



Original Article

COVID-19 and Psychological Complications Among University Students in Islamabad: A Cross-sectional Survey

Ejaz Hussain^{1*}, Maria Zafar², Duaa Afzal³, Kiran Haq⁴, Muhammad Qasim Ali², Somiya Asif⁵

^{1*}Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan

²Yusra Institute of Rehabilitation Sciences, Islamabad, Pakistan

³Ginnastic Physiotherapy, Islamabad, Pakistan

⁴Rawal Institute of Health Sciences, Islamabad, Pakistan

⁵Margalla Institute of Health Sciences, Rawalpindi, Pakistan

ABSTRACT

Background: Due to quarantine, mental health problems particularly depression and anxiety worsen in the general population. The psychological impact of COVID-19 on university students is more due to exaggerated stress levels and anxiety-related evidence as a result of transformed delivery and doubtfulness of university education, technological concerns of online courses of instruction, being far away from home, social separation and financial losses. **Objective:** To determine the post-COVID-19 psychological complications among university students in Islamabad. **Methods:** The study was carried out in various educational universities in Islamabad from March to August 2021. A questionnaire was distributed to obtain data about demographic characteristics and psychological complications during quarantine periods after the Covid-19 outbreak in Pakistan. The questionnaire used to collect data was DASS 21 questionnaire. The association between quarantine due to COVID-19 and students' psychological health was estimated through SPSS 23 analysis procedure with a p-value<0.001 **Results:** The study was completed by participation of 219 individuals, 54(24.7%) females and 165(75.3%) males. All students with age between 18-30 years who completed the questionnaire both physically and online. The results of the cross-sectional study showed that depression p-value=0.30, anxiety p=0.03 and stress p=0.01. **Conclusion:** The incidence of post-COVID-19 quarantine psychological complications was quite high among university students of Islamabad due to home-based and administrative quarantine during lockdown measures for conserving their physical and mental health and daily life activities. The current study concludes that stress, anxiety and depression were quite common in students of universities due to quarantine.

Access
the
article
online



SCAN ME

***Corresponding Author:** Ejaz Hussain, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan
Email: raesejaz92@gmail.com
Keywords: COVID-19; psychological; quarantine; students

Citations: Hussain E, Zafar M, Afzal D, Haq K, Ali MQ, Asif S. COVID-19 and psychological complications among university students in Islamabad: A cross-sectional survey. The Healer Journal of Physiotherapy and Rehabilitation Sciences. 2022; 2(4):287-292

INTRODUCTION

The coronavirus SARS-CoV-2 breakdown, initiated in major provinces of China, has outreached to other countries.^[1] The clinical signs of COVID-19 usually develop after a week following its exposure incorporating high fever, cough, nasal congestion, fatigue and other symptoms of intense upper respiratory tract infections. The progress of infection can cause severe pulmonary conditions leading to pneumonia.^[2] Mental health varies among several characteristics in the general population. Psychological health is estimated to account for nearly one-half of the total health issues for young adults.

Due to quarantine, mental health problems particularly depression and anxiety worsen.^[3] A recent review indicates the psychological impact of COVID-19 on university students. Many of them experienced exaggerated stress levels and anxiety-related evidence as a result of transformed delivery and doubtfulness of university education, technological concerns of online courses of instruction, being far away from home, social separation, weakened family income and future business. These anxiety-induced elements have been discovered in universities across the world.^[4]

Initially, during the COVID-19 outbreak, the Organization of American Medical Colleges suggested ceasing all clinical visits, students expressed reservations about their ability to pursue specialties of interest and their confidence in becoming competent medical specialists. Medical students also reported higher levels of anxiety, stress, and fatigue, with female students reporting more frequently than male students.^[5] Many cross-sectional studies were conducted to determine the prevalence of psychological complications among people due to complete lockdown and social isolation imposed by the higher authorities due to the outbreak of different

contagious diseases in a specified area.^[3] The purpose of this cross-sectional study was to determine the prevalence of post-quarantine psychological complications among the university students of Islamabad and Rawalpindi, Pakistan who got infected by the Coronavirus infection. The findings of the given study aim at assisting the concerned departments of government and health authorities to take steps to minimize the negative impact of isolation among people specifically students so that any pandemic may not affect the educational activities of the state. The study was designed to determine the post-COVID-19 psychological complications among university students in Islamabad.

METHODS

This cross-sectional study was carried out in the universities of Islamabad from March to August 2021. The sample size was collected using the sample size calculator Raosoft. The data was collected physically and online by filling out given questionnaires, administered to obtain information about demographic characteristics and psychological complications in students. Non-probability convenient sampling technique was incorporated to select the participants aged between 18 to 30 years.

Ethical approval was taken from the ethical research committee of Shaheed Zulfiqar Ali Bhutto Medical University and Yusra Institute of Rehabilitation Sciences. The questionnaire used to collect data was DASS 21 questionnaire. The association between quarantine due to COVID-19 and students' psychological health was estimated through SPSS 23 analysis procedure with a p-value < 0.001.^[6] Frequency and percentages were calculated for categorical variables.

RESULTS

A total of 219 participants with a history of COVID-19 were enrolled in the study, 54 (24.7%) were males and 165 (75.3%) were females, showing an overall predominance of females. The age groups were considered ranging from 18-30 years of age with a mean value of 23.66 ± 1.32 years with a maximum age of 30 and minimum age of 20. The total number of participants from Islamabad and Rawalpindi was 117 (54.4%) and 102 (46.6%) respectively. The participants of different quarantine periods were considered ranging from 7 to 14 days, the quarantine period for a total number of subjects under study was 7 days with a mean value of 112 (51%), 10 days mean value of 12 (6%) and 14 days mean value 95 (43%). The DASS-21 was used to measure depression, anxiety, and stress. The findings of the descriptive analysis revealed that 92 (42%) participants had severe

depressive and anxiety symptoms and 55 (25.1%) had extremely severe symptoms. Further, 91 (41.6%) had severe stress and 54 (24.7%) had extremely severe stress (Table I).

The results showed that the psychological complications during COVID-19 in students are due to post-COVID-19 quarantine. The chi-square test was applied to check the association between psychological complications of depression, anxiety and stress with post-COVID quarantine and the p-values were 0.03, 0.03 and 0.01 for depression, anxiety and stress respectively (Table II).

DISCUSSION

Evidence showed that many studies were conducted to find out the prevalence of post-COVID quarantine psychological complications among university students.

Table I: Descriptive Statistics of Characteristics of Study Participants (n=219)

Demographics	Characteristics	Frequency(Percent)
Gender	Females	165(75.3%)
	Males	54(24.7%)
Depression	Mild	11(5%)
	Moderate	61(27.9%)
	Severe	92(42%)
	Extremely Severe	55(25.1%)
Anxiety	Mild	11(5%)
	Moderate	58(26.5)
	Severe	92(42%)
	Extremely Severe	55(25.1%)
Stress	Mild	11(5%)
	Moderate	56(25.6%)
	Severe	91(41.6%)
	Extremely Severe	54(24.7%)

Table II: Showing Mean and Standard deviation of Psychological Complications

Psychological Complications	n	Mean	Standard deviation	p-value
Depression	219	17.23	±5.39	0.03
Anxiety	219	28.2	±7.18	0.03
Stress	219	23.67	±6.78	0.01

DISCUSSION

Evidence showed that many studies were conducted to find out the prevalence of post-COVID quarantine psychological complications among university students. The result of the previous study conducted by Deepak Nathiya et al. depicted similar results as shown in the current study. The p-values determined previously were 0.41, 0.38 and 0.32 for depression, anxiety and stress respectively.^[8]

A study by Aqeel M et al. indicated mild (20.5%, 15.7%), moderate (13.6%, 9.6%), and severe (22.7%, 19.5%) levels of anxiety prevalence in both female and male students respectively. Results showed mild (9.10%, 14.8%), moderate (9.12%, 21.4%), and severe (15.90%, 25.7%) depression present in male and female students.^[9] Previous studies concluded that anxiety, irritation, mood swings, distraction, depression and sleep disturbance are very frequent among home-quarantined students. Studies demonstrated that students also undergo additional psychological stress due to off-and-on academics. The health professionals were also found to be more upset about the faulty behavior and psychological indication observed in their children during this outbreak.^[10]

A study revealed that there is a relationship

between social isolation and psychological complications among university students. The chi-square test was applied to detect the association between social isolation and psychological complications in male and female students of twin cities. The p-values of depression were 0.03, anxiety 0.03 and stress 0.01 revealing significant results.^[11] A study assessed the psychological impact related to quarantine. During quarantine depression, anxiety and stress were the most frequent issues experienced by the individuals. The pandemic had remarkably affected the psychological health of people all around the world.^[12]

Another study was conducted to analyze the psychological health status among individuals in Pakistan which supports the current study. A survey was conducted online from April to May, after the outbreak, using a convenient snowball sampling method.^[13]

The DASS-21 scale was utilized to calculate the mental health of the participants. The results showed mild to moderate depression among 390 participants, anxiety among 490 participants and stress among 52 participants.^[14] The psychological health status of the people was wonder-struck during the pandemic. The arrangement of different factors with remarkable associations with depression, anxiety and stress may help in

developing psychological interventions for vulnerable groups.^[15]

CONCLUSION

The incidence of post-COVID-19 quarantine psychological complications was quite high among university students of Islamabad due to home-based and administrative quarantine during lockdown measures for conserving their physical and mental health and daily life activities. The current study concludes that stress, anxiety and depression were quite common in students of universities due to quarantine. Students who were quarantined following the pandemic measures for conserving their physical health require paying extra care to their psychological well-being. As the study suggested an increased level of psychological effects, it is critical to change the psychological involvement to cope with the health system.

DECLARATIONS

Consent to participate: Written consent had been taken from patients. All methods were performed following the relevant guidelines and regulations.

Availability of data and materials: Data will be available on request. The corresponding author will submit all dataset files.

Competing interests: None

Funding: No funding source is involved.

Authors' contributions: All authors read and approved the final manuscript.

REFERENCES

1. Liu, S., et al., Online mental health services in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 2020. 7(4): p. e17-e18.
2. Guan, W.-j., et al., Clinical characteristics of coronavirus disease 2019 in

China. *New England journal of medicine*, 2020. 382(18): p. 1708-1720.

3. Grubic, N., S. Badovinac, and A.M. Johri, Student mental health in the midst of the COVID-19 pandemic: A call for further research and immediate solutions. *International Journal of Social Psychiatry*, 2020. 66(5): p. 517-518.

4. Sankhi, S. and N.R. Marasine, Impact of COVID-19 pandemic on mental health of the general population, students, and health care workers. *Europasian Journal of Medical Sciences*, 2020. 2: p. 64-72.

5. Mittal, R., L. Su, and R. Jain, COVID-19 mental health consequences on medical students worldwide. *Journal of Community Hospital Internal Medicine Perspectives*, 2021. 11(3): p. 296-298.

6. Scruggs, T.E., M.A. Mastropieri, and G. Casto, The quantitative synthesis of single-subject research: Methodology and validation. *Remedial and Special education*, 1987. 8(2): p. 24-33.

7. Henssler, J., et al., Mental health effects of infection containment strategies: quarantine and isolation—a systematic review and meta-analysis. *European Archives of Psychiatry and Clinical Neuroscience*, 2021. 271(2): p. 223-234.

8. Nathiya, D., et al., Mental health problems and impact on youth minds during the COVID-19 outbreak: Cross-sectional (RED-COVID) survey. *Social Health and Behavior*, 2020. 3(3): p. 83.

9. Aqeel, M., et al., The influence of illness perception, anxiety and depression disorders on students mental health during COVID-19 outbreak in Pakistan: a web-based cross-sectional survey. *International Journal of Human Rights in Healthcare*, 2021.

10. Yuki, K., M. Fujiogi, and S. Koutsogiannaki, COVID-19 pathophysiology: A review. *Clinical immunology*, 2020. 215: p. 108427.

11. Mukhtar, S., Mental health and psychosocial aspects of coronavirus outbreak

in Pakistan: psychological intervention for public mental health crisis. *Asian journal of psychiatry*, 2020. 51: p. 102069.

12. Saurabh, K. and S. Ranjan, Compliance and psychological impact of quarantine in children and adolescents due to Covid-19 pandemic. *The Indian Journal of Pediatrics*, 2020. 87(7): p. 532-536.

13. Daniel, S.J., Education and the COVID-19 pandemic. *Prospects*, 2020. 49(1): p. 91-96.

14. Shaikh, B., et al., Students, stress and coping strategies: a case of Pakistani medical school. *Education for Health: Change in Learning & Practice*, 2004. 17(3).

15. Hayat, K., et al., Impact of the COVID-19 outbreak on mental health status and associated factors among general population: a cross-sectional study from Pakistan. *Psychology, Health & Medicine*, 2022. 27(1): p. 54-68.