



## Psychiatry

## THE IMPACT OF COVID-19 PANDEMIC ON MENTAL WELL-BEING OF NEET MEDICAL PG ASPIRANTS

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**ABSTRACT**

**BACKGROUND:** In a densely populated country like India, the selection of candidates is through a rank-based system by conducting competitive exams like NEET PG. This system causes a lot of stress among aspirants. In addition to the psychosocial stressors, the COVID pandemic has made things worse. Contracting COVID infection, hospitalization, and bereavement of the family members are the additional events which had a huge impact on the PG aspirants.

**MATERIALS AND METHODS:** A cross sectional study was conducted using Google forms among 108 NEET medical PG aspirants who completed internship and were preparing for the NEET PG exam. Beck Depression Inventory, Beck Anxiety Inventory, Adult Hope Scale were administered.

**RESULTS:** The depression was found to be 78.57 percent among NEET PG aspirants with a history of COVID contraction, indicating a statistically significant link between COVID contraction history and depression. Hope and Depression, as well as Hope and Anxiety, were discovered to have an inverse relationship.

**CONCLUSION:** Contraction of the COVID infection has contributed to exacerbating depression among the PG aspirants.

**KEYWORDS :** PG aspirants, COVID, depression, anxiety, hope

**INTRODUCTION**

Following a report of a cluster of cases of 'viral pneumonia' in Wuhan by People's Republic of China, WHO first heard of the new virus on December 31, 2019 and named it as COVID 19 which is caused by the SARS-CoV-2 corona virus, a novel virus.

The virus spread was slow at first, and then quickly expanded around the world, resulting in a massive pandemic that killed millions of people and affected every individual's social, professional, economic, and psychological domains.

A wide range of psychological effects were documented at the individual level, community level, national, and international levels. People are more prone to be afraid of getting sick or dying, feeling helpless, and being stereotyped by others on an individual basis<sup>1</sup>. The pandemic had a negative impact on public mental health; potentially resulting in psychological crises<sup>2</sup>. Early detection of persons in the early stages of a psychological problem improves the effectiveness of intervention efforts. The COVID-19 pandemic has been related to stress, worry, depressive symptoms, insomnia, denial, and dread. Among other mental health issues anxiety<sup>3</sup> (including post-traumatic stress disorder<sup>5</sup>), depression<sup>6</sup>, and sleeplessness<sup>7</sup> have all been reported in COVID-19 patients. In a cross-sectional study, 25 percent of COVID-19 patients also had a neuropsychiatric diagnosis<sup>8,9,10,11</sup> following an infection with acute respiratory symptoms.

Researchers discovered that, 47 percent of students had depression as a result of the pandemic<sup>12</sup>. According to studies, Medical Education is considered to be the most stressful and medical students are a vulnerable group for mental health issues like depression and anxiety<sup>13,14</sup>.

In India, the selection of candidates is through a merit-based system by conducting competitive exams like NEET PG. This system incurs a lot of stress among aspirants. In addition to the psychosocial stressors, the COVID pandemic has made things worse. Contracting COVID infection, hospitalization, and bereavement of the family members are the additional factors. Our study aims to find the impact of COVID 19 on the NEET Medical PG aspirants.

**AIM**

To assess the prevalence of Depression, Anxiety and Hope level among the NEET Medical PG Aspirants in relation to the COVID 19 Pandemic.

**MATERIALS AND METHODS:**

A cross sectional study was conducted among 108 NEET Medical PG aspirants who completed their internship and were preparing for the exam conducted on September 11th 2021. In a social media group, the details and the requirements of the study were described. Those who agreed to volunteer and consented to take part in the study were

enrolled. The Google forms were sent to their personal social media accounts based on their consent. Those who have completed the forms including the inventories and scales were evaluated.

The data was collected from 30th August 2021 to September 10th 2021 containing questions related to the COVID pandemic like history of contraction of COVID infection, hospitalization, ICU admission, bereavement of family members etc along with education details and socio-demographic details.

**The following inventories were likewise included:**

1. Beck Depression 13 item inventory<sup>15,16</sup> An approved normalized short structure self-evaluating measure for depression that scores 0-4 No depression, 5-7 Mild Depression, 8-15 Moderate Depression, and  $\geq 16$  Severe Depression.
2. Beck-21 item Anxiety Inventory<sup>17</sup> (BAI): An approved normalized self-evaluating instrument for anxiety, with scores going from 8 to 15 for mild anxiety, 16 to 25 for moderate anxiety, and 26 to 63 for severe anxiety.
3. Adult Hope Scale: A 12-item scale that evaluates an individual's degree of hope. The scale is separated into two subscales that make up Snyder's<sup>19</sup> cognitive model of hope: (1) Agency (i.e., objective coordinated energy) and (2) Pathways (i.e., intending to achieve objectives). The Agency subscale has four items, and the Pathways subscale has four. The last four items are fillers. Each question is reviewed on an 8-point Likert scale that ranges from Definitely False to Definitely True.

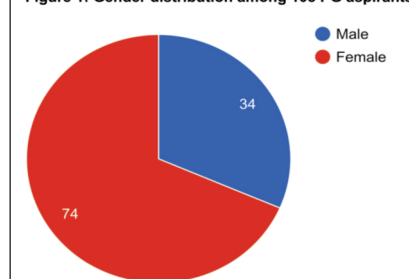
**Statistical Analysis**

Data was entered into a spreadsheet and analyzed statistically using SPSS version 22 (Statistical Package for the Social Sciences).

**RESULTS**

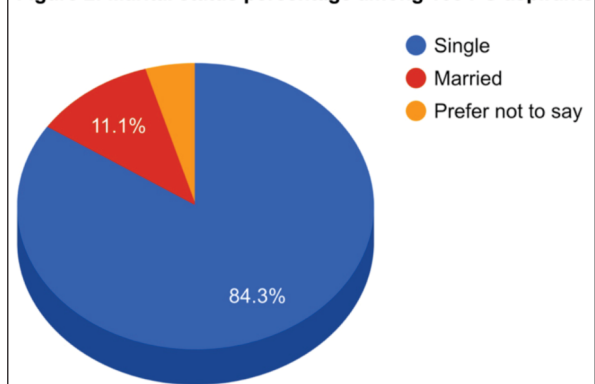
A total of 108 PG aspirants participated in the study - 74 Females and 34 Males (Figure 1). The minimum age of the aspirants from the study is 23 years and the maximum age is 35 years with a mean age of 25.44 +/- 1.703 SD.

Figure 1: Gender distribution among 108 PG aspirants

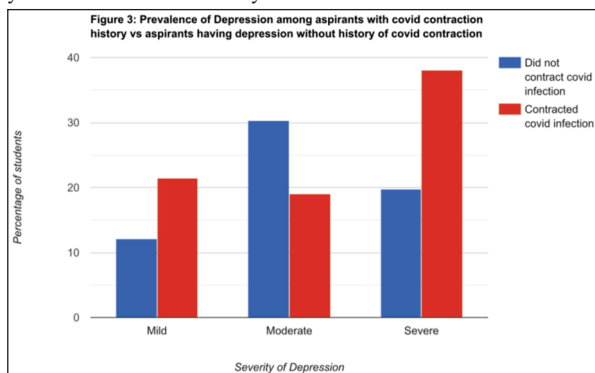


Out of 108 students, 91 of them are single, 12 were married and 5 of them preferred not to say their marital status (Figure 2). Aspirant's year of joining in MBBS ranged from 2005 to 2015. 40.7% had joined their course in 2013.

**Figure 2: Marital status percentage among 108 PG aspirants**



The percentage of preparation years of less than 1 yr is 45.4%, 1-2 years 49.1% and More than 2 years is 5.6%.



The mean score of depression among the PG aspirants is 10.10 with +/- 8.56 SD which accounts for moderate depression. Out of 108 PG aspirants, 42 people contracted COVID, of which 33 reported Depression - 9 mild, 8 moderate, 16 were severe; based on Beck Depression Inventory which accounts 78.57% depression with a history of COVID contraction (Figure 3).

Of those who did not contract COVID i.e., 66, the numbers of aspirants with depression were 41. Of these 8 were mild, 20 moderate and 13 severe. Among the 41 aspirants, 25 of them had a history of bereavement of the family members and history of contraction of COVID in the close family members. 62.1% was the depression seen in aspirants who did not contract COVID. (Table 1) The overall depression ranging from mild to severe among the NEET PG aspirants is 68.52%. When a Chi square test is applied between the aspirants with a history of COVID contraction and severity of depression including mild, moderate and severe among them, a significant p value of 0.0440 is obtained which confirms that there is a statistically significant association between history of COVID infection and depression.

**Table 1: COVID related questionnaire with depression severity and their association estimated using the Chi square test**

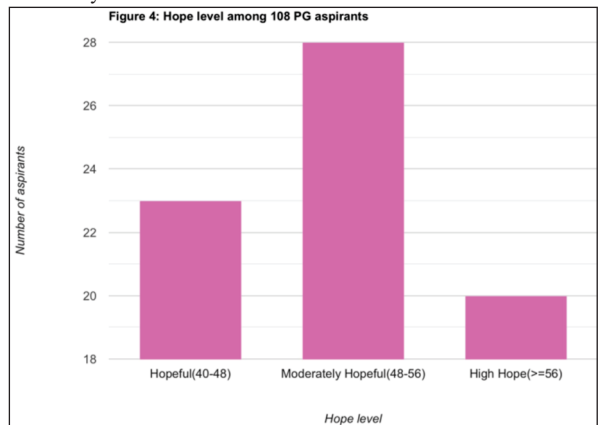
Contraction of covid 19	Depression severity				Pearson's Chi-square	p-value
	None, n (%)	Mild, n (%)	Moderate, n (%)	Severe, n (%)		
Did you contract covid ever since the pandemic has started?					8.11	0.0440*
Yes	9(21.4)	9(21.4)	8(19)	16(38.1)		
No	25(37.9)	8(12.1)	20(30.3)	13(19.7)		
Ever hospitalized for covid pneumonia?					2.77	0.4280
Yes	1(12.5)	1(12.5)	2(25)	4(50)		
No	33(33)	16(16)	26(26)	25(25)		
Ever Had an ICU admission due to Covid?					5.37	0.1460
Yes	1(25)	0(0)	0(0)	3(75)		
No	33(31.7)	17(16.3)	28(26.9)	26(25)		
Did anyone of your close (in house) family member contracted covid?					3.26	0.3530
Yes	18(26.1)	13(18.8)	18(26.1)	20(29)		
No	16(41)	4(10.3)	10(25.6)	9(23.1)		
Did you loose any close family member to covid?					0.86	0.8350
Yes	10(31.2)	4(12.5)	10(31.2)	8(25)		
No	24(31.6)	13(17.1)	18(23.7)	21(27.6)		
Have you been doing/done any covid duties?					3.15	0.3690
Yes	16(29.6)	9(16.7)	11(20.4)	18(33.3)		
No	18(33.3)	8(14.8)	17(31.5)	11(20.4)		

\*- P<0.05 there is a significant association between Contraction of covid 19 and Depression severity by using Pearson's Chi-square test

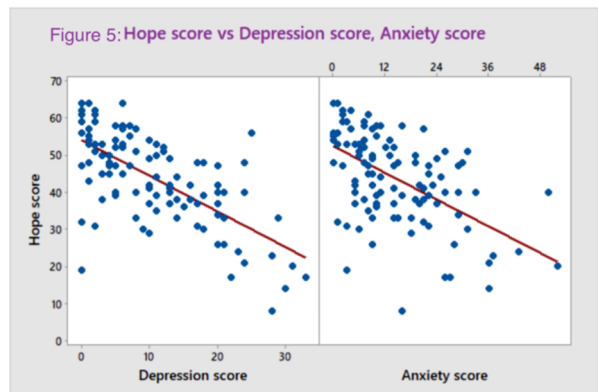
The mean score of anxiety among aspirants is found to be 13.84 with +/- 11.37 SD which accounts for mild anxiety. Out of 108 PG aspirants, 42 people contracted COVID, of which 25 of them reported anxiety - 11 mild, 6 moderate, 8 severe; based on Beck Anxiety Inventory.

59.52% of aspirants found to have anxiety of those who contracted COVID infection.

Of those who did not contract COVID i.e., 66, the numbers of aspirants with anxiety were 44, 22 had no anxiety. Of these 8 were mild, 16 moderate and 10 severe. 66.67% found to have anxiety without COVID. The overall anxiety ranging from mild to severe among aspirants is 63.8%. The p value for history of COVID contraction and severity of anxiety was found to be 0.8930 which is not significant. No significant association between the COVID contraction variables and the anxiety is seen.



Hope is described as the belief in one's ability to deduce pathways to desired goals and encourage oneself to follow those pathways via agency thinking. The mean score of total hope was found to be 44.167 +/- 12.451 SD which indicates hopeful. It was found that 23 aspirants were hopeful, 28 were moderately hopeful, 20 of them with high hope (Figure 4). 34.25% of the aspirants found to have no hope. No significant association is established between the COVID and hope levels in the study where p values for COVID contraction history and hope level was found to be 0.893.



When a Pearson correlation was applied between hope and depression, the r value was found to be -0.658 and an r value of -0.547 was seen when applied between hope and anxiety scores. According to the scatter plot diagram, in figure 5- higher levels of hope are associated with lower levels of depression and anxiety, while low levels of hope are associated with higher levels of depression and anxiety.

**DISCUSSION**

Chronic stress is most commonly seen in the medical school students and graduates which often progresses to severe burnout. Enormous curriculum and hospital duties have all contributed to this stress.

The emotional well-being of students during medical school training has long been a source of worry. Because it has the potential to impair a student's overall performance and have a cascade of ramifications on both personal and professional level. Anxiety and depression can be used as a valid indication for determining the prevalence of mental illness in any community.

Depression, anxiety, and stress in medical students are frequently undetected and mistreated. Because of the shame and guilt associated with mental illness, they were often hesitant to seek professional help.

In Shailesh Rai et al<sup>20</sup> study, 24 percent of medical PG aspirants

experienced moderate to severe depression and 42% of them have anxiety. In the current study, 68.52% of medical PG aspirants experienced mild to severe depression according to Beck Depression Inventory.

Depression, anxiety and stress levels were significantly higher in the Pre-Exam group, according to Kulsoom and Afsar's<sup>21</sup> research. Year 4 students had the greatest rates of depression, anxiety, and stress, and it is sometimes assumed that medical students have high rates of depression, anxiety, and stress.

Depression was shown to be prevalent in 41.5 percent of undergraduate and postgraduate students studying medicine around the world. During the COVID-19 outbreak, studies show a higher level of anxiety among college students, and web-based learning is a major cause of anxiety and depression<sup>22</sup>.

Hope, which is also a measurable quality, is one of the psychological factors that aids people in moving forward. Higher levels of hope have been linked to improved academic, athletic, physical, psychological outcomes. Hope was revealed to be inversely connected to depression and anxiety in the current study. The more hope aspirants have, the less depressed and anxious they were.

### Limitations

There is no systematic COVID questionnaire to apply.

Recall bias can be influenced by an individual's current emotional state.

The study did not account for confounding factors such as a family history of psychiatric illness or a previous history of psychiatric illness.

### CONCLUSION

The overall depression among NEET PG aspirants was found to be 68.52% and a significant association between the COVID contraction history and depression is established. Anxiety and Depression were evident among medical PG aspirants in our study. Increasing hope among the doctors would probably reduce their anxiety and depression ultimately improving their mental health. So, there is an urgent need to address the pandemic related mental health crisis effectively and further studies with structured questionnaire have to be done to safeguard the mental well being of the budding health care professionals.

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