



QUANTIFYING DEPRESSION IN HIGH SCHOOL CHILDREN DURING COVID LOCKDOWN AND ONLINE SCHOOLING

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Abstract

In December 2019, Corona virus (Covid-19) originated in Wuhan, China and its outbreak caused a pandemic where almost every country was quarantined. India declared a statewide lockdown from March 25th 2020. Teenagers being at a challenging transitional period were at risk because factors such as social interactions and engagement, companionship which are essential for growth and wellness were affected due to lockdown. Due to the high rate of infection and death, Indians have experienced loss and trauma during both of the waves of Covid-19. Individuals who have been associated with the victims of Covid-19 have experienced stress, anxiety, depression. This study is measuring depressive symptoms of school going secondary and higher secondary students during covid-19. This study was conducted between August 2021 and December 2021. The data was collected from 165 students from various English mediums of secondary school (n=81) and higher secondary school (n=84) from Gujarat, India. The Patient Health Questionnaire – 9 (PHQ-9), developed by Dr. Robert L. at all, was used to assess the symptoms of depression; it was administered through an online survey. The data was examined by using a 't' test, to find out the mean, different level of education, gender and types of family. The depression scores were higher for higher education students than secondary education students. Girls experienced higher depression scores than boys and there were no significant differences in depression scores between joint and nuclear families.

Keywords: Secondary and Higher secondary students, gender, family, depression, covid-19

1. INTRODUCTION

A rare coronavirus disease outbreak (COVID-19) that originated in Wuhan, China, (Huang et al., 2020) in December 2019 was spread in every continent (WHO, 2020). By the first few days of June 2020, the COVID-19 pandemic had claimed the lives of around 383,000 individuals throughout the globe (Johns Hopkins University, 2020). Covid 19 spread resulted in widespread quarantine. The act of isolating and limiting the mobility of anyone who may have been exposed to a contagious illness is known as quarantine (Kumar and Shilpi, 2020). Quarantine is primarily used to stop the spread of infectious agents from persons who may be capable of carrying them. The Government of India had ordered a statewide lockdown since March 25, 2020, in an effort to break the transmission chain in light of the increasing number of illnesses (Kumar and Shilpi, 2020, Wikipedia, accessed 2020).

Teenagers are at risk and have gone through a challenging transitional period (Swick et al., 2002; Larsen and Luna, 2018; Sturman and Moghaddam, 2011) and may experience long term adverse influence of Covid-19 (Shen et al., 2020). Social interactions were hampered. People remained in their homes. In certain nations, it was formerly uncommon, wearing a mask became more and more prevalent. Companionship and social engagement are crucial for children's healthy psychological growth and wellness. However, adolescents may experience a variety of effects as a result of the COVID-19 epidemic and lock-down, including chronic and acute stress, concern regarding their family, a sudden school hiatus, home confinement in many nations, and much more time spent on the internet and social media. Covid 19 has evidently affected the individuals psychologically throughout the world (Asmundson and Taylor, 2020; Li et al., 2020).

Indians are considered to be more sociable than those in western nations, with larger social networks, participation in a variety of religious celebrations, and year-round gatherings. This is a result of India's rich cultural heritage. (Sandeep et al., 2020) In this aspect, a total lockdown might be leading to the degradation of the collective mentality of the community. While a lockdown is now an absolute necessity to battle the COVID-19 virus, measures should be taken to lessen the potential psychological effects on the general public. Due to the high infection rate and death rates, India experienced loss and trauma in both the first and second waves of COVID-19 (Lathabhavan, 2021). In such an event, individuals may become depressed, anxious, or stressed as a result of trying to protect themselves and their loved ones from COVID-19 (Kumar & Nayar, 2021). Students who are associated with victims of COVID-19, dread contracting the disease, and view the disease with pessimism, often fall victim to anxiety or depression (Ren et al. (2021) The frequent information updates on social media and the internet during a pandemic situation also increase stress among them. (Lathabhavan & Padhy, (2022).

In a Spanish university sample, a significant percentage of students showed evidence of despair (34%) and anxiety (21%) in the first few weeks of lockdown (Odriozola-González et al., 2020). A research done by Shula et al. (2021), showed that most children from North India had no personal experience (97.41%) or knew anyone (82.58%) with COVID-19, yet endorsed moderate-to-severe impact of COVID-19 on their

academics, social life, and work. In another study done by Chaudhary et al., (2021), it was found that of the 324 college students in south India, 68.8% had high fear of COVID-19, 28.7% had moderate to severe depression, and 51.5% had mild to severe anxiety.

High school students are the most susceptible demographic that might be examined. But until now, there hasn't been much study on the psychological impact of Covid-19 on high school kids in India, particularly in Gujarat, during the COVID-19 pandemic. According to reports, early periods in the pandemic, anxiety symptoms and depression issues may be more present. The goal of this study is to evaluate the incidence of anxiety, depression, and related conditions brought on by the COVID-19 pandemic both during and post lockdown.

2. METHODS

2.1 Objective of the study: The main objective of the study is measuring depressive symptoms of school going secondary and higher secondary students during covid-19.

2.2 Hypotheses:

Ho1: There will be no significant differences in the depression scores between secondary and higher secondary education.

Ho2: There will be no significant differences in depression scores between boys and girls.

Ho3: There will be no significant differences in depression scores between joint and nuclear families.

2.3 Sample: We collected 165 student's data through an online survey for this present study. The data was collected from various English mediums of secondary school (n=81) and higher secondary school (n=84) from Gujarat, India.

2.4 Tool: The Patient Health Questionnaire – 9 (PHQ-9), developed by Dr. Robert L. at all, was used to assess the symptoms of depression. The PHQ-9 is a self-administered scale used for screening, assessing and monitoring depression severity. The PHQ-9 has nine items and the answers refer to the past two weeks. Nine items assess symptoms, and one of them assesses functional impairment. Each item is scored using a 4-point Likert scale ranging from 0 to 3. 0 meant 'not at all' and implied that the participant was not bothered by that particular problem at all and did not show signs of poor mental health; 1 meant 'several days'; 2 meant 'more than half the days' and 3 meant 'nearly every day' implying that the participant suffered that particular problem almost every day and displayed signs of extremely poor mental health.

2.5 Process: This study was conducted between August 2021 and December 2021. The questionnaire was administered as an online survey through a specialized web page form developed by using Google forms. The Google forms were emailed to the principals of two different schools in Gujarat. The invitations to fill out the form were then sent to all the students and a significant number of responses were collected back in 2-3 weeks.

The questionnaire was delivered in English and divided into 4 sections. The first section warned the participants regarding the questions being potentially intrusive but ensured them the confidentiality of their privacy. It required them to agree to take part in the survey. This was essential to gain the electronic informed consent from each participant that participated in the survey. The second section included a disclaimer concerning a possible trigger due to the questions about depression and anxiety asked in the questionnaire. This section was also provided with the consent to move forward with the questionnaire only if participants were comfortable. The third section played an important role in collecting basic information regarding all the participants, such as 'name of participant', 'age', 'grade', 'type of family', 'school name', 'state', 'type of school', and 'family income'. All the categories were required for the participants to fill out except their own names and the names of their schools. Most of these categories would later be the variables in the study. The 'age' required the participants to select one from multiple choices ranging from 13 to 18 years old. Since the survey assessed the mental health of only high school students, the 'grade' gave the 4 options ranging from grade 9 to grade 12. The 'type of family' required them to select one of the two options: nuclear or joint. The 'gender' provided the participants with three options: boys and girls. 'Annual family income' needed the subject to select one of the three options ranging from less than 5 lakhs to above 10 lakhs. Section 4 requested the students to fill out a 9 question multiple choice grid. The participants were asked if they were bothered by any of the various problems, showing symptoms of poor mental health and depression, and were given 9 different scenarios, with 4 different choices to select an answer. The questions focused on the student's mood, appetite, motivation, energy, thoughts and sleep schedule and each question required a response for the form to be submitted. Lastly, there is an unrequited short answer text that allowed the participants to give feedback of their experience during covid-19.

2.6 Data Analysis: The obtained data from 165 students of secondary and higher secondary school were analyzed through SPSS version 16.0. 't' test was used to examine collected data. 't' test was used to find out the mean, different level of education, gender and types of family.

3. RESULT:

Table 1

Showing the Mean, SD and t value of different factors on PHQ-9.

Factors	N	Mean	SD	't'	Level of Significant
Education					
Secondary	81	5.84	5.45		
Higher Secondary	84	7.81	6.32	2.133	0.05
Gender					
Boys	94	6.09	5.53		
Girls	71	7.97	6.35	2.034	0.05
Types of Family					
Joint	54	6.87	5.59		
Nuclear	111	6.80	6.11	0.069	NS

The above result Table number 1: we can see that the 't' test was used to know the level of depression in factors of education, gender and types of family on PHQ-9 scale. Where secondary education's mean was 5.84 & SD was 5.45 and higher secondary education's mean was 7.81 & SD was 6.32 and difference between their 't' values was 2.1333 it was significant at 0.05 level. The result shows that higher secondary education has more levels of depressive symptoms than secondary education. Thus, the null hypothesis 1, which states "there was no significant difference found between secondary and higher secondary education" was rejected.

Where boys' mean was 6.09 & SD was 5.53 and girls' mean was 7.97 & SD was 6.35 and difference between their 't' values was 2.034 i was significant at 0.05 level. The result shows that the girls have more levels of depressive symptoms than boys. Thus the null hypothesis 2, I which states "there was no significant difference found between boys and girls gender" was rejected.

Moreover, joint family's mean was 6.87 & SD was 5.59 and nuclear family's mean was 6.80 & SD was 6.11 and difference between their 't' values was 0.069, which indicates there was no any significant differences between joint and nuclear family's depressive symptoms score. So here our hypothesis was accepted.

4. DISCUSSION:

Findings of PHQ-9 revealed that, there was significant differences found between secondary and higher secondary education it could be because of their have difficulties in coping with new subject such as arts, commerce and science, and also if you are studying online, so they may be stressed whether they will get admission in a good college or not. Also, significant differences were there between boys and girls. It could be one of the reasons it may be that boys have more sources of social media, mobile or TV viewing during the lockdown than girls. As we saw in the results, there was no significant difference between joint and nuclear family it could be the covid-19 pandemic was new for both type of families, hence to cope with corona virus might have affected equally, or both types of families spend quality times with their family members such as watching movies, discuss the future plan or goal etc.

5. LIMITATIONS:

There are some limitations that should be considered when interpreting this study's findings. We examined limited sample size because as is known, the large sample size reduces the sample size related errors. We examined only English medium school's students and thus can not be generalized to other students. Our study's other limitation is that we collect data through online surveys. We have only focused on depressive symptoms, not other symptoms such as anxiety, stress, and adjustment.

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