The International Journal of
INDIAN PSYCHOLOGY

Research Paper

Psychological Impact of COVID-19

Ashta Kaul[1]*, Chetna Lakhotia[2]

ABSTRACT

Background: The severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2) is an emerging viral infection and a public health emergency that has caused a widely spread pandemic. The current COVID-19 pandemic is prompting feelings of helplessness, fear of falling sick or dying and therefore, requires an urgent and timely understanding of the psychological impact it has had on/mental health status of the community. The aim of this study was to survey the general public in India to better understand their depression, anxiety, and stress levels during the COVID-19 outbreak. *Methods:* The study included a total of 76 participants which consisted of both adult students and working professionals including 38 males and 38 females. An online-based survey using a non-random convenience-based and snowball sample technique was conducted. The survey collected information about several aspects of participants' socio-demographic and psychological impact. The psychological impact was assessed using the Depression, Anxiety and Stress Scale (DASS-21). The Independent sample t-test was run to analyze the collected data. *Results:* The findings of the study indicated that there is no significant difference in the psychological impact of the pandemic among males and females. Another finding of the study suggested a significant difference in the psychological impact of the pandemic among working individuals and students.

T he novel coronavirus disease 2019 (COVID-19) originated in Wuhan, China. The disease is caused by Severe Acute Respiratory Syndrome (SARS) and is highly infectious. The disease can spread through close contact or respiratory droplets. The main features of COVID-19 include fever, fatigue, cough, shortness of breath. Since the end of December 2019 when China reported novel pneumonia caused by coronavirus disease 2019, there has been a rapid spread across borders, infecting people throughout the entire world.

The first case of coronavirus pandemic in India was reported on the 30th of January 2020. According to the official website of the World Health Organisation (WHO), there have been a total of 2,215,074 confirmed cases in India (World Health Organisation, 2020). This is a

---

[1]M. Sc. Psychology, Indian Institute of Psychology and Research, Banglore, India.
[2]Assistant Professor, Indian Institute of Psychology and Research, Banglore, India.
*Corresponding Author

large-scale public health event that has put massive pressure not only on the government but also on the medical and health care providers and the general public.

The risk brought by the pandemic was not only in the form of viral infection but also excruciating psychological pressure to people all over the world (Xiao, 2020; Duan,2020). The pandemic also brought with itself immense health, economic and social difficulties (Haleem, Javaid and Vaishya, 2020). COVID-19 has caused a ripple effect on every aspect of an individual's life. Some of the major adversities were caused in the economic, healthcare, and social front. Difficulties in one sector significantly affected the activities of the other sectors.

One of the major steps taken by the Indian government to avoid the spread of the virus was that of implementing nationwide lockdown. With the rapid escalation of the pandemic, quarantining and self-isolation led to a weighty decrease in the demand, production, utilization, and consumption of different products which subsequently led to lesser demands of the workforce across various sectors (Nicola et al., 2020).

Since the virus can be transmitted through close contact, the World Health Organization ordered certain protocols to be followed to prevent the spread of the disease. This included maintaining social distance, avoiding any form of unprotected contact, shutting down places of mass gathering including malls, restaurants, religious places, and self-isolation (Chakraborty & Maity, 2020).

Although these protocols significantly reduced the chances of getting exposed to the life-threatening virus, it also led to enormous psychological consequences for people. The severe situation is causing mental health problems such as anxiety, stress, depression, denial, anger, psychological distress and fear leading to an amplified need to understand the mental health status of the community on an immediate basis.

A study conducted to survey the general health of the public in china during the times of an epidemic showed that more than half of the participants were moderately or severely psychologically impacted by the pandemic. Almost a third of the sample reported severe anxiety symptoms. Also, the results of the study indicated that female gender, student status ad certain physical symptoms were significantly associated with greater psychological impact as well as a higher level of stress, anxiety, and depression (Wang et al., 2020).

METHODOLOGY

Study population and sample

The total sample size for the present study is 76 which includes adult students and working professionals. The sample consists of 38 males (23 working and 15 students) and 38 females (23 working and 15 students). Non-random convenience and snowball sampling. Non-random convenience sampling is a form of non-probability sampling method which includes selecting sample on the basis of convenience in accessibility or proximity to the researcher. Snowball sampling includes the existing study subjects recruiting future subjects from among their acquaintances. Given the situation of pandemic, data was collected using google forms questionnaire, which was sent to individuals via various online platforms, email and social networks. The questionnaires informed the voluntary nature of the individual's participation as well as the need for consent before answering the questionnaire.

Instrument

The respondents who belong to the sample inclusion criteria were asked to fill a socio-demographic sheet for their personal details and an informed consent was taken. In order to assess the psychological impact, DASS-21 questionnaire was used. DASS-21 is a 21 Likert-type item scale which presents 3 factors: Depressions, Anxiety and Stress. The available options for answering the scale include 0: did not apply to me at all, 1: applied to me to some degree, 2: applied to me to a considerable degree or good part of time, and 3: applied to me very much or most of the time. The answers were categorized using the cut-offs into 5 categories, i.e., *normal, mild, moderate, severe and extremely severe*. The reliability of the scale was analysed with Cronbach's alpha which for depression was 0.076, anxiety α = 0.82 and stress α = 0.75.

Data analysis

The data was analysed using SPSS Version 16. Gender was categorized as male (n = 38) and female (n = 38) and status was categorized as working (n = 46) and students (n = 30). The demographic and other selected characteristics of the respondents were illustrated using analysis of descriptive statistics. Independent sample t-test was used to test the hypothesis of the study. The study aimed to investigate if there would be a significant difference between male and females on depression, anxiety and stress as well as if there would be significant difference between working individuals and students on depression, anxiety and stress.

RESULTS

A total of 76 individuals from different tier-1 cities participated in the study. Females constituted 50% (n = 38) of the sample, with men comprising the other 50% (n = 38). The working individuals constituted 60.52% (n = 46) and students constituted 39.47% (n = 30).

Table 1 Mean, Standard Deviation (SD), Skewness and Kurtosis of Depression, Anxiety and Stress Scores

	N	Mean	Std. Deviation	Skewness	Kurtosis
Depression scores	76	12.68	11.801	0.754	-0.604
Anxiety scores	76	12.39	10.733	1.024	0.470
Stress scores	76	14.42	12.404	0.465	-1.104

Table 1 shows the descriptive statistics of the Depression, Anxiety and Stress Scores in the study for the selected sample (N = 76). Mean (M) of the depression scores was 12.68 and standard deviation was 11.80. The mean (M) of the anxiety scores was 12.39 and standard deviation was 10.73. The mean (M) for stress scores was 14.42 and the standard deviation was 12.40. The skewness and kurtosis for the three scores (depression, anxiety and stress) indicated that the distribution of the current sample is within the normal range of -1.96 to +1.96. Therefore, it can be said that the obtained data from the sample population was normally distributed within the normal probability (bell) curve.

Table 2 Difference in Psychological Impact among males and females

	Males (n=38)		Females (n=38)		t*	Sig (2-Tailed)
	M	SD	M	SD		
Depression score	11.74	11.24	13.63	12.40	-0.697	0.488
Anxiety score	11.42	9.67	13.37	11.74	-0.789	0.433
Stress score	13.84	11.69	15.00	13.20	-0.405	0.687

*P<0.05

Table 2 shows the independent samples t-test for males and females on scores for depression, anxiety and stress. The test was found to be statistically non-significant for depression, $t(74) = -0.69$, $p>0.05$, anxiety $t(74) = -0.78$, $p= >0.05$ as well as for stress, $t(74) = -0.40$, $p=>0.05$.

In order to test the difference in the psychological impact of the pandemic on different genders, i.e., male and female, an independent sample t-test was conducted. This test was found to be statistically insignificant for all the three factors, i.e., depression, anxiety and stress. The results suggest that male and females experienced similar levels of depression, anxiety and stress symptoms during the pandemic.

Table 3 Difference in Psychological Impact among working individuals and students

	Working Individuals (n=46)		Student (n=30)		t*	Sig (2-Tailed)
	M	SD	M	SD		
Depression score	9.74	9.77	17.20	13.30	-2.816	0.003
Anxiety score	10.00	8.50	16.07	12.75	-2.491	0.009
Stress score	10.91	10.36	19.80	13.48	-3.241	0.015

$*P<0.005$

Table 3 shows the independent samples t-test for working and students on scores for depression, anxiety and stress. The test was found to be statistically significant for depression, $t(74) = -2.81$, $p<0.05$, anxiety $t(74) = -2.49$, $p= <0.05$ as well as for stress, $t(74) = -3.24$, $p=<0.05$.

In order to test the difference in the psychological impact of the pandemic on different status of participants, i.e., working and students, an independent sample t-test was conducted. This test was found to be statistically significant for all the three factors, i.e., depression, anxiety and stress. The results indicate that students experienced significantly higher levels of depression, anxiety and stress symptoms during the pandemic than the working individuals.

DISCUSSION

The COVID-19 pandemic is caused due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case in India, which now has the second-highest number of confirmed cases, was reported on 30th January 2020. The pandemic bought with itself various ill-effects on the physical as well as psychological well-being. The unceasing spread of the pandemic, strict isolation, and physical distancing measures along with the delays at the beginning of school, college, and university sessions are expected to influence the mental health of the students.

The aim of this study was to understand if there is any significant difference in the psychological impact between individuals identifying as different genders (male and female) and status (working and students). One of the findings of the study indicated that there is no significant difference in the psychological impact of the pandemic among males and females.

Researches have shown that public health emergencies such as the ongoing pandemic can have serious psychological effects on the student's well-being which can be largely expressed through anxiety, fear, worry, etc (Mei et al., 2011).

Issues pertaining to the pandemic include its effect on one's studies (Cornine, 2020) as well as future employment (C. Wang et al., 2020) which can lead to increased anxiety among students. Since humans are social beings, interpersonal communication is a very vital part of one's life which has also been severely hindered due to the stern social distancing and isolation norms being enforced (Chunfeng, 2020) leading to amplified anxiety among people.

Another finding of the study was that there is no significant difference in the psychological impact among people who identify as male and female. This finding was supported by research also indicating that both males and females experienced similar anxiety symptoms as along with other negative emotions during the pandemic (Moreno et al., 2019).

CONCLUSION

The current study shows that the COVID-19 pandemic has caused a significant psychological impact on the student population. This helps in shedding light on the importance of guiding students to efficiently as well as appropriately regulate their emotions especially through such public health emergencies. Also, avoiding any losses caused by crisis events should become a concern of utmost importance to avoid undergoing negative happenings leading to less experiencing negative and undesirable emotions.

In these unprecedented circumstances, it is exceedingly important to deal with psychological factors and to analyse the effect of COVID-19 pandemic on individual's mental health. The findings of this study can help in developing social as well as health initiatives to prevent and alleviate the pandemics psychological effect on students.

REFERENCES

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *287*.

Chakraborty, I., & Maity, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. *Science of The Total Environment, 728*, 138882. doi: 10.1016/j.scitotenv.2020.138882

Chunfeng, X. (2020). A Novel Approach of Consultation on 2019 Novel Coronavirus (COVID-19)-Related Psychological and Mental Problems: Structured Letter Therapy. *Psychiatry Investigation, 17*(2), 175-176.

Cornine, A. (2020). Reducing Nursing Student Anxiety in the Clinical Setting: An Integrative Review. Nursing Education Perspectives, 41(4), 229-234.

Haleem, A., Javaid, M. and Vaishya, R., 2020. Effects of COVID-19 pandemic in daily life. *Current Medicine Research and Practice*, 10(2), pp.78-79.

Mei SL, Yu JX, He BW, Li JY. Psychological investigation of university students in a university in Jilin province. Med Soc. 2011;24(5):84–6.

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M. and Agha, R., 2020. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78, pp.185-193.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. International Journal of Environmental Research and Public Health, 17(5), 1729. doi:10.3390/ijerph17051729

Conflict of Interest
The author declared no conflict of interest.