therapy, beta-blockers, Isotretinoin, contraceptives, cardiac agents, anticonvulsants, antimigraine drugs, antipsychotics, and hormonal agents such as gonadotropin-releasing hormone agonist ^[6].
- **Substance-induced:** Several drugs of abuse can cause or exacerbate depression, whether in intoxication, withdrawal, and from chronic use. These include alcohol, sedatives (including prescription benzodiazepines), opioids (including prescription pain killers and illicit drugs such as heroin), stimulants (such as cocaine and amphetamines), hallucinogens, and inhalants ^[7].
- **Non-psychiatric illnesses:** Depressed mood can be the result of a number of infectious diseases, nutritional

deficiencies, neurological conditions and physiological problems, including hypoandrogenism (in men), Addison's disease, Cushing's syndrome, hypothyroidism, Lyme disease, multiple sclerosis, Parkinson's disease, chronic pain, stroke, diabetes and cancer [8].

- **Psychiatric syndromes:** A number of psychiatric syndromes feature depressed mood as a main symptom. The mood disorders are a group of disorders considered to be primary disturbances of mood. These include major depressive disorder (MDD; commonly called major depression or clinical depression) where a person has at least two weeks of depressed mood or a loss of interest or pleasure in nearly all activities; and dysthymia, a state of chronic depressed mood, the symptoms of which do not meet the severity of a major depressive episode.
- **Historical legacy:** Researchers have begun to conceptualize ways in which the historical legacies of racism and colonialism may create depressive conditions [9].

Medical training is full of stress and this has been a topic of concern for nearly half a century. Various stressors in the life of a medical student include homesickness, heavy work load, sleep deprivation, difficult patients, financial concerns, information overload and career planning. Hence based on the above literature findings this study was planned to determine

Table 2: Prevalence of Depression as per year of study

	Total Subjects			Prevalence		
	Males	Females	Total	Male (%)	Female (%)	Total
1st year	15	6	21	9	4	13
2nd year	17	6	23	11	3	14
3rd year	20	8	28	9	3	12
4th year	18	10	28	11	4	15
Total	70	30	100	40	14	54

Table 3: Reasons of Depressions

Reasons	Yes	No
Financial stress	11	3
Having a romantic partner	8	3
Any Addictions	7	2
Extracurricular activities	2	11
Substance abuse	0	13
Family H/O depression	3	14
Family problems	5	10

The prevalence of depression in our study was found to be 56%. This is higher than the reported prevalence of provisionally diagnosed depressive and major depressive disorder in medical students as 21.5% and 7.6%, respectively by Sidana S *et al.* using the PHQ-9 questionnaire [10]. However Vankar *et al.* also used PHQ-9 in their study and reported the prevalence of self-identified depression as 64% [11].

In our study, depression was found to be significantly higher in lower batches when compared with all their seniors combined. This is similar to the findings of Singh *et al.* who reported the prevalence of depressive symptoms as high among newly entered students (1st and 2nd year) as compared to the senior students, Sidana *et al.* who reported that the first year students had the highest prevalence of depression

the prevalence of depression, its severity and some of the factors associated with the course of study.

Methodology

The study is conducted in NMCH. Total 100 medical students were enrolled in to the study. All the patients are informed consents. The approval of the institutional ethical committee is taken for the planned study.

A self-administered questionnaire, Patient Health Questionnaire (PHQ-9), based on PRIME-MD Today (Primary Care Evaluation of Mental Disorders), was used to provisionally diagnose depression and its grading. PHQ-9 assists in screening, evaluating and provisionally diagnosing depression.

Results & Discussion

The data from the 100 students were collected and presented as below.

Table 1: Type of Depression

Type of Depression	No. of Students
No depression	44
Mild depression	45
Moderate depression	8
Severe depression	3
Total	100

followed by second year students (P value <0.001), Vankar *et al.* who reported that highest level of depression on PHQ-9 was seen in the 1st year and also 1st and 2nd years students had significantly higher levels of depression than 3rd and 4th year students and Sharma *et al.* who reported a significantly highest prevalence of depression among the first-year students and also found a highly significant association between the year of the study and the depression levels [10-12,14].

It was found in our study that gender had no significant effect on the development of depression among medical students (p>0.05). This is in compliance with the findings of Aniebue PN and Onyema GO [15] who used the Zung self-rating depression scale to assess the prevalence of depressive symptoms among Nigerian Medical Student and found that although female students showed higher levels of depression than males, it was not a significant difference, Sidana *et al.* who found that gender did not have a statistically significant impact on prevalence of depression.

Conclusion

More than half of the students were found to have some degree of depression in our study. The prevalence of depression was found to be highest in the 1st year students when compared to their seniors. As the years of stay in the

college increased the prevalence of depression was found to decrease.

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