

# Impact of COVID-19 On the Mental Health of College Students Within India and Outside India

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**Abstract:** Depression is a mood disorder in which individuals experience extreme unhappiness, lack of energy, and several related symptoms (Baron, 1995). Anxiety involves a general feeling of apprehension about possible future danger (Butcher et al, 2019). Stress refer to one's responses to events that disrupt, the physical and psychological functioning (Lazarus & Folkman, 1984; Taylor, 1991). Individuals experience stress when they have to face demands or threats without adequate resources to meet these demands or mitigate the threats (Lazarus & Folkman, 1984). The new coronavirus called SARS-cov-2 causes Covid-19 disease. 80% of those who develop symptoms of the disease recover whereas 15% become seriously ill and require oxygen and 5% become critically ill and need intensive care. Although people aged 60 years and above, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, obesity or cancer, are at a higher risk of developing serious illness, anyone can get sick with COVID-19 and become seriously ill or die at any age (WHO, 2020). The aim of this study is to find out the impact of Covid-19 on the mental health of college students inside and outside India ever since the start of online classes in the confinement period. The sample considered included a total of 62 college students which was selected through purposive sampling technique and out of which 36 are from within India and 26 are from outside India. The DASS-21 questionnaire and the IES-R questionnaire were used for data collection. The sample was analyzed using Spearman's rank correlation and Mann-Whitney U test. From the result it can be inferred that there is a significant difference between the level of depression, stress, anxiety, PTSD, hyperarousal, avoidance and intrusion among college students inside and outside India. It was also found that there is a positive correlation between depression and PTSD, depression and intrusion, depression and avoidance, depression and hyperarousal, stress and PTSD, stress and intrusion, stress and avoidance, stress and hyperarousal, anxiety and PTSD, anxiety and intrusion, anxiety and avoidance, anxiety and hyperarousal.

**Keywords:** Anxiety, Avoidance, Covid-19, Depression, Hyperarousal, Intrusion, Mental Health, PTSD, Stress.

## 1. Introduction

While the coronavirus pandemic has spread all over the world and created disruption to the normal lives of individuals it has also created an imbalance in the lifestyle of the college students. The pandemic has said to affect the college students physically, academically, financially and psychologically. In order to contain the situation higher institutions all over the world has switched to online learning platforms overnight. Courses that require hands on experience and high level of

interaction have a clear disadvantage with respect to the evaluation of students. (Sahu, 2020).

This action may lead to negative psychological consequences among college students. Many students also face difficulty in accessing these online learning platforms due to the unavailability of adequate technology. Apart from this, students are also concerned about their health, health of their family members, given that youth can be asymptomatic carrier of the virus.

Some students who find the campus homelike and welcoming may experience intense feelings of frustration and anxiety. They may also face loneliness and isolation due to social distancing and disconnection from friends. Some of the students who depend on the on-campus counseling services can no longer access it which leaves them feeling helpless and increases their risk for suicide and substance abuse. (Zhai & Du, 2020).

College students may also experience distress due to the uncertainty and abrupt disruption of the semester in addition to the anxiety caused by school closure and disruption of their academic routine. In case of many final year students, they had to cease their research projects and internships which jeopardizes their program of study, delay their graduation, and undermine their competitiveness on the job market, and as a result fuels their anxiety.

The fact that the COVID-19 pandemic affects mental health of college students only reveals the urgent need to understand these challenges and concerns in order to develop a courses of action to support college students during this difficult time.

### A. Definition of key terms

**Depression:** Depression is a mood disorder in which individuals experience extreme unhappiness, lack of energy, and several related symptoms (Baron, 1995). It is a state of low mood and aversion to activity and can affect an individual's thought, behavior, motivation, feelings, and sense of well-being. (NIMH, 2016)

**Anxiety:** Anxiety is an emotion characterized by an unpleasant state of inner turmoil, often accompanied by nervous behavior such as pacing back and forth, somatic complaints, and rumination. It includes subjectively unpleasant feelings of dread over anticipated events (Seligman, Walker & Rosenhan, 2007).

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*Stress*: Stress is a feeling of emotional strain and pressure. Psychological stress occurs when an individual perceives that environmental demands exceed his or her adaptive capacity. (Cohen, Janicki-Deverts & Miller, 2007).

*PTSD*: Post-Traumatic Stress Disorder (PTSD) is a mental disorder that can develop after a person is exposed to a traumatic event, such as sexual assault, warfare, traffic collisions, child abuse, or other threats on a person's life. (Diagnostic and statistical manual of mental disorders, 2013)

*Hyperarousal*: Hyperarousal is a primary symptom of post-traumatic stress disorder (PTSD). It occurs when a person's body suddenly kicks into high alert as a result of thinking about their trauma. (Cirino, 2018) It is biological in nature, and reflect stress reactions to fear and threat which automatically trigger sub control emotional systems into operation (Friedman, 2000; LeDoux, 1996).

*Avoidance*: The avoidance cluster of PTSD symptoms is an attempt to avoid distressing memories, thoughts, or feelings as well as external reminders such as conversations about the traumatic event or people or places that bring the event to mind. (Tull, 2020).

*Intrusion*: Recurrent recollections of the event in the form of dreams, intrusive memories, and discernable prolonged distress and physical reactions to cues that resemble the traumatic event. (University of Pennsylvania, 2020).

## 2. Review of Literature

Kecojevic, C. Basch, M. Sullivan and N. Davi, (2020) conducted a study on the factors associated with the increased levels of mental health burden among a sample of undergraduate college students in Northern New Jersey, the region of the U.S. severely impacted by the outbreak of COVID-19. A total of 162 students completed the survey, resulting in a response rate of 36.0%. The tools used for this study were Brief Symptom Inventory, BSI-18 and the Perceived Stress Scale (PSS). From this study it was proved that the current COVID-19 pandemic is making a significant negative impact on mental health of college students.

Son, S. Hegde, A. Smith, X. Wang and F. Sasangohar, (2020) conducted a study on timely assessment of the effects of the COVID-19 pandemic on the mental health of college students. Interview surveys were conducted on 195 students at a large public university in the United States to understand the effects of the pandemic on their mental health and well-being. The tool used for data collection was Perceived Stress Scale-10 which were then analyzed through quantitative and qualitative methods. It was found that due to the long-lasting pandemic situation, lockdown and stay-at-home orders, the COVID-19 pandemic brings negative impacts on the students of higher education institution.

Aylie, N., Mekonen, M., & Mekuria, R. (2020) conducted a study to assess the psychological impacts of COVID-19 pandemic among university students in Bench-Sheko Zone, South-west, Ethiopia. The study was conducted on 322 university students with a 97.5% response rate. The tools used in this study is the DASS-21. This study revealed a higher prevalence of depression, anxiety, and stress among university

students.

Aiyer A., Surani S., Gill Y, Iyer R., Surani Z. (2020) conducted a study on Mental Health Impact of Covid-19 on Students in the USA. The study was done on a sample of 369 students out of which 51.8 % were male and 44.1% were studying in college. The tools used for this study were Perceived Stress Scale-4 and Patient Health Questionnaire on Depression and Anxiety-4. From this study it was found that the Covid-19 pandemic has resulted in extremely high level of stress and mental health morbidity in both high school and college students and it is more pronounced in females.

### A. Rationale

After reviewing the literature, it was found that there was no study related to the impact of Covid-19 on the mental health of college students inside and outside India. Therefore, the researcher is hopeful about finding out valuable information so as to enable the researcher and others to contribute for the welfare of the students studying in higher education institution.

## 3. Methodology

### A. Problem

Is there a relationship between the level of depression, stress, anxiety, hyperarousal, avoidance, intrusion and PTSD among college students studying inside and outside India during covid-19 pandemic?

### B. Aim

To understand the level of depression, stress, anxiety, hyperarousal, avoidance, intrusion and PTSD among college students studying inside and outside India during covid-19 pandemic.

### C. Objective

1. To study level of depression, stress, anxiety, hyperarousal, avoidance, intrusion and PTSD among college students studying inside and outside India amid Covid-19.
2. To study the correlation between depression and PTSD, depression and intrusion, depression and avoidance, depression and hyperarousal, stress and PTSD, stress and intrusion, stress and avoidance, stress and hyperarousal, anxiety and PTSD, anxiety and intrusion, anxiety and avoidance, anxiety and hyperarousal among college students during covid-19 pandemic.

### D. Variable

1. Independent Variable: Inside/ outside India
2. Dependent Variable: Depression, Stress, Anxiety, Hyperarousal, Avoidance, Intrusion and PTSD.

### E. Hypothesis

1. There will be no significant difference in the level of depression among undergraduates during covid-19 pandemic based on gender.
2. There will be no significant difference in the level of stress among undergraduates during covid-19 pandemic based on gender.

3. There will be no significant difference in the level of anxiety among undergraduates during covid-19 pandemic based on gender.
4. There will be no significant difference in the level of PTSD among undergraduates during covid-19 pandemic based on gender.
5. There will be no significant difference in the level of hyperarousal among undergraduates during covid-19 pandemic based on gender.
6. There will be no significant difference in the level of avoidance among undergraduates during covid-19 pandemic based on gender.
7. There will be no significant difference in the level of intrusion among undergraduates during covid-19 pandemic based on gender.
8. There will be no significant relationship between depression and PTSD among college students during covid-19 pandemic.
9. There will be no significant relationship between depression and intrusion among college students during covid-19 pandemic.
10. There will be no significant relationship between depression and avoidance among college students during covid-19 pandemic.
11. There will be no significant relationship between depression and hyperarousal among college students during covid-19 pandemic.
12. There will be no significant relationship between stress and PTSD among college students during covid-19 pandemic.
13. There will be no significant relationship between stress and intrusion among college students during covid-19 pandemic.
14. There will be no significant relationship between stress and avoidance among college students during covid-19 pandemic.
15. There will be no significant relationship between stress and hyperarousal among college students during covid-19 pandemic.
16. There will be no significant relationship between anxiety and PTSD among college students during covid-19 pandemic.
17. There will be no significant relationship between anxiety and intrusion among college students during covid-19 pandemic.
18. There will be no significant relationship between anxiety and avoidance among college students during covid-19 pandemic.
19. There will be no significant relationship between anxiety and hyperarousal among college students during covid-19 pandemic.

#### F. Research Design

Correlational research design and Between group research design was used to determine if there exists a relationship between mental health issues like depression, stress, anxiety, hyperarousal, avoidance, intrusion, PTSD and the place of

study among college students amid Covid-19.

#### G. Research Sample

Purposive sampling method was used for this and the study sample consisted of 62 college students out of which 26 are studying outside India and rest 36 are studying in India. The sample consisted of participants studying in different institutions and universities in different countries and were of different gender and age.

#### H. Sampling criteria

##### Inclusion criteria:

- Only those who are willing to participate via online means of communication.
- Only students who are currently enrolled in higher education institutions were considered.
- Age limit 18-30.

##### Exclusion criteria:

- Those who are not currently enrolled in universities or colleges.

#### I. Tools

The following tools were administered to each participant in order to collect the required information,

- Socio-demographic data.
- DASS 21 developed by Lovibond, S.H. & Lovibond, P.F. (1995).
- IES-R developed by Weiss, D.S., & Marmar, C.R. (1997).

#### J. Procedure

Permission to conduct the study was obtained from the authorities and the consent of the participants was also attained which was followed by establishment of a rapport between the participants and the researcher through social media. The participants were then individually educated about the purpose of study and were assured the confidentiality of their responses. Finally, the questionnaires were administered through online modes of communication and their responses were noted. The participants were not asked to disclose any of their personal information.

#### K. Analysis of the data

The collected data was analyzed further using statistical package for social science (SPSS-20). The following statistical tests were carried:

- Mean, standard deviation.
- Mann-Whitney Test.
- Spearman's rank correlation.

#### L. Ethical Issues

- The consent of each and every participant was acquired before enrolling them in the study.
- Confidentiality of the responses were maintained and assured.
- As the participants were told the collected data was solely used for research purpose.

### 4. Result

#### A. Data Analysis and Interpretation

The aim of this study was to understand the impact of Covid-19 on the mental health of college students studying inside and outside India. The study consisted of 62 university students out of which 26 are studying outside India and 36 are studying within India. For the purpose of the study the investigator formulated 19 hypothesis and the results are shown below.

Table 1

Mean and significant difference of depression, stress, anxiety, PTSD avoidance, intrusion and hyperarousal among college students inside and outside India

VARIABLE	TYPE	N	MEAN	SIG.
DEPRESSION	Inside India	36	37.18	.003
	Outside India	26	23.63	
	Total	62	12.9032	
STRESS	Inside India	36	38.82	.000
	Outside India	26	21.37	
	Total	62	13.8387	
ANXIETY	Inside India	36	39.94	.000
	Outside India	26	19.81	
	Total	62	11.2258	
PTSD	Inside India	36	40.06	.000
	Outside India	26	19.65	
	Total	62	27.3871	
INTRUSION	Inside India	36	39.83	.000
	Outside India	26	19.96	
	Total	62	10.2581	
AVOIDANCE	Inside India	36	39.32	.000
	Outside India	26	20.67	
	Total	62	10.5323	
HYPERAROUSAL	Inside India	36	37.93	.001
	Outside India	26	22.60	
	Total	62	7.5645	

From the table 1, it is clear that the mean rank for depression, stress, anxiety, PTSD avoidance, intrusion and hyper arousal is higher for students studying inside India than outside India. Also, on comparing the significant value (2-tailed) we can infer that there is a significant difference in the level of depression, stress, anxiety, PTSD, avoidance, intrusion and hyper arousal among the two groups.

Thus, from these results the researcher rejects the 7 hypotheses which states that there is no significant relationship in the level of depression, stress, anxiety, PTSD, avoidance, intrusion and hyperarousal among college students studying inside and outside India during covid-19 pandemic.

Table 2

Correlation co-efficient value between depression and PTSD, depression and intrusion, depression and avoidance, depression and hyperarousal, stress and PTSD, stress and intrusion, stress and avoidance, stress and hyperarousal, anxiety and PTSD, anxiety and intrusion, anxiety and avoidance, anxiety and hyperarousal

		DEPRESSION	STRESS	ANXIETY
PTSD	Correlation Coefficient	.786**	.835**	.849**
	Sig. (2-tailed)	.000	.000	.000
	N	62	62	62
INTRUSION	Correlation Coefficient	.666**	.741**	.775**
	Sig. (2-tailed)	.000	.000	.000
	N	62	62	62
AVOIDANCE	Correlation Coefficient	.699**	.720**	.756**
	Sig. (2-tailed)	.000	.000	.000
	N	62	62	62
HYPERAROUSAL	Correlation Coefficient	.737**	.790**	.756**
	Sig. (2-tailed)	.000	.000	.000
	N	62	62	62

\*\* . Correlation is significant at the 0.05 level (2-tailed)

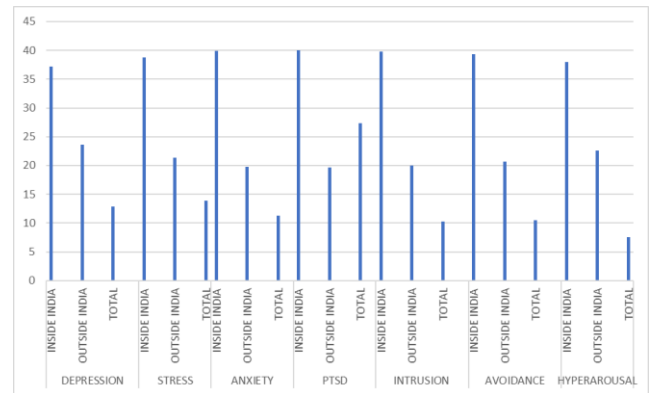


Fig. 1. Mean score of depression, stress, anxiety, PTSD avoidance, intrusion and hyperarousal among college students inside and outside India

In the table 2, while looking at the significant values of correlation and the values of correlation coefficient it is clear that there exists a relationship between depression and PTSD, depression and intrusion, depression and avoidance, depression and hyperarousal, stress and PTSD, stress and intrusion, stress and avoidance, stress and hyperarousal, anxiety and PTSD, anxiety and intrusion, anxiety and avoidance, anxiety and hyperarousal and the relationship is positive in nature.

Therefore, hypothesis 8 to 19 which states that there is no significant relationship between depression and PTSD, depression and intrusion, depression and avoidance, depression and hyperarousal, stress and PTSD, stress and intrusion, stress and avoidance, stress and hyperarousal, anxiety and PTSD, anxiety and intrusion, anxiety and avoidance, anxiety and hyperarousal is rejected.

### 5. Conclusion

Coronavirus pandemic has created disruption to the lives of the individuals all over the world and in order to contain the rapid spread of the viral infection, higher institutions has switched to online learning platforms overnight. The present study on the impact of Covid 19 on the mental health of college students was conducted on a total of 62 college students and from the results it can be inferred that there is a positive correlation between the variables taken that is depression, stress, anxiety, PTSD, hyperarousal, avoidance and intrusion. Also, higher levels of depression, stress, anxiety, PTSD,

hyperarousal, avoidance and intrusion can be observed in the students studying within India compared to the students outside. This study can be used to develop interventions that will aid in the welfare of the students and further studies can be conducted on a larger population.

#### A. Major Findings

1. There is a significant difference in the level of depression among undergraduates during covid-19 pandemic based on gender.
2. There is a significant difference in the level of stress among undergraduates during covid-19 pandemic based on gender.
3. There is a significant difference in the level of anxiety among undergraduates during covid-19 pandemic based on gender.
4. There is a significant difference in the level of PTSD among undergraduates during covid-19 pandemic based on gender.
5. There is a significant difference in the level of hyperarousal among undergraduates during covid-19 pandemic based on gender.
6. There is a significant difference in the level of avoidance among undergraduates during covid-19 pandemic based on gender.
7. There is a significant difference in the level of intrusion among undergraduates during covid-19 pandemic based on gender.
8. There is a positive correlation between depression and PTSD among college students during covid-19 pandemic.
9. There is a positive correlation between depression and intrusion among college students during covid-19 pandemic.
10. There is a positive correlation between depression and avoidance among college students during covid-19 pandemic.
11. There is a positive correlation between depression and hyperarousal among college students during covid-19 pandemic.
12. There is a positive correlation between stress and PTSD among college students during covid-19 pandemic.
13. There is a positive correlation between stress and intrusion among college students during covid-19 pandemic.
14. There is a positive correlation between stress and avoidance among college students during covid-19 pandemic.
15. There is a positive correlation between stress and hyperarousal among college students during covid-19 pandemic.
16. There is a positive correlation between anxiety and PTSD among college students during covid-19 pandemic.
17. There is a positive correlation between anxiety and intrusion among college students during covid-19 pandemic.
18. There is a positive correlation between anxiety and avoidance among college students during covid-19

pandemic.

19. There is a positive correlation between anxiety and hyperarousal among college students during covid-19 pandemic.

#### B. Implications

As indicated depression, stress, anxiety, PTSD, avoidance, intrusion and hyperarousal show correlation to each other, so from this study it is possible to devise interventions to support college students during this difficult time. This study can be used for the welfare of the individuals.

#### C. Interventions

- Make it a habit to practice mindfulness and exercise daily.
- Use technology to connect with family and friends.
- Do things that you love.
- Collecting facts on the pandemic from credible sources like WHO instead of social media.
- Maintaining a routine to stay organized and combat loneliness.

#### D. Scope

- Further study can be conducted on a larger population.

#### E. Limitation

The research was done on a fairly small amount of sample.

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