



Review Article

Psychological Implications of Covid-19 Pandemic in College Students-A Systematic Review

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Abstract

Background: College students are a vulnerable group of the population due to the unique nature of challenges they encounter during the course of their studies and are especially at risk for developing psychological disturbances due to the outbreak of COVID-19. This review article highlights the nature and prevalence of psychological implications experienced by college students due to the pandemic over the last year.

Materials and Methods: The literature search was performed on Pubmed and Google Scholar using the following combination of keywords: “psychological OR psychiatry”, “mental health”, “college students”, and “COVID-19 OR corona OR SARS-CoV-2”.

Conclusion: Our study revealed a high incidence of stress, anxiety, and depression among college students with a greater tendency for the female gender. The college administration should be vigilant enough to take precautionary steps in controlling the factors that elevate the psychological stress among the college students. These include promoting awareness among the students regarding the psychological stress that they may experience, advising counseling sessions on experiencing such symptoms, and limiting the use of social media.

1. Introduction

Coronavirus disease 2019 (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a highly contagious disease that has produced a disastrous effect on the demography of the world and has resulted in almost 3.6 million deaths worldwide till date [1]. The initial

cases of this disease were reported in Wuhan, Hubei Province, China in late December 2019 [2]. As the disease rapidly disseminated worldwide, the World Health Organization (WHO) labelled the COVID-19 outbreak as a ‘pandemic’. After the influenza pandemic of 1918, this disease is regarded as the most significant global health problem [1]. Coronavirus is an enveloped RNA virus and is distributed widely in humans and animals [3]. There are two subtypes of coronavirus that have caused severe outbreaks in the past. Severe acute respiratory syndrome-related coronavirus (SARS-CoV) outbreak occurred in 2002 in Guangdong, China, and Middle East respiratory syndrome coronavirus (MERS-CoV) was first detected in Saudi Arabia in 2012 [3]. The pandemic caused by SARS-CoV-2 in 2019 is the third coronavirus outbreak in the last 20 years after the SARS-CoV and the MERS-CoV outbreaks [4]. Due to the rapidly spreading COVID-19 pandemic, the governments ordered lockdowns, quarantines, and social distancing around the globe. These sudden and forced lockdowns brought chaos to the public’s daily routines. The activities that were previously considered normal such as family gatherings, shaking hands with each other, and moving outside without masks were now considered dangerous [5]. This unexpected disruption in lives has not only affected the mental health of the general public but also adversely affected the mental health of physicians involved in the care of these patients. Several studies have revealed a significantly elevated prevalence of depression, anxiety, insomnia, and emotional distress among health care workers [6, 7]. Due to a high infectivity rate, there was a closure of educational institutions, putting physical teaching to a halt for a considerable time.

College students are a vulnerable group of the population due to the unique nature of challenges they encounter and are especially considered at risk for developing psychological disturbances due to the outbreak of COVID-19. A Japan-based study has suggested that younger people are more likely to experience symptoms of anxiety and depression as compared to older ones [8]. Similar results were reported from another study conducted in China [9]. A study done in Nepal showed that many college students suffered from some level of anxiety during this pandemic [10]. This review article discusses the nature and prevalence of psychological implications

experienced by college students due to the COVID-19 pandemic over the last year.

2. Method of Literature Search

The literature search was performed on Pubmed and Google Scholar. The following combination of keywords was used: “psychological OR psychiatry”, “mental health”, “college students”, and “COVID-19 OR corona OR SARS-CoV-2”. The relevant articles were then thoroughly checked and selected. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used to report the findings (Figure 1).

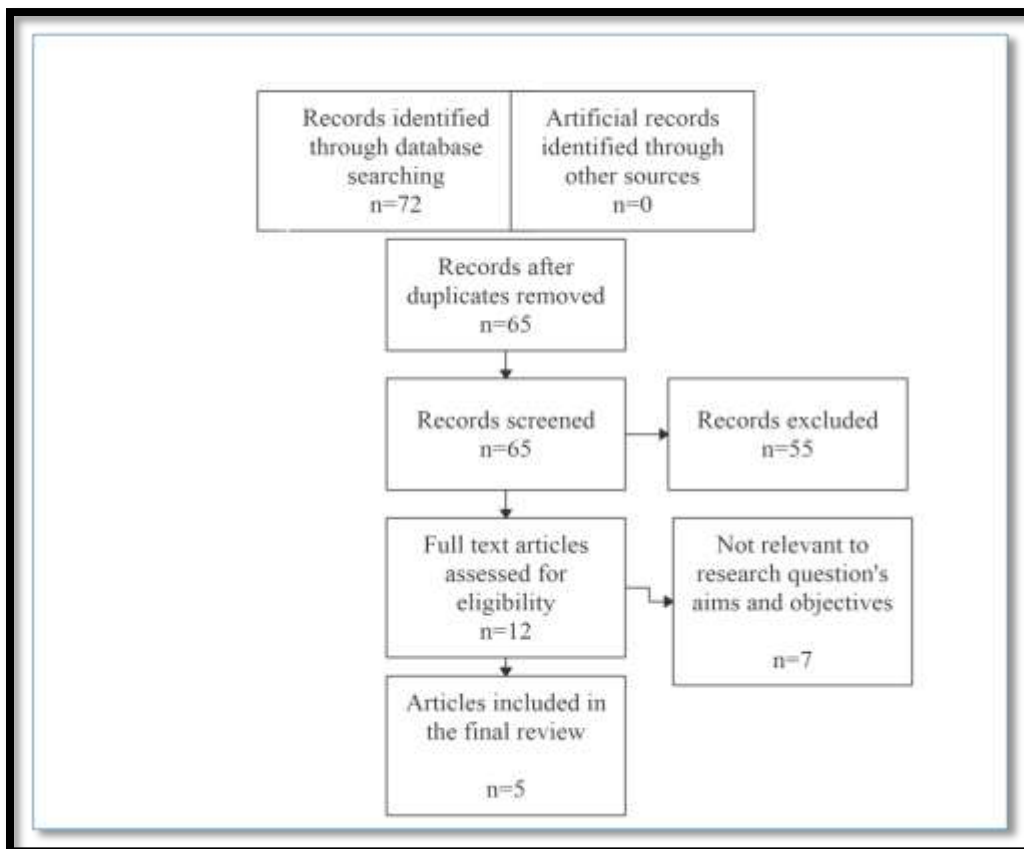


Figure 1: PRISMA flow diagram.

3. Results

A systematic approach was applied and a total of 72 articles were identified. Out of these, only 5 articles were analysed and included in our review (Table 2). Inclusion criteria comprised of 1) Cross-sectional

studies in English, 2) involving College students. All other studies (case reports, reviews, editorials) were excluded.

| Author/Year | Location of study | No. of students | Male | Female | Outcome |
|-------------------------|-------------------|-----------------|------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dangal MR et al. (2020) | Nepal | 105 | 41 | 64 | Two-thirds (66.67%) of the students (mostly females) experienced mild to moderate anxiety. The gender of the students had a significant association with their level of anxiousness ($p < 0.005$). Other socio-demographic characteristics such as age, level of education, family income, residence, and the number of positive cases of Covid-19 had no significant effect on anxiety ($p > 0.05$) [10]. |
| Verma K et al. (2020) | India | 131 | 63 | 68 | Both anxiety and depression were more common in females students. Also, the students with disturbed sleep tend to have a higher level of anxiety [11]. |
| Si M et al. (2020) | China | 3606 | 1014 | 2592 | Male students were more likely to experience stress symptoms ($p < 0.020$). The incidence of post-traumatic symptoms such as stress, anxiety, and depression was greater in students who knew that COVID-19 had been announced as a Public Health Emergency of International Concern (PHEIC) on 30 th January by WHO ($p = 0.005$). The students who had ever been isolated/ quarantined (during the pandemic) and those who had confirmed positive cases among their acquaintances experienced stress symptoms more [12]. |
| Cao W et al. (2020) | China | 7143 | 2168 | 4975 | Percentages of students with mild, moderate, and severe anxiety were 21.3%, 2.7%, and 0.9% respectively. A significant association was found between anxiety and living with parents; students who used to live |

| | | | | | |
|------------------------------|----------|-----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | alone had increased levels of anxiety (p<0.05). Furthermore, the students who belonged to rural areas (1.02%), had families without a good income (1.09%), or had a relative infected with COVID-19 (2.56%) were more likely to have severe anxiety (p<0.001). There was no significant association of anxiety with gender (p>0.05) [13]. |
| Lopez-Castro T et al. (2020) | New York | 909 | 280 | 629 | Severe symptoms of depression were reported in 90% of the students and about two-thirds experienced severe symptoms of anxiety too. There was a significant association of female gender with the levels of stress (p<0.001), anxiety (p=0.004), and depression (p=0.030) [14]. |

Table 1: Location, sample size, and gender distribution of selected articles.

4. Discussion

Covid-19 has brought a devastating public health crisis all over the world. The disease is creating a lot of fear and anxiety in individuals of all age groups.

College students are also prone to the psychological effects of COVID-19. The factors which are related to the psychological implications of the Covid-19 pandemic among students are summarized below:

| Socio-demographic factors |
|-------------------------------------------------|
| Age |
| Gender |
| Relationship status |
| College enrollment status |
| Steady family income |
| Relative or acquaintance infected with COVID-19 |
| Lack of support from family and friends |

| Covid-related factors |
|---------------------------------------|
| Delays in academic learning |
| Economic consequences |
| Health status |
| History of chronic disease |
| Fear of being quarantined or isolated |
| Fear of death due to Covid-19 |
| Effect on daily life |

Table 2: Factors responsible for psychological implications of COVID-19.

A study on the psychological impact of the pandemic on Ethiopian students reported that most of the participants (77.2%) had experienced some level of

anxiety [15]. Although the students who were part of this study had not contracted the disease themselves, they were potentially exposed to it and were ordered

to quarantine at their homes. Due to this restraint of going out, the feeling of deprivation of freedom and exhaustion of the monotonous routines might have affected their mental health negatively [16]. In light of these findings, it can be well understood that the incidence of anxiety and depression has escalated significantly among the college students and appropriate actions such as promoting awareness of COVID-19 and its psychological effects among the students and advising them to get counseling sessions whenever they feel psychologically upset are the need of the hour. Studies report that the psychological impact of COVID-19 is more apparent in female students. [11, 14, 15, 17].

The greater prevalence of stress, anxiety, and depression among female students could be due to their higher emotional quotient and vulnerability to easily get affected by stressful situations. A study done on college students in New York City showed that students living in a severely affected area are more likely to get psychologically impacted by COVID-19. Similar results were obtained in other studies [18-20]. A study done by Gao J et al. suggested that unrestricted use of social media during the COVID-19 outbreak was strongly associated with an elevated risk of anxiety and depression [21]. In another study, it was revealed that frequent use of social media was associated with a stronger feeling of apprehension and helplessness in the course of this pandemic [22]. As the information provided on social media is often unfiltered, it may mislead the public and do more mental harm than good. Therefore it is advised to disseminate only the authentic and filtered out information to the general public to alleviate their anxiety and stress [23]. To ensure mental health

integrity, targeted behavioral health services should be provided to the high-risk population to prevent the acute and long-term psychological implications of the COVID-19 pandemic [24].

5. Conclusion

The enormity of the COVID-19 pandemic has taken a great toll on the mental health of almost every other person. The results of our review revealed a high incidence of stress, anxiety, and depression among college students with a greater tendency for the female gender. The college administration and faculty members collaborating with the local governments should be vigilant enough to take precautionary steps in controlling the factors that elevate the psychological stress among the college students.

This should include promoting awareness among students regarding the stress they may experience and advising them to get counseling sessions if they experience any stress-related symptoms. Social media should be used minimally for educational and entertainment purposes only. Also, mental health rehabilitation services adapted to the current circumstances should be provided to mitigate the psychological impact of the pandemic.

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