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## Prevalence of Depression among Neet - PG Aspirants

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### ABSTRACT:

#### Objectives:

The study aims to find the prevalence of depression among NEET PG aspirants in India

#### Method and materials:

A cross sectional study was conducted among MBBS graduates aged 24 to 30. The sample size comprised 220 students, selected using stratified random sampling.

Data Collection and Analysis: The Hamilton depression scale was used to assess depression severity. Data was tabulated and analysed using descriptive statistics and significance tests via SPSS software version 27.

#### Results:

Two hundred and twenty participants (84 males, and 136 females) were interviewed. In our study 33% (n=73) of PG aspirants were suffering from depression out of which 24% (n=53) were suffering from mild depression, 7.3% (n = 16) were suffering from mild to moderate depression, 1.7% (n=4) were suffering from moderate to severe depression, in which 22 % (n=48) are female students, 11% (n = 25) were male students.

#### Conclusion:

The study's findings spotlight a significant and concerning prevalence of depression among NEET-PG aspirants in India. With 8% of participants identified as suffering from depression, it underscores the pressing need to prioritize the mental health of medical students, particularly those preparing for the highly competitive NEET-PG examination.

Keywords: NEET – PG, depression, medical students, prevalence, medical education, doctors.

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## 1. INTRODUCTION

Depression is the most common mental illnesses globally. It affects millions of people of all ages, and backgrounds. The world health organisation (WHO) says depression as a leading cause of disability worldwide. Among young adults the rise in cases of depression and suicide is alarming, studies have shown suicide is the 3<sup>rd</sup> leading cause of death among young adults [1]. India ranks 43rd in descending order of rates of suicide with a rate of 10.6/100,000 reported in 2009 (WHO suicide rates) [1]. Addressing this trend requires immediate interference and a extreme need for more research to understand its underlying causes better and develop more effective solutions.

The increase in prevalence of depressive disorder can be due to various causes like social media, poor self-care, parental issues, and education. Among specific population groups, medical students have garnered considerable attention due to their vulnerability to strain and mental health issues throughout their demanding training.

McKerrow et al., 2020 have shown medical students typically experience a heightened level of depression, anxiety, and mental stress compared to peers of the same age who are not pursuing medical education.[2], Rotenstein et al.,2016took data from several countries showing that the suicidal ideation rate in medical students is 11.1% which is alarming and the estimate of prevalence of depression or depressive like symptoms among medical students was 27.2% [3]

The body of research continuously emphasizes the mental health difficulties that medical students encounter; many of the studies point to elevated stress, anxiety, and depressive symptoms. The National eligibility cum entrance test for Post-Graduation (NEET-PG) in India, serving as a gateway for medical graduates to access postgraduate medical courses, epitomizes this challenge. Aspirants navigating the competitive landscape of NEET-PG encounter academic pressure, personal expectations, and the ever-present fear of failure. In recent years, the medical education landscape has undergone notable transformations, magnified by the global pandemic, which has introduced new dimensions in stress and uncertainty. When it comes to depression among NEET-PG candidates, there is an urgent need for more research and treatment. In addition to attempting to quantify the issue, this study aims to highlight the significance of early detection, intervention, and customized support networks. Its goal is to investigate the prevalence of depression within this particular demographic. As the medical community emphasizes the importance of holistic care, including mental health, this study seeks to contribute to a more informed discourse. By advocating mental health initiatives specific to the needs of aspiring medical professionals, it endeavors to alleviate the burden in depression and promote the overall well-being of NEET-PG aspirants in India.

## 2. METHOD AND METHODOLOGY:

Design: Cross-Sectional Study

Setting: Multiple medical colleges across India

Population: NEET-PG aspirants pursuing an MBBS degree

### **Inclusion Criteria:**

MBBS graduates (various medical colleges in India).

Age between 24 to 30 years.

Willingness to participate and provide informed consent.

### **Exclusion Criteria:**

Participants who are seriously ill or unable to complete the assessment.

Participants who do not provide informed consent.

**Sample Size Determination:**

A sample size of 220 students was selected to provide adequate statistical power and representation of NEET-PG aspirants.

**Sampling Technique:**

Stratified Random Sampling:

The population was stratified based on the geographical region of medical colleges.

Random sample were drawn from each stratum proportionate to number of NEET-PG aspirants in that region.

**Data Collection:**

Instrument: The Hamilton Depression Scale was utilized to assess severity of depression in participants.

The HAM-D scale consists of a series of questions or statements related to different aspects of depression, all item is rated on a scale from 0 (no symptoms) to 2 or 4 (increasing severity of symptoms). The total score is done by adding up the scores for each item, resulting in a combined score that can range from 0 to 52, depending on the version of the scale used. [4]

Questionnaire: Participants completed a structured questionnaire to provide demographic information (age, gender, college, etc.).

Data Collection Period: Data was taken from August to September 2022.

**Data Analysis:**

Chi-Square Test: The chi-square test was used to assess the association between categorical variables. Statistical Software: Data analysis was conducted using SPSS software (version 27.0).

**Ethical Considerations:**

Ethical approval for the study was obtained from the Institutional human ethics committee of Meenakshi medical college and research institute.

Informed consent was taken from all participants, and their privacy and confidentiality were maintained throughout the study.

**3. RESULTS**

Two hundred and twenty participants (84 males, and 136 females) were interviewed. In the study study 33% (n=73) of PG aspirants be suffering from depression, out of which 24% (n=53) were suffering from mild depression, 7.3% (n= 16) were suffering from mild to moderate depression, 1.7%(n=4)were suffering from moderate to severe depression, in which 22 % (n=48) are female students, 11% (n= 25) were male students.

The sociodemographic profile of the participants is tabulated in tables:

<b>GENDER</b>	<b>n=220 (%)</b>
<b>Male</b>	<b>84 (38.18 %)</b>
<b>Female</b>	<b>136 (61.8%)</b>

TABLE 1

<b>AGE</b>	<b>n=220(%)</b>
<b>22- 25 years</b>	<b>64 (29.09 %)</b>
<b>26- 30 years</b>	<b>117 (53.18 %)</b>
<b>31- 35 years</b>	<b>39 (17.22 %)</b>

TABLE 2

<b>BACKGROUND</b>	<b>n=220(%)</b>
<b>Urban</b>	<b>116 (52.8%)</b>
<b>Rural</b>	<b>31 (14.2%)</b>
<b>Semiurban</b>	<b>73(33%)</b>

TABLE 3

<b>SOCIOOCCUPATIONAL STATUS</b>	<b>n=220 (%)</b>
<b>Upper</b>	<b>16(7.5%)</b>
<b>Upper middle</b>	<b>142(64.2%)</b>
<b>Lower middle</b>	<b>52(23.6%)</b>
<b>Upper lower</b>	<b>10(4.7%)</b>
<b>Lower</b>	<b>0</b>

TABLE 4

#### 4. DISCUSSION:

The results of our study shed light on the prevalence of depression among NEET-PG aspirants in India and the socio-demographic factors associated with this condition. The findings indicate that a significant proportion of NEET-PG aspirants are affected by depression, underlining the importance in addressing mental health problems within this specific student population.

Prevalence of Depression:

It was shown that 33% of the NEET-PG applicants had depression in the survey. This incidence raises concerns since it indicates a serious mental health issue among medical students. These results are consistent with prior research, emphasizing that medical students, particularly those undergoing high-stakes examinations like NEET-PG, face a heightened risk of developing depression. The study further categorized severity of depressive disorder among affected participants. It is noteworthy that 24% of the PG aspirants were identified as experiencing mild depression, 7.3% had mild to moderate depression, and 1.7% had moderate to severe depression. Previous studies by Mishra SK et al., 2020 reported an increase in prevalence of depression among students who appeared at the medical entrance of about 63.8% [5]

According to Yousuf A. et al. (2011), smoking, age, religion, ethnicity, marital status, housing situation, specialty, support from coworkers and supervisors, enough time for academics, and these factors were all significant risk factors for depression [6].

These severity levels highlight the wide range of depression symptoms that NEET-PG applicants face. This emphasizes the necessity of customized mental health interventions that take into account the various levels of depression that students may encounter. Of all people, 69.4% studied at home. Twenty-five percent of the pupils were planning to attend the institute. 5.6% of pupils were using the library as a study space. 48.5% of students experience persistent low mood and 58.4% experience loss of interest in previously pleasurable activities. 48.5% experience a lack of sleep. 63.1% report they have having low mood when compared to peers, and 51% report they have having low mood when compared with toppers. 50.5 percent said they had parental pressure which worsened their symptoms, and 57.8% reported community pressure which worsened their symptom.

Premkumar et al., 2022 found that of students preparing for NEETUG which is a similar competitive exam for undergraduate students, they have found 59.2% have depression,

among which symptoms of severe depression were high among those with three previous attempts(44) and those awaiting their first NEET attempt[7].

Gender-based testing revealed that female students were more vulnerable to depression, with 22% suffering from depression compared to 11% of their male counterparts. This finding mirror previous research that has highlighted a more prevalence of depression among female medical students. The gender disparity in depression prevalence is a crucial observation, emphasizing the need for gender-specific mental health support programs and further investigation into the factors contributing to this disparity. In one study by Gururaj et al., 2016 they found depression is more common among male students and highest in the age group of 18 to 22 and among those in urban areas (1.7%) than that compared rural areas (1%) [8]

The socio-demographic profile of the participants provides valuable insights into the context of depression prevalence. It is evident from the findings that the majority of participants were in the 25-30 years age group (53.18%), and more than half were from urban backgrounds (52.8%). This information could be indicative of the specific life stage and environment in which NEET-PG aspirants are situated.

Moreover, socio-occupational status data indicates that a significant proportion of participants belonged to the upper-middle class (64.2%).

In their study, Marimuthu et al. (2022) discovered that depression is more common in rural than in urban students; among urban students, the prevalence rate was 45.3%, while it was 56% in rural students.[9]

It was discovered that female students were more vulnerable to stress from exams than male pupils [10]

The relationship between gender, age, socio-occupational status, and the presence of depression in NEETPG aspirants was investigated using the chi-square test. All factors had p-values greater than 0.05 according to the study, which also showed that there was no statistically significant correlation between the occurrence of depression and socioeconomic position ( $p = 0.089$ ), age ( $p = 0.092$ ), or gender ( $p = 0.065$ ).

One of the interventions that can be done for the students is to establish on-campus counseling services that are easily available to students. Skilled mental health professional can provide support and guidance to those struggling with depression or related mental health issues.

Include training on coping skills and stress management in the curriculum. Giving pupils coping mechanisms and mental health maintenance techniques might be quite helpful. Establish peer support groups so that students can talk about their struggles and experiences. It can be consoling to know that they are not alone in their challenges, and peers can offer invaluable emotional support. To find at-risk pupils early, implement a regular mental health screening program. Individuals exhibiting indications of depression or associated problems may be directed towards suitable interventions.

## 5. CONCLUSION:

The incidence of depression among Indian NEET-PG applicants is a serious issue with broad ramifications. In order to alleviate the burden of depression and enhance the general well-being of aspiring medical professionals, this study highlights the critical need for specialized mental health support within medical education. The results highlight how crucial holistic well-being is to medical education, both for students' wellbeing and the standard of care they will eventually deliver as medical professionals. In an effort to improve the prospects and mental wellness of individuals who will be handling the future of healthcare, this study

advocates for evidence-based therapies and research, which adds to the educated conversation on medical students' mental health.

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