



IMPACT OF COVID-19 PANDEMIC ON SOCIAL, PSYCHOLOGICAL AND MENTAL HEALTH AMONG UNIVERSITY STUDENTS IN INDIA: A CROSS SECTIONAL ELECTRONIC SURVEY

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ABSTRACT

Background: The COVID -19 pandemic has resulted in an increased level of stress among university students particularly due to online education, lockdown, stay-at-home orders. This exerted an extensive impact on social, psychological, emotional and mental health among students.

Objective: In this survey, we analysed the social behaviour, psychological reactions, mental and emotional implications on the students due to the covid-19 pandemic.

Methods: An online survey was conducted among students studying in different universities & diverse fields in India, using a series of questionnaires to understand the effects of the pandemic on their mental health and well-being. The data were analysed through quantitative and qualitative methods.

Results: During our online survey, we analyzed 800 participants (400 males and 400 females) who completed the questionnaire. While analysing for perceived social stress, we observed females to be more affected than males whereas, for psychological and mental stress, the majority of the participants were affected to some extent. The mean global stress score was 14.96 ± 5.09 for females and 11.16 ± 4.60 for males which showed a significant difference between the two groups (p value=0.009). 72.9% of the total participants felt that their mental well being has deteriorated by the imposition of lockdown and being in quarantine has made 36.7% people burdened with stress to a whole lot of extent. 31.4% of the total responders experienced agitation, anger and irritability being at home during quarantine and only 10.6% were unaffected by it. Majority of the participants suffered from symptoms of anxiety or depression in this 2 year period.

Conclusion: The survey concludes with its observation of mental and psychosocial implications in form of anxiety, disturbed sleep pattern, economic burden and future academic plan etc on university students in the span of the COVID -19 pandemic. Institutions must address these effects and consider implementing some student wellness programme which is supported by mental health experts in order to mitigate related consequences.

KEYWORDS :

INTRODUCTION

COVID-19 is caused by SARS-COV2, a virus strain belonging to coronavirus family

- (1). The cases of COVID-19 were initially identified in China
- (2). The Chinese Center for disease control (CCDC) reports on January 7th 2020 about the novel coronavirus strain
- (3). Due to the rapid spread of disease to other countries from China, World Health Organization (WHO) identified COVID-19 as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020.
- (4). With further increase in the number of cases and the number of deaths affecting the nations worldwide, WHO announced COVID-19 as a pandemic on 11 March 2020.
- (5). With the further spread of COVID-19, almost all the affected countries have issued partial or complete lockdown. All nations adopted the social distancing method in order to break the continuous chain of transmission. Hence, in addition to the disease, the measures taken by the respective countries to fight against pandemic has uprooted or affected the livelihood of the people, directly or indirectly resulting in increased psychological morbidities.

In order to understand the psychological needs and gaps, it is important to do a situational analysis of the current scenario by collecting currently available evidence from various countries.

The pandemic had a significant impact on higher education

students, practices regarding academic work and life, including the switch to online learning, closed libraries, altered communication channels for teachers' and administrative support, new assessment methods, different workloads, and performance levels [6]. In addition, many students experienced disrupted social environments, with lockdown measures resulting in closed campuses, no meetings with friends, university colleagues, or relatives, no parties, no travelling, and remaining trapped abroad, etc. [7,8]. Many students had to face personal financial issues after losing student jobs, worrying about their financial situation, future education, and career, resulting in emotional health issues, such as fears, frustrations, anxiety, anger, and boredom [9,10,11,12]

Therefore, we conducted an online survey to examine the prevalence of depressive symptoms, anxiety symptoms, and sleep disturbances in higher education students to better understand the impact of the COVID-19 pandemic on the mental health of this vulnerable population.

AIMS AND OBJECTIVE

To assess the impact of the covid-19 pandemic on the social, psychological, and mental health of university students using the Covid-19 Student Stress Questionnaire (CSSQ).

MATERIAL AND METHODS

It is a cross-sectional study where data was collected in single moment and time. An online survey was carried out where the

purpose was to describe variables and analyze their incidence and interaction at a given moment. The studied sample constituted of students of different semesters of diverse careers in Indian universities. We received 942 college students' responses which were randomised to include the first 400 responses for males and females each. Thus making a total data of 800 responses. We chose 800 participants for better comparison of global stress scores and other domains of perceived social state.

The inclusion criteria were to be student of Indian universities, giving respective consent for participation. The exclusion criteria were students who did not complete the survey. The sample size was determined using the STATS® (2020)20 program through randomised numbers.

Online questionnaire

Covid-19 Student Stress Questionnaire (CSSQ) was elaborated with 23 questions divided into two categories to analyse:

1. Perceived social state (QuesHon 1-7)
2. Psychological and mental state. (QuesHon 8-23)

The first category of "Perceived social state" was again divided into three domains(13):

- a) Fear of contagion(QuesHon 1)
- b) IsolaHon(QuesHon 2 and 7)
- c) RelaHonship and academic life(QuesHon 3,4,5 and 6)

For these three domains, data were analyzed using unpaired student t- tests to compare the perceived social state of males and females. For the rest of quesHonnaire, observational analysis was done.

RESULTS AND ANALYSIS

In this online conducted survey we analysed a total of 800 participants who completed the questionnaire. The average age of the participants was 22.96 years. The sample was constituted by 400 males and 400 females.

Gender:	Number(n)
Males	400
females	400
Occupation:	
Undergraduates	687
Postgraduates	113

COVID-19 related awareness, perception and social factors:

For the initial 7 items of questionnaire we made a comparison between male and female groups and have summarised the findings in Table.....

For females:

CSSQ scales	items	mean±SD	median	mode	range
Fear of contagion	1	2.4±1.12	2	1	1-4
IsolaHon	2,7	5.44±1.80	6	7	2-8
RelaHonships and academic life	3,4,5,6	7.12±3.33	7	9	0-13
Global stress	All items	14.96±5.19	15	14	5-24

For males

CSSQ scales	items	mean±SD	median	mode	range
Fear of contagion	1	1.88±0.97	2	2	0-4
IsolaHon	2,7	4.24±1.69	4	4	0-7
RelaHonships and academic life	3,4,5,6	5.04±3.03	5	7	0-10
Global stress	All items	11.16±4.69	11	10	1-18

We observed that in the domain of 'fear of contagion' the two groups had the same level of perceived stress confirmed by p value=0.15.

For the other two domains, we observed that females have suffered significantly through more stress compared to males as was shown by p value=0.019, for the domain of social isolation and p value=0.025 for the domain of relationships & academic life.

The results showed that the majority of participants i.e. 47% had moderate stress about the risk of contagion for covid-19 while 10.1% were extremely stressed about its risk.

35.4% of participants felt very stressed due to the social isolation conditions.

30.2% of responders perceived relationships to be moderately stressful during the pandemic period while 13.6% were even very stressed about relations with family and peers. During this period majority of participants i.e. 54.3% perceived only mild to moderate stress in relationships with university colleagues while 25.9% perceived no stress in maintaining relationships with colleagues. As bare as 6% of students had extremely stressful experiences with university professors during the pandemic while the majority of students (82.1%) had negligible to moderate stress in relations with university professors. A large chunk of students 43.7% were very much stressed by academic studying experience during the covid 19 period.

Mental health including symptoms of depression and anxiety:

72.9% of the total participants felt their mental well being deteriorating by the imposition of lockdown where quarantine made 36.7% of students burdened with stress to a further extent.

17.3% were constantly worried about their health and 25.9% were worried to a much larger extent. As much as 67.6% of the responders were stressed for themselves and for near and dear ones after seeing media reports on infectivity and death tolls.

Of the total responders, 31.4% experienced agitation, anger and irritability being at home during quarantine, leaving only 10.6% unaffected by it. 36.2% of participants felt startled or jumpy during the pandemic period because of the constant anxiety and around 6.7% had panic attacks accompanied by physical symptoms like palpitations, chest pain and dizziness etc. In addition to it, 8.3% of participants faced difficulty in sleeping at night. Moreover, 44.8% of students could not maintain a daily regular routine during the global pandemic. The majority of participants i.e. almost 67% tried to integrate into sports, yoga or exercises with or without strict regular schedules. A worrying figure of 60.3% of responders admitted to having started spending more and more time on social media platforms. 34.1% of students were unproductive during the pandemic period while 44.5% found themselves little productive. A whopping 39.4% had feelings of uncertainty for the future and doubts about oneself whereas 41.2% had uncertainties regarding jobs, training, studies and school. On one hand, 25.4% of participants reported facing financial issues leading to mental stress while on the other hand, 48.2% reported only minimal financial issues. On the brighter side, 68.1% of people denied having felt any desire to consume addictive substances like alcohol, cigarettes or any other recreational drugs of abuse during the isolation or quarantine period.

DISCUSSION

COVID-19 has severely impacted the health of people of all age groups, especially the mental health of young students. Poor Mental health can affect students' motivation, concentration, and social interactions—crucial factors for students to succeed in terms of higher education or for living a balanced social life. An epidemic accentuates or creates new stressors including worries about self or loved ones, constraints on physical movement and social activities due to quarantine, and radical lifestyle changes. A recent review of virus outbreaks and pandemics documented stressors such as infection fears, frustration, boredom, inadequate supplies, inadequate information, financial loss, and stigma. Much of the current literature on the psychological impacts of COVID-19 has emerged from the earliest hot spots in China. Although several studies have assessed mental health issues during epidemics, most are focused on health workers, patients, children, and the general population. However, with the few exceptions studies, there is sparse evidence of the psychological or mental health effects of the current pandemic on college students, who are known to be one of the most vulnerable populations. As highlighted in multiple recent correspondences, there is an urgent need to assess the impact of the current pandemic on the mental health and well-being of college students, an online survey was conducted by us to assess the same.

The findings of our survey suggest a considerable negative impact of the COVID-19 pandemic on a variety of academic, health, and lifestyle-related outcomes. We analysed a total of 800 responses of whom 10.1% were extremely stressed about the risk of contagion of covid-19, whereas, 47% felt moderately stressed for the same. 30.2% of students were burdened about maintaining relationships during the pandemic. Some of these areas are not given as much importance as they should be, if these stresses are properly addressed in the beginning, it might help in preventing the development of frank anxiety or depression later.

Aftab et al. (2021) carried out a cross-sectional study that encompassed 418 undergraduate and postgraduate medical students from all over the world. The foregoing researchers found 37.8% of the participants showing symptoms resulting from anxiety. In our study, we noticed 36.2% of participants had frank anxiety symptoms and 6.7% even reported panic attacks at some times. Overall 72.9% of participants admitted that their mental health deteriorated during lockdown which is a concerning figure. Similar to our findings, Alqudah, et al. (2021) investigated the levels of anxiety among undergraduate university students in Jordan during the COVID-19 pandemic; 40.6% of those who took part in the study experienced moderate to severe anxiety.

Vala et al. (2020) performed a study in India to assess the mental status and prevalence of factors such as anxiety, stress and depression among Medical students during the coronavirus pandemic; It came to light that the impact of anxiety, stress, and depression were 17.20%, 15.60%, and 10.80% respectively, in medical students. Our study did not limit itself to medical students only, including students from non-medical fields too. 29.5% of the responders admitted to being constantly worried for their health and 39.4% even experienced uncertainties for the future and had doubts regarding self. In another similar study in China, Wang et al. (2020) performed a number of studies during the initial outbreak of the Coronavirus pandemic. They reported that 28.8% of participants illuminated moderate to severe anxiety and 8.1% reported moderate to the severe stress level.

67% of the participants reported that during lockdown they indulged in activities like yoga, running, jogging and other exercises to manage their stress. Therefore, 44.5% of the responders were productive during the lockdown and faced

lesser mental health challenges compared to the rest. This strengthens the paramount need to promote some anxiety-reducing strategies like yoga, meditation, physical exercises etc during the pandemic period.

A major, yet underrated factor in stress for students has been the restricted availability of internet, especially in developing nations like ours. Countries like Iran have provided some free internet packages for teachers, instructors and students as internet is an essential part of online learning. This trend could be adopted by many countries throughout the world including ours. To minimise the adverse effects of the COVID-19 pandemic on students, providing some interest-free loans to students can be of great help as they can purchase the needed electronic devices to be able to attend their online classes. So that the fear of lagging behind in learning can be eliminated.

Providing empathetic support by instructors, consultations and crisis-oriented psychological services in different educational systems might help students overcome their fears and anxiety in the time of the pandemic to achieve their educational goals. Coordination between the mental health sector and universities for regular counselling and support sessions for students may also prove beneficial in reducing the perceived mental stress in students. Students should also be encouraged to seek professional help if they face distressing anxiety, depression or other mental health issues.

CONCLUSION

A high prevalence of anxiety, depression, stress, and insomnia was identified among students. It might become worse with the emergence of new variants of the virulent COVID-19 virus. Effective intervention support programs are urgently needed to improve healthcare providers' psychological health and maintain the health system in combating the COVID-19 pandemic. The intervention should be focused more specifically on affected groups such as frontline healthcare providers, females, and nurses.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

1. Rothan H.A., Byrareddy S.N. The Epidemiology and Pathogenesis of Coronavirus Disease (COVID-19) Outbreak. *J. Autoimmun.* 2020;109
2. World Health Organization . World Health Organization; Geneva: 2020. Situation Report-94. Coronavirus disease (COVID-2019) Situation Reports; p. 2
3. Li W., Yang Y., Liu Z., Zhao Y., Zhang Q., Zhang L. Progression of Mental Health Services during the COVID-19 Outbreak in China. *Int. J. Biol. Sci.* 2020; 16:1732–1738.
4. World Health Organization, 2020b. Statement On The Second Meeting Of The International Health Regulations (2005) Emergency Committee Regarding The Outbreak Of Novel Coronavirus (2019-Ncov).
5. World Health Organization. 2020c. Shortage of personal protective equipment endangering health workers worldwide. [cited 27 Apr 2020]
6. Gonzalez T., De La Rubia M.A., Hincz K.P., Comas-Lopez M., Subirats L., Fort S., Sacha G.M. Influence of COVID-19 confinement on students' performance in higher education. *PLoS ONE.* 2020;15:e0239490. doi: 10.1371/ journal.pone.0239490
7. Elmer T., Mepham K., Stadtfeld C. Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLoS ONE.* 2020;15:e0236337. doi: 10.1371/ journal.pone.0236337. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
8. Pan H. A Glimpse of University Students' Family Life Amidst the COVID-19 Virus. *J. Loss Trauma.* 2020;25:594–597. doi: 10.1080/15325024.2020.1750194.
9. Baloran E.T. Knowledge, Attitudes, Anxiety, and Coping Strategies of Students during COVID-19 Pandemic. [(accessed on 27 June 2021)]; *J. Loss Trauma.* 2020 25:635. doi: 10.1080/15325024.2020.1769300. Available online: <https://www.tandfonline.com/action/journalInformation?journalCode=upil20>. [CrossRef] [Google Scholar]
10. Kapasia N., Paul P., Roy A., Saha J., Zaveri A., Mallick R., Barman B., Das P., Chouhan P. Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Child. Youth Serv. Rev.* 2020;116:105194. doi: 10.1016/j. childyouth. 2020. 105194. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
11. Sahu P. Closure of Universities Due to Coronavirus Disease 2019 (COVID-19):

- Impact on Education and Mental Health of Students and Academic Staff. *Cureus*. 2020;12:e7541. doi: 10.7759/cureus.7541. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
12. Zimmermann M., Bledsoe C., Papa A. The initial impact of the COVID-19 pandemic on college student mental health: A longitudinal examination of risk and protective factors. *Psychiatry Res*. 2021;305:114254. DOI: 10.1016/j.psychres.2021.114254.
 13. Zurlo MC, Cattaneo Della Volta MF and Vallone F (2020) COVID-19 Student Stress Questionnaire: Development and Validation of a Questionnaire to Evaluate Students' Stressors Related to the Coronavirus Pandemic Lockdown. *Front. Psychol*. 11:576758. doi: 10.3389/fpsyg.2020.576758.