



IMPACT OF COVID-19 ON PSYCHOLOGICAL STRESS IN PHYSIOTHERAPY STUDENTS – A CROSS SECTIONAL STUDY

Amber Jamaal^{1*} and Diker Dev Joshi²

^{1,2}Padmashree Institute of Physiotherapy, Bangalore

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ABSTRACT

Introduction: The COVID-19 pandemic has led to massive disruption in the lives and education of university students in India, through school closure, and transition to internet-based learning, and social isolation from peers during nation-enforced quarantine. Available evidence suggests that these factors may indeed be leading to elevated psychiatric stress. Therefore, the objective of this study is to determine the impact of COVID-19 on psychological stress in physiotherapy students.

Method: A cross sectional online survey was conducted among students of physiotherapy in Padmashree Institute of Physiotherapy which includes UG students, Interns and PG students. The survey was conducted in the form of an online self-administered questionnaire using google forms. Depression Anxiety Stress Scale (DASS) was considered to assess the impact of Covid-19 on psychological stress in physiotherapy students.

Results: A total of 60 students participated in this survey (13 males and 47 females). It is found to be that the mean and standard deviation of age of the participants is 23.71 ± 2.281 , while the ratio of gender of the participants reveals that there were 13 males and 47 females. This study reveals the mean and SD of DASS score to be 27.33 ± 22.77 , based on which, in accordance to the DASS manual, the prevalence of psychological stress in participants was at severe level. However, the stress levels were significantly higher in female students than in males.

Conclusion: According to the result, total DASS score is 27.33 ± 22.77 which concludes students had severe level of psychological stress.

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INTRODUCTION

In December 2019, an outbreak of a novel coronavirus pneumonia occurred in Wuhan City, China, and spread throughout the whole of country in a short period¹. The novel coronavirus was officially named 'SARSCoV-2' by the International Committee on Taxonomy of Viruses, and disease infected by this virus was termed 'COVID-19'.²

As generally known, this pandemic was more contagious than SARS and brought challenge and threaten to global public health security.³

An increasing amount of information and concerns are impacting on global mental health. Global media, local and international health organizations (including World Health Organization), epidemiologists, virologists and opinion-makers put out information, recommendations and minute-by-minute updates on COVID-19 spreading and lethality. Nevertheless, the burden of this infection on the global mental health is currently neglected even if it may challenge patients, general

population, as well as policy makers and health organizations and teams.⁴

The WHO has labeled as COVID-19 this emerging respiratory disease. The first cases of this pandemic were men, less than half of them reporting had underlying diseases including diabetes, hypertension and cardiovascular disease. Common symptoms at the onset of illness were fever, cough and myalgia or fatigue. Less common symptoms were sputum production, headache, hemoptysis and diarrhea. Complications included acute respiratory distress syndrome, acute cardiac injury and secondary bacterial infection⁵.

During SARS-CoV-2 outbreak, the heavier workload and life threatening medical workers were facing aggravated the psychological pressure, even mental illness. Follow-up data suggested that hospital workers particularly doctor and nurse were more susceptible to psychological disorders after participating in the treatment of SARS patients over a decade ago. In particular, increasing number of confirmed and suspected cases are verified in many countries outside China. Therefore, it is extremely important to realize the psychological status of the medical workforce.⁶

*Corresponding author: Amber Jamaal
Padmashree Institute of Physiotherapy, Bangalore

The mental health impact of a pandemic of this scale is yet to be understood, and such an understanding is valuable for characterizing and ultimately addressing the psychological fallout of the current and future pandemics as well as increasing a basic scientific understanding of the psychiatric consequences of extreme stress.⁷

For several reasons, university students may be a particular vulnerable population to the mental health consequences of the COVID-19 pandemic. Developmentally, emerging adulthood is a vulnerable period: many mental disorders have symptoms that first occur during youth and young adulthood, which can negatively impact developmental trajectories through reduced educational achievement, increased substance use, and poor health behaviors.⁸

The COVID-19 pandemic has led to massive disruption in the lives and education of university students in India, through school closure, and transition to internet-based learning, and social isolation from peers during nation-enforced quarantine. Available evidence suggests that these factors may indeed be leading to elevated psychiatric stress. Henceforth, a need to evaluate the impact of Covid-19 pandemic on psychological stress in physiotherapy students arises.

METHODOLOGY

A cross sectional online survey was conducted among students of physiotherapy in Padmashree Institute of Physiotherapy which includes UG students, Interns and PG students. The survey was conducted in the form of an online self-administered questionnaire using google forms.

Depression Anxiety Stress Scale (DASS) was considered to assess the impact of Covid-19 on psychological stress in physiotherapy students. The DASS is a 42-item self-administered questionnaire designed to measure the magnitude of three negative emotional states: depression, anxiety, and stress. The DASS Depression focuses on reports of low mood, motivation, and self-esteem, DASS-anxiety on physiological arousal, perceived panic, and fear, and DASS-stress on tension and irritability.⁹

The questionnaire was sent through various platforms on social media to all the subjects for their response via Google form. Informed consent was taken from all the subjects along with their demographic details. There were 60 participants who willingly participated in the survey. Convenient sampling was done. All the responses were analyzed in Excel.

Inclusion and Exclusion Criteria

Participants who were currently enrolled as physiotherapy students from Padmashree Institute of Physiotherapy, both males and females and being of at-least 18 years of age were included in the study. While physiotherapy students from other colleges were excluded and not considered to participate in the study.

Outcome Measure

Depression Anxiety Stress Scale (DASS) was considered to assess the impact of Covid-19 on psychological stress.

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, DASS-anxiety on physiological arousal, perceived panic, and fear, and DASS-stress on tension and irritability.⁴

RESULTS

Table 1 Demographic characteristics of the subjects

CHARACTERISTIC		MEAN± SD
1.	Age	23.71 ± 2.281
2.	Sex (male/female)	13/47

Table 1 shows the mean and standard deviation of age and ratio of sex of the participants. It is found to be that the mean and standard deviation of age is 23.71±2.281. While the ratio of gender of the participants reveals that there were 13 males and 47 females.

Table 2 Total DASS Score

SCORE	Mean ± SD
DASS	27.33 ± 22.77

Table 2 reveals that the mean and standard deviation of total DASS score is 27.33 ± 22.77.

DISCUSSION

Studies show pandemic, such as COVID-19 increases psychological stress; and, the consequences of quarantine lead to emotional disturbance, depression, irritability, insomnia, anger, and emotional exhaustion among other health and mental health conditions.¹⁰

In this study, the gender ratio results in female predominance with 13 males and 47 females. This shows that there is a female predominance in physiotherapy students. This was in line with a study done by Priyal P Shah *et al.*¹¹

This present study reveals the mean and SD of DASS score to be 27.33 ± 22.77. Based on this score, in accordance to the DASS manual, the prevalence of psychological stress in participants was at severe level.

In males, 7 out of 13 (53.84%) had normal stress levels, 1(7.69%) had mild stress, 1(7.69%) had severe stress and 4(30.76%) had severe stress.

In females, 18 out of 47(38.29%) had normal stress levels, 1(2.12%) had mild stress, 3(6.38%) had moderate stress, 11(23.4%) had severe stress and 14 (29.78%) had severe stress levels.

Altogether, out of 60 students, 25 had normal stress levels (41.66%), 2 had mild stress (3.33%), 3 had moderate stress (5%), 12 had severe stress (20%) and 18 had very stress levels (30%). According to the results, 50% of students had severe and very severe stress. Contributing factors to this might include effects on daily life and routine, academic delays, and perhaps reduced social support.¹² “e-Learning crack-up” perception has a significant positive impact on student’s psychological distress, and fear of academic year loss is the crucial factor that is responsible for psychological distress during COVID-19 lockdown. This study can provide an understanding of how “e-Learning crack-up” and “Fear of academic year loss” influence college students’ mental health.¹³

CONCLUSION

This study concludes that the psychological stress level in students of Padmashree Institute of Physiotherapy is at severe

levels as an impact of outbreak of COVID-19. However female students had higher psychological stress levels than in male students.

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