

Research Paper

## Well-Being and Anxiety Level of College Students During Covid-19 Pandemic Lockdown

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### ABSTRACT

**Background:** The COVID-19 pandemic had a pronounced effect on individuals across the globe. The consequent stay-at-home directives obstructed recreational services access and reliance on internet-based teaching via smart gadgets, thereby likely aggravating behavioural and emotive problems. Previous studies showed that adolescents suffered from stress and compromised quality of life due to the crisis period. Therefore, the study aimed to evaluate wellness status among university students and check for anxieties amid the COVID-19 lockdown. **Objectives:** To ascertain the impact of the COVID-19 lockdown on well-being and anxiety levels among college students. **Methods:** The study involved 103 healthy college students aged 18-30 evaluated for psychological health using the GAD-7 and WHO-5 questionnaires. Participants completed these assessments via Google Forms, with the GAD-7 measuring anxiety and the WHO-5 assessing overall psychological well-being. **Result:** The participant's mean age was 22.64±2.92 years. There was a moderate correlation between WHO 5 and GAD 7 with  $r=-0.43(p<0.001^*)$ . The combined GAD7 score for anxiety and WHO5 score for general well-being was 8.45±5.32 and 13.56±5.95. **Conclusion:** There was a reduction in well-being and a mild increase in anxiety levels in both genders during the COVID lockdown period. Furthermore, females had reduced general well-being and decreased anxiety levels when compared to male participants.

**Keywords:** COVID-19, Well-being, Anxiety Level, College Students

In December 2019, the world witnessed a global pandemic of COVID-19, which is induced by a newly identified coronavirus known as SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2). This unprecedented event significantly impacted billions of individuals worldwide, according to the World Health Organization (WHO) (Li et al. 2020).

Distinct measures, such as adhering to COVID-appropriate behavior encompassing stringent hygiene practices, isolation, social distancing, quarantine, and the enforcement of partial or complete lockdowns, have been instituted. The closure of educational institutions was deemed imperative, particularly considering the susceptibility of the young population, leading to a surge in the reliance on smart devices for online learning. Students encountered

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not only the heightened risk of viral infection mortality but also endured considerable psychological stress. As essential contributors to community foundations, college students require adequate consideration during this pandemic (D et al., 2024).

The lockdown has brought a sense of anxiety and stress and a lack of voluntary participation among students which lead to short-term and long-term psychosocial and mental health implications for students. The psychological impact of the COVID-19 epidemic on college students having economic effects, delays in academic activities, and effects on daily life were positively associated with anxiety symptoms for students. (Cao et al., 2020) Another study from Germany showed students suffer severely from pandemic-related social restrictions (Holm-Hadulla et al., 2021).

The speed with which the pandemic has developed, the extent of the governmental and educational mitigation strategies, and the ongoing nature of the threat make this a unique experience. Commonly observed effects of such experiences include anxiety, depression, and stress, but also low academic motivation (Copeland et al., 2021).

Amid the ongoing pandemic, research indicates a spectrum of psychological repercussions ranging from heightened anxiety to widespread sentiments of despair and desperation, potentially culminating in suicidal tendencies (Serafini et al., 2020).

Several research studies have emphasized the correlation between COVID-19, mental health, and suicidal tendencies. These investigations reveal a notable rise in suicide rates corresponding to an increase in mental health cases throughout the pandemic. One of the primary factors contributing to documented suicide attempts was identified as depression, with anxiety being mentioned in conjunction (Acharya et al., 2022; Baldessarini et al., 2017). Despite this supporting evidence, research investigations have prioritised the examination of the COVID-19 disease and its patients, giving comparatively less attention to its psychological impacts.

Furthermore, numerous mental health studies related to COVID-19 have concentrated predominantly on assessing its impact on infected individuals and high-risk groups, such as those with comorbidities and the elderly. However, there has been a noticeable lack of emphasis on other vulnerable demographics, particularly the younger age group, who have demonstrated a heightened prevalence of psychological distress compared to other age groups even before the onset of the pandemic (Marahwa et al., 2022; Twenge et al., 2019).

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## **METHODOLOGY**

This cross-sectional investigation was carried out through an online survey targeting college students from diverse academic disciplines, encompassing fields such as medicine, engineering, and other undergraduate and postgraduate programs.

### *Study design and participants*

We conducted a cross-sectional study using convenient sampling among college students living in India during the COVID-19 lockdown. The study included both male and female healthy college students, aged between 18 to 30 years, excluding those not enrolled in any college and who had a history of any psychiatric disorder.

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113 participants responded. 10 responses had to be discarded since they were not pursuing any college degree. A total of 103 responses were considered for the study.

### *Sources of Data and Procedure*

Before the commencement of the study, ethical approval was obtained from the institutional review boards (IRB) Amar Jyoti Institutional Review Board – Ethical Committee Amar Jyoti Institute of Physiotherapy, New Delhi, India. Informed consent was obtained from all participants, and ethical guidelines for human research were strictly adhered to throughout the selection process, ensuring the ethical conduct of the study. Data was collected through an anonymous online survey by filling out Google forms (<https://bit.ly/42n4Tb3>) that were propagated through social media (WhatsApp and Emails). They filled out the form after submitting an informed consent and agreeing to participate in the survey. No personal information was gathered in the study. The age range represented the young adult population typically found in colleges. The inclusion of healthy individuals ensured that the study's findings primarily reflected the impact of the pandemic on their mental health rather than pre-existing health conditions.

### *Theoretical framework*

The study used anxiety and well-being as the dependent variable and the COVID-19 pandemic as an independent variable. Whereas anxiety included the GAD 7 (General Anxiety Disorder 7) scale, well-being included the WHO 5 (World Health Organization 5) scale.

### *Instruments*

The questionnaire consisted of two sections to gather information.

Section one comprised the Generalized Anxiety Disorder GAD-7, a screening questionnaire for measuring the severity of major anxiety disorders in mental health care. It is a 7-item anxiety scale with participants reporting the frequency of symptoms within the last two weeks. Severity is classified as minimal (0–4), mild (5–9), moderate (10–14), and severe (15–21). It has a high internal consistency of Cronbach's  $\alpha = 0.91$  (Tiirikainen et al., 2019).

Section two comprised the WHO-5 Well-Being Index, a screening instrument to measure subjective well-being and depression. It consists of five positively worded items that are rated on a 6-point Likert scale, ranging from 0 (at no the time) to 5 (all of the time) with participants reporting the frequency of symptoms within the last two weeks. The raw scores are transformed to a score from 0 to 100, with lower scores indicating worse well-being. A score of  $\leq 50$  indicates poor well-being and suggests further investigation into possible symptoms of depression. A score of 28 or below is indicative of depression (Bech et al., 1996; Bech et al., 2003). It has a high internal consistency of Cronbach's  $\alpha = 0.85$  (Omani-Samani et al., 2019).

These comprehensive assessments provided a holistic view of the psychological status of the participants, particularly in light of the challenging circumstances posed by the COVID-19 pandemic.

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### Statistical analysis

Data was compiled and a rigorous statistical analysis was carried out using SPSS ver. 28(Windows version), employing two fundamental measures: the mean and the standard deviation for both scales. The data showed ( $r = -0.42$ ) with  $p < 0.001$  suggesting a moderate correlation between Anxiety and Depression. Also, there was a significant association between Anxiety and Depression with  $\chi^2(6) = 22.51$ ,  $p < 0.001$ . (Table 2)

## RESULTS

### General data

Of the 113 questionnaires collected, ten responses were excluded as they did not involve individuals pursuing a college degree. The study considered a total of 103 responses, 57(55.3%) respondents were males and 46(44.6%) were female university students. (table 1) There was a moderate correlation ( $r = -0.42$ ) with  $p < 0.001$  between the anxiety and well-being of the participants. Also, anxiety and well-being are highly associated with each other ( $\chi^2(6) = 22.51$ ,  $p = 0.001$ ).

The data shows 48.4% of participants had mild anxiety and poor well-being while 46.7% of participants are suffering from severe anxiety and depression.

### Anxiety

Based on the cut-off scores for the GAD-7 which is 7, of the 103 respondents, 64 (62.1%) have had anxiety including 37(64.9%) male and 27(58.6%) female participants. The mean score of  $8.45 \pm 5.32$  (Mean $\pm$ SD) denoting mild anxiety was seen in respondents. (figure 1). There was an association between gender and anxiety with ( $\chi^2(3) = 7.6$ ,  $p = 0.005$ ), whereby females (47.8%) are mildly anxious and males (33.3%) are moderately anxious.

### Well-being

Based on the cut-off score of WHO5 which is less than 50, of the 103 respondents, 46 (44.6%) have poor well-being including 23(40.3%) male and 23(50%) female participants. The mean score of  $13.56 \pm 5.95$  (Mean $\pm$ SD) i.e. 54.2% denotes average well-being among respondents. (figure 2). There was no association found between gender and well-being.

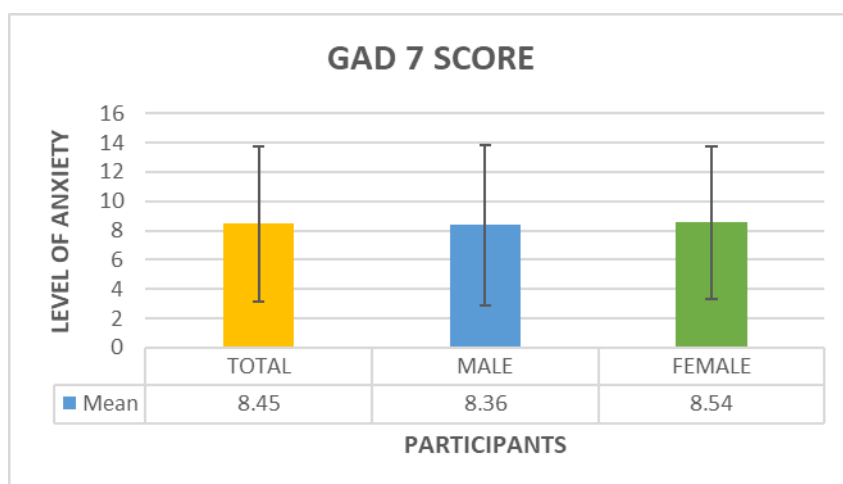
Table-1 General Demographic and statistical information

Outcome measures	Total (Mean $\pm$ SD) n= 103	Male(Mean $\pm$ SD) n= 57	Female (Mean $\pm$ SD) n= 46	p-value*
AGE (years)	22.64 $\pm$ 2.92	22.64 $\pm$ 3.16	22.63 $\pm$ 2.63	0.952
WHO 5(Well-being) Index	13.56 $\pm$ 5.95 [54.24%]	13.24 $\pm$ 5.54 [56.04%]	13.92 $\pm$ 6.46 [52%]	0.55
GAD score	7 8.45 $\pm$ 5.32	8.36 $\pm$ 5.48	8.54 $\pm$ 5.18	0.882

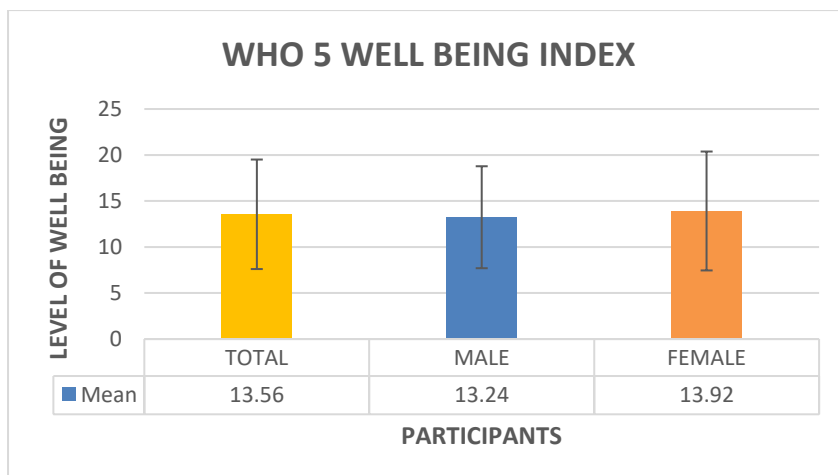
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**Table-2 Association between WHO 5 and GAD 7**

		GAD 7 Scoring			
		< 5(Minimal)	5-9(Mild)	10-14(Moderate)	15+(Severe)
WHO 5 Scoring	<30(Depression)	6.70%	33.30%	13.30%	46.70%
	30-50(Poor Well-being)	9.70%	48.40%	29.00%	12.90%
	51+(Good Well-being)	36.80%	29.80%	24.60%	8.80%

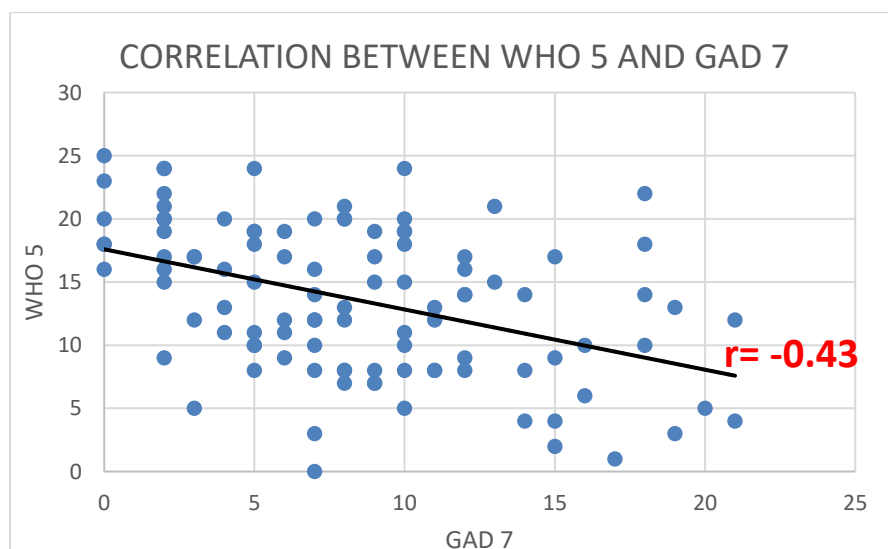


**Figure-1 GAD 7 scoring of total(8.45), male (8.36), and female(8.54) students**

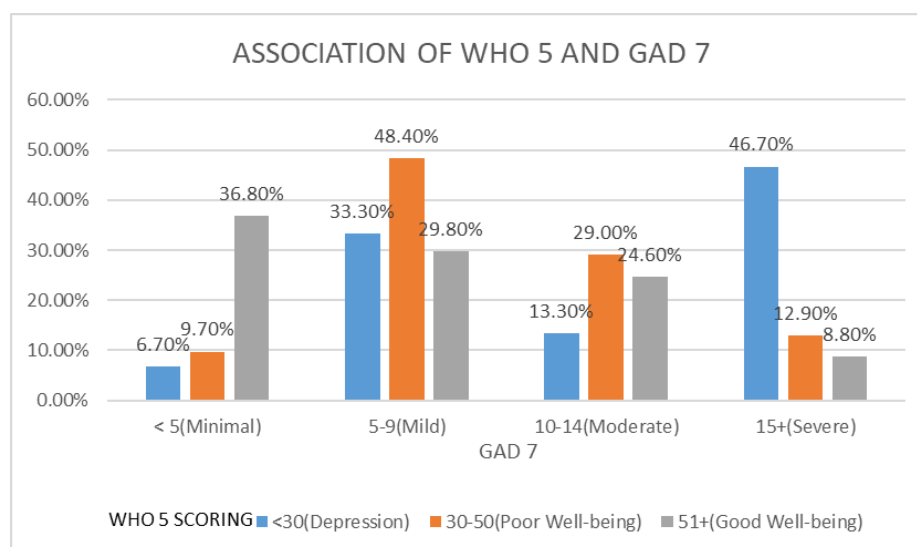


**Figure-2 Well-being index scoring of total (13.56), male (13.24), and female (13.92) students**

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**Figure-3 Correlation of WHO 5 and GAD 7**



**Figure-4 Association of WHO 5 and GAD 7**

## DISCUSSION

Existing research has demonstrated that public health epidemics can induce psychological repercussions in individuals, manifesting as conditions such as depression, fear, anxiety, worry, and stress, among other effects. Notably, university students are recognized as a demographic vulnerable to mental health issues (Tiirikainen et al., 2019). Therefore, this study evaluated general well-being and anxiety levels in the COVID-19 pandemic in India. Major nations have seen effects on psychological well-being. Studies showed that the overall pooled prevalence rate of anxiety symptoms was 29.1%, according to GAD-7 (Ebrahim et al., 2022). Our study reveals a marginal uptick in levels of anxiety among the participants. This subtle increase in anxiety suggests a noteworthy aspect of the psychological impact experienced during the lockdown period.

The sudden shift to online learning during the lockdown presented challenges for college students in India. Uncertainty about the academic calendar, changes in assessment methods, and the digital divide have contributed to heightened academic stress. Studies have shown a direct correlation between academic stress and increased anxiety levels among students

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(Zhang et al., 2021). The lockdown measures implemented to curb the spread of the virus led to social isolation, limiting face-to-face interactions among college students. Social connections play a crucial role in mental well-being, and the absence of these interactions may contribute to feelings of loneliness and isolation, which are linked to elevated levels of anxiety (Banerjee et al., 2020). The findings from our research suggest that the overall well-being of individuals, as assessed through the lens of quality of life during the lockdown period, is situated at an intermediate or average level.

Furthermore, while addressing the gender-specific patterns in mental health responses to the COVID-19 pandemic, our study indicates that women exhibited a lower quality of life and lower anxiety levels in comparison to men. These findings align with a study conducted in the Netherlands, which mirrored our results, suggesting that the impact of the COVID-19 pandemic on mental health displays notable variations. According to the Dutch study, there is a clear divergence in the mental health experiences of women, who reported higher levels of depression, and men, who experienced elevated levels of anxiety (Vloo et al., (2021). These results contrast with those of a Chinese study, which found that another important factor contributing to this group's greater anxiety levels was being female (Marahwa et al., 2022).

Studies have shown a noticeable drop-in physical fitness throughout the COVID-19 pandemic. They were considering the close relationship between overall quality of life and mental and physical health (Li et al. 2020).

The findings from our study revealed that a substantial majority, specifically 62.1% of the total participants, experienced a mild to moderate level of anxiety during the lockdown period. Additionally, a significant % of the participants, accounting for 44.6%, reported poor well-being.

Given that our data collection coincided with the second wave of the COVID-19 pandemic, our objective was to ascertain whether the psychological well-being of individuals was more profoundly impacted during this period. This was attributed to the continuation of online education and examinations in colleges, coupled with a lack of interaction with peers. In contrast to the first wave, the impact was found to be less severe during the second wave. This difference may be attributed to a more planned and resilient approach, as individuals had acquired coping strategies from their previous experiences, indicating their adaptive capacity in navigating challenging circumstances. This is consistent with other studies that highlighted that people who exhibited heightened psychological resilience and perceived social support experienced improved psychological well-being during the second lockdown (Kumar et al., 2021).

## CONCLUSION

In conclusion, our research examining the well-being and anxiety levels of college students during the COVID-19 pandemic lockdown provides valuable insights into the complex dynamics of mental health amidst unprecedented challenges. The results highlight the significant influence of the pandemic on the psychological well-being of college students, revealing a nuanced interplay between well-being and anxiety. The observed average well-being, coupled with a slight increase in anxiety levels, underscores the resilience exhibited by the student population in the face of lockdown-induced disruptions. Moreover, gender-based variations and a comparison between the first and second waves offer unique perspectives on the diverse psychological responses during this period. Participants

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experienced heightened anxiety levels, and their well-being was impacted; however, in comparison to studies conducted during the first wave, the situation was comparatively improved. This suggests that students demonstrated increased organization and adaptability, better equipped to navigate and counteract the adverse effects of the COVID-19 lockdown.

### **Implication**

There has been an apparent decline in mental health throughout the COVID-19 pandemic, which has resulted in a slight decrease in well-being. Reduction in psychological well-being should be considered a major warning sign because psychological health and life satisfaction are closely related. This is important to understand since a decline in psychological health can have a significant impact on a person's overall biopsychosocial well-being. It is crucial to recognize the connection between psychological health and general well-being to provide a comprehensive approach to individual health and resilience. This makes it even more important to address and monitor mental health during times of crisis.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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