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Original Research Article

Prevalence of anxiety among the adult population during the COVID-19 pandemic in Uttar Pradesh

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ABSTRACT

Background: The COVID-19 pandemic had a negative impact on the mental health of the global population. The purpose of this study is to investigate anxiety levels of adult population in relation to the COVID-19 pandemic.
Methods: The study utilized a web-based cross-sectional survey design. A total of 236 participants were enrolled via snowball sampling method. Standardized tool coronavirus anxiety scale was used to collect the data regarding COVID-19 related anxiety. The data was collected during August-November 2021.
Results: Statistical analysis was done using SPSS version 20. The mean age of the participants was 26.64±8.38 years, with the majority being female (65.3%). Approximately half (48.3%) of the participants were healthcare professionals (HCWs). The results revealed that only 5.5% of the participants were anxious about COVID-19, with healthcare workers being the most anxious.
Conclusions: During the COVID-19 crisis, appropriate supportive interventions should be implemented with the goal of providing targeted mental health services to those who are more likely to suffer from mental disorders. The psychosocial intervention and support strategy should cover specifically frontline workers who are tasked with the role of combating virus.

Keywords: Adult population, Anxiety, COVID-19, Mental health, Pandemic, Health crisis

INTRODUCTION

The coronavirus, which was originally discovered in Wuhan, China, in December 2019, posed a threat to the whole world, so it has been declared an international public health emergency by the World Health Organization on March 11, 2020.[1] The virus spread quickly throughout the whole world and caused millions of deaths and a negative impact on people's physical health, social lives, and economic and mental health.[2] The impact of the COVID-19 pandemic is not only restricted to physical symptoms but also includes psychological symptoms such as depressive disorders and anxiety because of high transmission, an increased mortality rate, and enforced lockdown.[3-5] Questions related to a pandemic with no definite answers, such as treatment, severity, prognosis, and constant exposure to a flow of information about the pandemic, all adversely affected the individuals' mental health. Approximately 4 in 10 adults in the United States have reported anxiety or depression symptoms during the pandemic.[6] Anxiety is a feeling of concern that typically appears as an emotional overreaction to situations that are only intuitively recognised as threatening. This feeling generally comes with muscular rigidity, agitation, exhaustion, and

attention deficit.[7] According to the WHO, there is an increase in 25 % of anxiety and depression worldwide due to the COVID-19 pandemic and the young and female genders are impacted the most.[8] According to various studies, anxiety (6.33% to 50.9%), depression (14.6% to 48.3%), post-traumatic stress disorder (7% to 53.8%), psychological distress (34.43% to 38%), and stress (8.1% to 81.9%) were reported during the COVID-19 pandemic.[9] Risk factors for mental health disorders during the COVID-19 epidemic include socio-demographic characteristics such as female sex, younger age and lower educational and socioeconomic status.[9-11] Moreover, contact with persons affected by COVID-19, fear of COVID-19 and the level of information regarding COVID-19, have also been found to contribute to the deterioration of mental health.[9-14] Studies have reported that excessive social media use, low socioeconomic status, a lack of social support, social distancing, and quarantine are other factors that might increase the risk of mental health disorders such as anxiety, irritation, and insomnia.[15-16] A study from China observed that 53% of people experienced feelings of dread.[17] Another study reported that 0.9% of university students exhibited severe symptoms of anxiety, 2.7% had moderate symptoms and 21.3% had mild symptoms.[18] Although the association between the COVID-19 pandemic and mental well-being has been researched in several studies it is still needed to figure out the general statistics on the prevalence of anxiety among the adult population and its main determinants. The objective of the study was to find out the prevalence of anxiety among the adult population during COVID-19.

METHODS

A web-based survey was conducted between August to November 2021 among selected districts of Uttar Pradesh, India, to assess the prevalence and predictors of anxiety during the COVID-19 pandemic. The coronavirus anxiety scale, was used to collect the data that was distributed through WhatsApp and email. Following the principle of "snowball sampling," respondents were requested to forward the link to their relatives, friends and colleagues. Participants were included in the study if they were 17 years of age or older and understood the English language. Those currently suffering from any severe mental illnesses were excluded from the study. Participants provided informed consent after being informed about the purpose of the study. They were given the freedom to withdraw from the study at any point of time during the study. It took approximately 10 minutes to complete the questionnaires. The confidentiality and anonymity of the participants were maintained.

Sample size

Assuming prevalence of anxiety among the Asian general population during COVID-19 to be 20%, absolute precision of 5% and a significance level of 95 %, the sample size was calculated to be 250.[19]

Tools for data collection

The study tool was divided into two parts. The first part consisted of a self-structured subject data sheet, and the second part consisted of the coronavirus anxiety scale. The subject data sheet was made to assess information related to sociodemographic variables such as age, gender, area of residence, marital status, current educational level, occupation, and details related to COVID-19 infection. Anxiety was assessed using a tool, the coronavirus anxiety scale contains five items.[20] The coronavirus anxiety scale (CAS) is a good screener to screen individuals with anxiety related to coronavirus and is also validated in the Indian context.[21,22] Each item in CAS is rated on a 4-point Likert scale, from 0 (not at all) to 4 (nearly every day), based on the experience over the past two weeks. The minimum score is 0, and the maximum is 20, ranging from 0 to 20. A score of 9 was taken as the cutoff for the corona anxiety score. CAS is a reliable instrument with Cronbach's alpha >0.90 and 90% sensitivity and 85% specificity.

Statistical analysis

The data was collected and coded in master datasheets. Statistical analysis was done using SPSS version 20 software. Both descriptive and inferential statistics was used for the analysis. As a descriptive statistic, mean, standard deviation, frequency, and percentage were used. The Chi-square test was used to determine the relationship between selected socio-demographic variables and anxiety scores.

RESULTS

A total of 236 adults participated in the present study. The mean age of the participants was 26.64±8.38 years, with the majority being female (65.3%). Most of the participants belonged to urban areas (62.3%). Approximately 50% (114) of the participants were healthcare professionals.

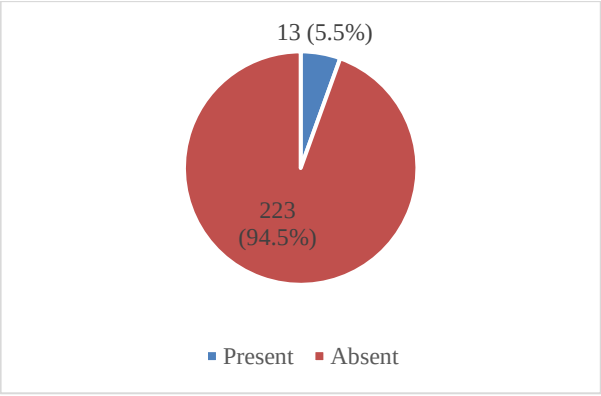

Figure 1: Level of coronavirus anxiety.

Most of the participants had not tested positive for COVID-19 during the previous year (77.5%).

Table 1: Socio-demographic characteristics of the participants (n=236).

Parameters	N (%)
Age (years) Mean±SD (Range)	26.64±8.38 (18-69)
Gender	
Male	82 (34.7)
Female	154 (65.3)
Area of residence	
Rural	89 (37.7)
Urban	147 (62.3)
Marital status	
Married	58 (24.5)
Unmarried	178 (75.4)
Type of family	
Nuclear	142 (60.2)
Joint	94 (39.8)
Current educational level	
High School	4 (1.7)
Intermediate	21 (8.9)
Graduation	142 (60.2)
Post-graduation or above	69 (29.2)
Occupation	
Employee (Private/Government)	47 (19.9)
Business	7 (3.0)
Health care professional	114 (48.3)
Student	55 (23.3)
Homemaker	13 (5.5)
Currently staying with	
Alone	40 (16.9)
Colleague	51 (21.6)
Parents/partner	140 (59.3)
Relative	5 (2.1)
Family income (per month)	
Rs. < 10,000	50 (21.2)
Rs. 10,000 - 40,000	74 (31.4)
Rs. 40,000 - 1,20,000	69 (29.2)
above Rs 1,20,000	43 (18.2)
Tested positive for COVID-19 in the past 1 year	
Yes	53 (22.5)
No	183 (77.5)
Relative or friend tested positive for COVID-19 in the past 1 year	
Yes	164 (69.5)
No	72 (30.5)
Family member, relative or friend died of COVID-19 in the past 1 year	
Yes	76 (32.2)
No	160 (67.8)

More than two-thirds of the participants reported that their friends or relatives had tested positive for COVID-19 (69.5%), and nearly a third (32.2%) had lost their family member, relative, or friend to COVID-19 infection during the previous year (Table 1). The responses of participants to the coronavirus anxiety scale (CAS) is depicted in (Table 2). It can be noted that the vast majority of participants in our study did not experienced Coronavirus-related anxiety (Figure 1). A significant association between occupation and the level of anxiety was observed as depicted in (Table 3). It can be noted that health care workers had significantly higher level of anxiety when compared to participants belonging to other professions.

DISCUSSION

The COVID-19 pandemic had resulted in the prevalence of a wide range of psychological issues such as fear, anxiety, stigma, prejudice, and marginalisation, which affected everyone, including healthy individuals and people who are at risk.[23] The prolonged lockdown and mandatory protective measures increased uncertainty and altered many aspects of daily life. Some earlier studies on the prevalence of mental health issues revealed that stress, depression, and posttraumatic stress symptoms were fairly widespread.[24] A scientific brief released by the World Health Organization (WHO), also reported an increase in the global prevalence of anxiety and depression by 25% during the first year of the COVID-19 pandemic.[25] The rapid spread of COVID-19 has exacerbated anxiety in populations globally, leading to mental health disorders in individuals. Anxiety, when raised above normal, weakens the body's immune system, increasing the risk of contracting the virus.[26] In this study, the mean age of the participants was 26.64±8.38, which is similar to that of the study conducted by Sahu et al. In which the majority of the participants belonged to the age group of 18-30 years.[27] In our study, only 5.5% of the participants reported anxiety associated with COVID-19 infection, which is in contrast with the study done by Sahu et al who reported that 20.4% of participants were found to have anxiety.[27] This could be explained as both studies have different data collection periods. The above-mentioned study was conducted during August-September 2020, during which COVID-19 cases were at their peak, whereas our study was conducted during August-November 2021, during which COVID cases were very low and the infection was in a controlled state. Furthermore, the low level of COVID-19-related anxiety in our study can be attributed to the fact that majority (77.5%) of the participants were not tested positive for COVID-19 infection during the past year. Also, it was found that the majority of the participants had not faced any COVID-19-related deaths in their families or friends during the past year. Also, the study highlighted a significant association between occupation and the level of anxiety associated with COVID-19 infection. It was noted that those working as healthcare workers (HCWs) had significantly higher levels of anxiety when compared to others working in a different profession. Similar findings were reported by Alenko et al who reported a higher prevalence of anxiety among HCWs.[28] Many studies explored the factors associated with anxiety during the COVID-19 pandemic. One such finding reported by Shanafelt et al suggests the areas of concern for healthcare workers include: being exposed to COVID-19 infection and spreading the infection to their home and

family; not having quick access to testing if they develop COVID-19 symptoms; uncertainty about their organization's ability to support and care for their personal and family needs if they become infected and functional changes where the nurses have to work in areas in which they are incompetent or inexperienced.[29]

Table 2: Responses of participants to coronavirus anxiety scale (CAS), N (%).

Responses	Not at all	Rare, less than a day or two	Several days	More than 7 days	Nearly every day over the last 2 weeks
I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus.	146 (61.9)	52 (22.0)	25 (10.6)	7 (3.0)	6 (2.5)
I had trouble falling or staying asleep because I was thinking about the coronavirus.	154 (65.3)	47 (19.9)	26 (11.0)	6 (2.5)	3 (1.3)
I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus.	176 (74.6)	30 (12.7)	22 (9.3)	4 (1.7)	4 (1.7)
I lost interest in eating when I thought about or was exposed to information about the coronavirus.	173 (73.3)	36 (15.3)	20 (8.5)	5 (2.1)	2 (0.8)
I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus.	188 (79.7)	27 (11.4)	16 (6.8)	2 (0.8)	3 (1.3)

Table 3: Association between sociodemographic variables with coronavirus related anxiety.

Variable	Corona virus anxiety		Chi-square value	df	P value
	Absent, N (%)	Present N (%)			
Gender					
Female	144 (64.6)	10 (76.9)	0.826	1	0.551
Male	79 (35.4)	3 (23.1)			
Residence					
Rural	82 (36.8)	7 (53.8)	1.525	1	0.247
Urban	141 (63.2)	6 (46.2)			
Marital status					
Married	53 (23.9)	5 (38.5)	1.727	1	0.422
Unmarried	170 (76.2)	8 (61.5)			
Type of family					
Nuclear	137 (61.4)	5 (38.5)	2.705	1	0.144
Joint	86 (38.6)	8 (61.5)			
Educational status					
High school	4 (1.8)	0 (0)			
Intermediate	19 (8.5)	2 (15.4)	1.974	3	0.578
Graduation	133 (59.6)	9 (69.2)			
Post-graduation and above	67 (30.0)	2 (15.4)			
Occupation					
Employee (Private/Government)	46 (20.6)	1 (7.7)			
Business	6 (2.7)	1 (7.7)			
Health care professional	53 (23.8)	6 (46.2)	10.160	4	0.038
Student	108 (48.4)	2 (15.4)			
Homemaker	10 (4.5)	3 (23.5)			
Currently staying with					
Alone	38 (17.0)	2 (15.4)			
Colleague	46 (20.6)	5 (38.5)	4.854	3	0.183
Parents/partner	135 (60.5)	5 (38.5)			
Relative	4 (1.8)	1 (7.7)			

Continued.

Variable	Corona Virus Anxiety		Chi-square value	df	P value
	Absent, N (%)	Present N (%)			
Family income (per month)					
Rs. < 10,000	46 (20.6)	4 (30.8)	3.505	3	0.320
Rs. 10,000 - 40,000	70 (31.4)	4 (30.8)			
Rs. 40,000 - 1,20,000	64 (28.7)	5 (38.4)			
above Rs 1,20,000	43 (19.3)	0 (0.0)			
Tested positive for COVID-19 in the past 1 year					
Yes	52 (23.3)	1 (7.7)	1.722	1	0.307
No	171 (23.3)	12 (92.3)			
Relative or friend tested positive for Covid-19 in the past 1 year					
Yes	158 (70.9)	6 (46.2)	3.534	1	0.070
No	65 (29.1)	7 (53.8)			
Family member, relative or friend died of Covid-19 in the past 1 year					
Yes	70 (31.4)	6 (46.2)	1.226	1	0.359
No	153 (68.6)	7 (53.80			

Even though mental health and psychosocial issues are common among HCWs, most do not seek or receive regular mental healthcare. Therefore, the mental health problems of HCWs during the COVID-19 pandemic have emerged as an urgent public health concern.[26] Furthermore, to devise an effective approach for supporting HCWs, it is essential to explore various sources of fear and anxiety among them so that a focused intervention can be developed for promoting their well-being.

The strength of the study includes the use of a standardised tool for assessing anxiety associated with COVID-19. On the other hand, the study also has some limitations, such as the use of a cross-sectional research design, which limits the assessment of longitudinal variations in the mental status of the participants.

Furthermore, due to the online nature of the survey, there can be a possibility of systematic sampling bias and participant self-selection. The self-reported questionnaires could also pose a threat to the authenticity of responses. Moreover, in our study, majority were female and participants with higher education status, which limits the generalizability of the findings.

These findings are significant because anxiety symptoms highlight the need for HCWs to receive immediate assistance in managing these stressors and reducing their long-term impact. Also, HCWs may require specific coping strategies to help them, as well as additional support such as counselling and time away from the workplace.[30]

CONCLUSION

The current study concluded that the COVID-19 pandemic has the potential to impair an Individual's mental health. Study highlighted a significantly higher level of anxiety among healthcare workers when compared to other professions. During these types of havoc-wreaking pandemic situations, strategies to reduce anxiety and mental breakdown should be employed on an urgent basis. Support programmes and counselling services should be organized in order to promote the mental well-being of HCWs.

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