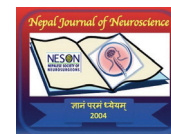


A Cross sectional Study on the Prevalence of Depression in Arunachal Pradesh



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Date of submission: 20th July 2022

Date of acceptance: 22nd December 2022

Date of publication: 30th January 2023

Abstract

Introduction: Depression is a commonly occurring mental disorder. Depression affects patients across all age groups, socioeconomic statuses, and genders.

To determine the prevalence of depression in patient attending OPD clinic in Pasighat, Arunachal Pradesh using the Patient Health Questionnaire (PHQ-9).

Methods: This is a cross-sectional study of fifty randomly selected patients in the OPD Clinic of Bakin Pertin General Hospital in Pasighat, Arunachal Pradesh, between the period 2017 and 2018. Eligible patients ranged in age from 13 to 70 years old and represented both rural and urban areas.

Results: The study found that twenty-one out of fifty patients, i.e., 42% of patients, suffered from minimal to mild depressive symptoms.

Conclusion: The study showed a high prevalence of depression in East Siang district (Pasighat), Arunachal Pradesh, and parts of adjoining districts of Pasighat. A combination of approaches could help in providing the best possible care for patients with mental disorders and assist them in living fulfilling lives.

Key words: Depression; Prevalence; Mental disorders, Patient Health Questionnaire-9(PHQ-9)

Introduction

Depression is a commonly occurring mental disorder characterized by feelings of persistent sadness, anger, and a loss of interest in your surroundings and in everything you do. Patients may experience insomnia, tiredness, and a loss of concentration at work. They might

even start doubting their self-worth.^{1,2} The severity of the depression might range from mild mood swings to major depressive episodes. Severe episodes of depression can impair the ability of an individual to conduct their day-to-day activities. It may even provoke suicidal tendencies.^{3,4} Dysthymia, a type of chronic depression, is another less severe form of depression but usually persists for a prolonged period, a minimum of two years or more.⁵

Depression affects patients across all age groups, socioeconomic statuses, and genders. As per the World Health Organization (WHO), about 280 million people suffer from depression worldwide, accounting for about 3.8% of the world population.⁶ Depression is a threat to public health and wellness. It ranks second in the Disability Adjusted Life Years (DALY) calculated for all ages. The prevalence of anxiety disorders increased by 47.19%, from 31.13 million in 1990 to 45.82 million in 2019. DALYs associated with anxiety disorders increased by 53.70%, from 18.66 million in 1990 to 28.68 million in 2019.⁷ High DALY leads to a loss of work productivity, resulting in an economic burden on the nation. Moreover, depressive disorders are more likely present in patients suffering from chronic and terminal diseases like cancer, HIV/AIDS, etc. As per the survey conducted by the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru (Bangalore) (2015-16), the estimated prevalence of depressive disorders in India is about 4.5% of the total population.⁸

Access this article online

Website: <https://www.nepjol.info/index.php/NJN>

DOI: <https://doi.org/10.3126/njn.v19i4.46800>

HOW TO CITE

Siram T, Perme O, Komut O. A Cross-sectional Study on the Prevalence of Depression in Arunachal Pradesh: Prevalence of depression. *NJNS*. 2022;19(4):43-7.



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ISSN: 1813-1948 (Print), 1813-1956 (Online)



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Suicide cases associated with depression are rising at an alarming rate, especially in Arunachal Pradesh, a thinly populated state located in the remote part of eastern India. However, most mental disorders, including depression, go undetected, making them one of the most poorly diagnosed conditions in the medical sciences. Additionally, a significant amount of social stigma is associated with mental disorders, hindering patients from seeking medical attention. Hence, despite the availability of cost-effective and evidence-based treatment options, low utilization has failed to minimize the socio-economic impact of depression has on individual patients and society at large. This situation mandates an urgent need to provide physicians with the necessary sensitization and training to recognize patients with depressive disorders and provide them with the necessary treatment facilities. The state would also need to mobilize more resources to address this issue.

In this study, we explored the prevalence of depression in patients attending OPD Clinic of Bakin Pertin General Hospital at Pasighat, Arunachal Pradesh, using the Patient Health Questionnaire (PHQ-9).

Methods

This is a cross-sectional study of fifty randomly selected patients in the OPD Clinic of Bakin Pertin General Hospital in Pasighat, Arunachal Pradesh between 2017 and 2018. Informed consent was obtained from patients before enrolling them in the study.

2.1 Inclusion criteria:

Eligible patients ranged in age from 13 to 70 years old attending OPD of Bakin Pertin General Hospital in Pasighat, Arunachal Pradesh.

2.2 Exclusion criteria:

Patients attending Psychiatric OPD and those with serious illness were excluded from the study.

2.3 Outcome measures:

The degree and severity of depression were assessed using the pre-designed and pre-tested questionnaire, Patient Health Questionnaire-9(PHQ-9).

2.4 Description of Patient Health Questionnaire-9 (PHQ-9):

The PHQ-9 is a nine-item depression module based on the full PHQ. This questionnaire can either be completed by the patients themselves or by healthcare workers during a face-to-face interview with the study subjects. The PHQ-9 is easy to administer to patients, even at the

OPD. The PHQ-9 tool is an easy-to-use instrument and multipurpose diagnostic tool designed specifically for assessing the degree and severity of depression. The PHQ-9 was used to interview patients in the OPD irrespective of their presenting chief complaint about symptoms of depression in the past 14 days. Diagnostic algorithms are summarized at the bottom of each page. A patient is diagnosed with major depression if they exhibit five or more of the nine depressive symptoms for at least “more than half of the days” during past 14 days. In addition, depression or anhedonia must be one of the presenting symptoms. Each out of the nine items of PHQ-9 is scored on a scale of 0 to 3. A person’s PHQ-9 score can range from 0 to 27. Higher scores indicate that patients’ depression is becoming more severe. The PHQ-9 tool is an easy-to-use instrument and multipurpose diagnostic tool designed specifically for assessing the degree and severity of depression. Depression can alter a person’s thoughts and feelings, as well as their social behavior and sense of physical well-being. Depression can affect people of any age, but it most commonly affects those aged 12 to 70. Depression can even be inherited. As a result, the PHQ-9 tool is expected to aid in early diagnosis and prevention before the quality of life suffers.

Results

3.1 Age and Sex Distribution of Study Subjects

Figure 1 depicts the age and sex distribution of study subjects. Among males, the maximum number of study subjects belonged to the age group of 29–39 years. Among females, the maximum number of study subjects belonged to the age group of 39–49 years and 13–19 years. The age group-wise distribution of the study subjects was as follows: 13–19 years =9 (male=2 female=7), 20–29 years =7 (male=4 female=3), 30–39 years =14 (male=12 female=2), 40–49 years =13 (male=6 female=7), 50–59 years =5 (male=4 female=1), and 60–70 years =2 male(Fig 1).

3.2: Prevalence of Depression

In the study, 21 out of the 50 subjects enrolled had scores of mild degree depression. Ten out of twenty female patients (50%) and eleven out of the thirty male patients (36.7%) were observed to have scores matching with various degrees of depression as per PHQ-9 questionnaire assessment (Table 1).

3.3 Rural Urban Residence and depression:

According to the study findings, 68 percent of study subjects with depression scores live in urban areas, while only 32 percent live in rural areas (Fig 2).

3.4 Marital status:

The study showed that 31 of the 50 subjects were married, while 19 were unmarried. 77% of the male study subjects were unmarried and 23% were married. 60% of the female study subjects were unmarried and 40% were married.

3.5 Level of Depression

According to the data, twenty-one patients of both genders were identified as having mild depression out of fifty patients interviewed in an OPD setting. This means that 42% of patients had symptoms ranging from mild to moderate depression. Despite having similar levels of depression in both men and women, the clinical manifestations presented in the study sample varied greatly. Men suffering from depression may appear angry or aggressive rather than sad. As a result, their families, friends, and even doctors may fail to recognize anger as a symptom of depression. The findings of the study also show that the depression is higher in females than in males (Table 2).

3.4.1 Level of depression in males:

Figure 6 shows that the age group of 30-39 years had the highest prevalence of depression in male patients (42%). Males aged 60-70 years had the lowest prevalence of depression, accounting for only 5% of the population. The prevalence of depression in other age groups was: 13 to 19 years old (10%), 20 to 29 years old (11%), 30 to 39 years old (42%), 40 to 49 years old (16%), 50 to 59 years old (16%), and 60 to 70 years old (16%). (5 percent).

3.4.2 Level of depression in females:

According to the study findings, depression affects women of all ages. Females between the ages of 13 and 19 had the highest rate of depression, at 50%. The prevalence of depression in other age groups is as shown in the pie diagram: 10% are between the ages of 20 and 29, 20% are between the ages of 30 and 39, and 20% are between the ages of 40 and 49. According to the study, depression was not reported in women between the ages of 50 and 70. The study findings are consistent with recent WHO statistics that show that the burden of depression is higher in women than in men.

Table 1: Table showing number of the patient having Depression based on PHQ-9 responses.

Prevalence of Depression among OPD patients			
Gender	Total No. of patient	Depression present	Percentage
Male	30	11	36.7%
Female	20	10	50%
Total	50	21	42%

Table 2: Table showing number of the patient showing symptoms of depression

Level Of Depression Symptoms			
Classification of Gender	No. of patient	Depression Symptom	Percentage
Male	30	11	27%
Female	20	10	33%
Total	50	21	42%

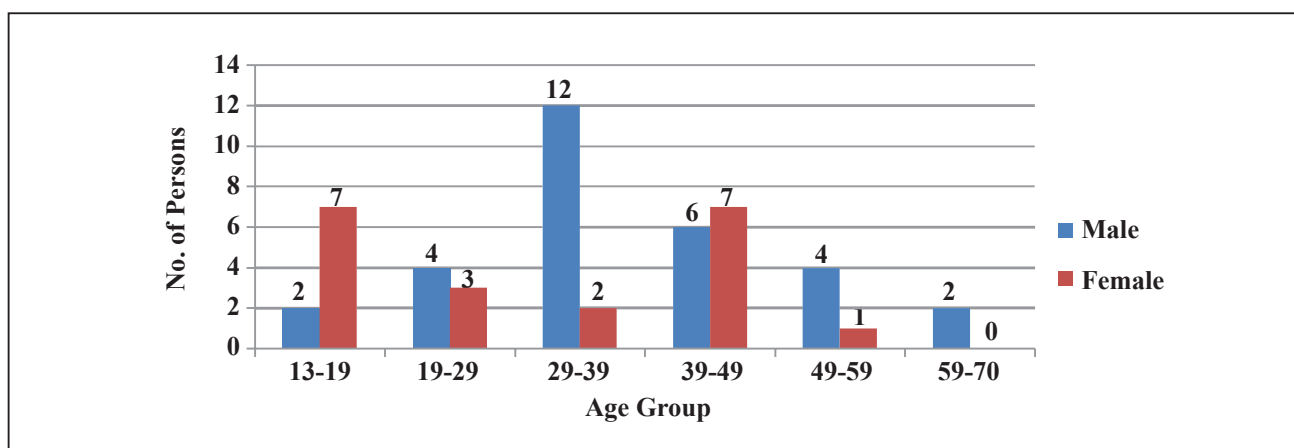


Figure 1: Graph showing the age-wise distribution of study subjects

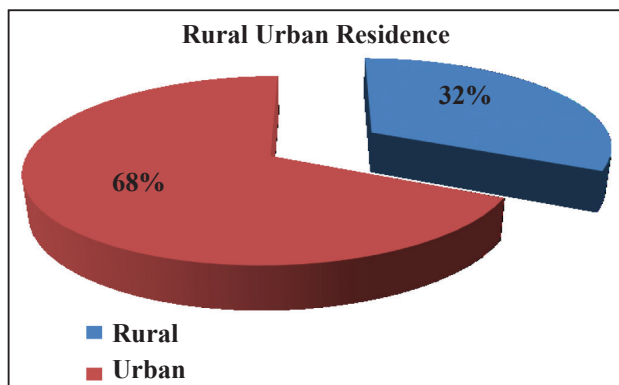


Figure 2: Pie chart showing the rural urban distribution of study subjects

Discussion

A cross-sectional study was conducted in Bakin Pertin General Hospital, Pasighat, to understand the prevalence of depression in the population. It included 50 randomly selected subjects. The study found that twenty-one out of fifty patients, i.e., 42% of patients, suffered from minimal to mild depressive symptoms. The study indicates that the prevalence of depression is high in the study area. The subjects randomly selected in this study were visiting the OPD clinic for some physical ailments. Seeking treatment for chronic diseases imposes a significant financial burden on a person. As a result, low income and a high financial burden may be linked to an increased prevalence of depression in patients with chronic and terminal diseases. This can be the reason for the high prevalence of depression in our study cohort. Moreover, India was also reported to be one of the world's most depressed countries.¹⁰

The study also found a higher prevalence of depression in women (33%) compared to men (27%). The data is in similar lines to a WHO report on depression where the burden of depression is mentioned to be 50% higher in females than in males.¹¹

The PHQ-9 questionnaire was used in this study to screen for signs of depression. It was first tested in 2001 by Kroenke, Spitzer, and Williams for validity and reliability. According to research, the PHQ-9 can be used in clinics to screen patients for depression. The PHQ-9 is also used in studies of patients with diabetes, HIV/AIDS, chronic pain, substance abuse, and other conditions. The PHQ-9 provides reliable results in different categories of people, like students, adolescents, and elderly adults with physical ailments and disabilities. The PHQ-9 has high sensitivity and negative predictive value in primary care facilities. So, PHQ-9 is helpful for screening patients with depressive disorders. PHQ-9 is available in thirty languages. Each translated version is validated for use in different ethnic groups. Pfizer currently owns the copyright to the PHQ-9 but has allowed others to access it freely.⁹

In the present study the prevalence of minimal to mild depression was higher in patients in rural areas. A higher prevalence in rural areas could be attributed to low economic development and job opportunities. Since people living in urban areas may have access to better living conditions, job opportunities, and healthcare facilities, their socioeconomic status might be better than those living in rural areas. Therefore, they showed lower levels of depression as compared to people who belong to rural areas.

Depression is also significantly associated with marital status. The study results showed that married males and unmarried females showed a higher prevalence of symptoms of depression. Li L *et al* showed that unmarried subjects showed a higher prevalence of symptoms of depression than married people. This difference could be attributed to the fact that married people have better emotional stability than unmarried ones. Since they have a partner to share their stress with, difficult experiences are less likely to damage their mental state.¹² Married males in this study showed higher depression which may be because of the prevalent cultural norms and requires further study.

The study also found a higher depression prevalence in patients in the age group of 21-50 years. Since the people in this age group face a lot of stress concerning their career, relationship status and peer pressure, obesity, and the onset of chronic diseases, they are more prone to develop symptoms of depression.

Limitations of study

There are several limitations to the study. The cross-sectional study design or survey covered only districts, which may limit the generalizability of the study results. Moreover, the was estimated using a screening-type tool rather than a definitive diagnosis by a psychiatrist. In addition, the study did not assess interpersonal problems such as divorced couples or widowers' marital issues, personal illness or abuse, such as diabetes or alcoholism, or other factors that are directly or indirectly related to depression. Moreover, the study was conducted in an urban hospital only. There may be a possible impairment in the socio-demographic ratio since most rural communities have limited access to urban healthcare facilities. The sample size for PHQ-9 administration was also limited to fifty patients in the study. Some patients who underwent the assessment were unable to understand or read the self-rating scales due to their low educational level.

Conclusion

The study showed a high prevalence of depression in East Siang district (Pasighat), Arunachal Pradesh, and

parts of adjoining districts of Pasighat. Since depression is a preventable and curable disorder, the government must take urgent steps to prevent and cure this disorder through policy changes and the availability of healthcare services. PHQ-9 is a useful and valuable instrument for screening and detecting mental disorders, even for primary care physicians. Hence, it can serve as a reliable tool to provide much-needed care for patients. PHQ-9 is also a reliable and valid measurement of severity of depression and a useful diagnostic tool for depression and also make criteria-based diagnosis of depressive disorder. However, the use of PHQ-9 should be accompanied by proper pharmacological therapies and non-pharmacological interventions. A combination of approaches could help in providing the best possible care for patients with mental disorders and assist them in living fulfilling lives.

Conflicts of interest

The authors listed immediately below certify that they have no affiliations with or involvement in any organization or entity with any financial interest or nonfinancial interest in the subject matter or materials discussed in this manuscript.

Funding: There was no external funding for this study.

Ethical approval: The study obtained ethical clearance from the Institutional Ethics Committee, from the office of the joint director of health services training and researches Pasighat, Government of Arunachal Pradesh.

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