



ISSN: 0975-833X

Available online at <http://www.journalcra.com>

International Journal of Current Research  
Vol. 12, Issue, 05, pp.11713-11716, May, 2020

DOI: <https://doi.org/10.24941/ijcr.38786.05.2020>

INTERNATIONAL JOURNAL  
OF CURRENT RESEARCH

## RESEARCH ARTICLE

### A STUDY TO ASSESS THE LEVEL OF ANXIETY DURING COVID-19: A SURVEY APPROACH

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#### ARTICLE INFO

##### Article History:

Received 19<sup>th</sup> February, 2020

Received in revised form

24<sup>th</sup> March, 2020

Accepted 28<sup>th</sup> April, 2020

Published online 31<sup>st</sup> May, 2020

##### Key Words:

Anxiety, Covid-19

#### ABSTRACT

The outbreak of covid-19 has created a global health crisis that has had a deep impact on the way we perceive our world and our everyday lives and hence causing a significant negative impact on mental health. The uncertainty and low predictability of COVID-19 not only threaten people's physical health, but also affect people's mental health, especially in terms of emotions and cognition. The aim of this study is to assess the level of anxiety among general population in India during COVID-19 outbreak. An online survey was conducted with a semi-structured questionnaire using non-probability snowball sampling technique that surveyed 210 individuals through social networking platform. The level of anxiety was found out to be in mild level but it also revealed that majority of the people (86%) were preoccupied with the thoughts of COVID-19 and reported that they wash their hand more than usual. Maximum number of sample (82%) also revealed that they think twice before going out and also they have started watching news more usually. The findings of the study also revealed that there was significant association between education and profession with level of anxiety.

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Citation: Jyotsna Jacob, Kanika Kumar. 2020. "A study to assess the level of anxiety during covid-19: A Survey approach", *International Journal of Current Research*, 12, (05), 11713-11716.

#### INTRODUCTION

Infectious disease disasters, including epidemics, pandemics and outbreaks, may cause high morbidity and mortality and may account for a quarter to a third of global death rate (Sir Daniel, 2020). In January 2020 the World Health Organization (WHO) declared the outbreak of a new coronavirus disease, COVID-19, to be a Public Health Emergency of International Concern. WHO stated that there is a high risk of COVID-19 spreading to other countries around the world.(WHO,2020). In March 2020, World Health Organization has announced COVID-19 as the sixth public health emergency of international concern. The virus was first detected in December 2019 in Wuhan, China, and its main symptoms include fever, dry cough and shortness of breath (Guan *et al.*, 2019). Globally, as of 2:00am CEST, 5 May 2020, there have been 3,525,116 confirmed cases of COVID-19, including 243,540 deaths, reported to WHO (World Health Organization, 2020). The outbreak of coronavirus disease 2019 (COVID-19) has created a global health crisis that has had a deep impact on the way we perceive our world and our everyday lives. Not only the rate of contagion and patterns of transmission threatens our sense of agency, but the safety measures put in place to contain the spread of the virus also require social

distancing by refraining from doing what is inherently human, which is to find solace in the company of others (Verikios *et al.*, 2016). The uncertainty and low predictability of COVID-19 not only threaten people's physical health, but also affect people's mental health, especially in terms of emotions and cognition, as many theories indicate. According to Behavioural Immune System (BIS) theory (John, 2013), people are likely to develop negative emotions (e.g., aversion, anxiety, etc.)<sup>7</sup> and negative cognitive assessment<sup>1</sup> for self-protection. Faced with potential disease threat, people tend to develop avoidant behaviours (e.g., avoid contact with people who have pneumonia-like symptoms) (Houston, 1994) and obey social norms strictly (e.g., conformity) (Roy, 2020). Print, electronic and social media are flooded with numerous advisories issued by governments and other national & international agencies looking after health-related affairs. While all this is being done with best of intentions so as to contain the spread of this viral disease, this is causing a significant negative impact on mental health of people. World Health Organization (WHO) has already taken a note of the same and has issued an advisory in this regard (Organisation, 2020). As the coronavirus pandemic rapidly sweeps across the world, it is inducing a considerable degree of fear, worry and concern in the population at large. In public mental health terms, the main psychological impact to date is elevated rates of stress or anxiety. But as new measures and impacts are introduced – especially quarantine and its effects on many people's usual activities, routines or livelihoods – levels of loneliness, depression, harmful alcohol

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and drug use, and self-harm or suicidal behaviour are also expected to rise (Verikios 2016). Anxiety is a feeling of tension, worry and physical changes such as increased blood pressure, sweating, trembling, dizziness or a rapid heartbeat (Major *et al.*, 2000). The unknown and newness of COVID-19, the instantaneous transmission of its mortality statistics and, overestimation by the infected, concerns about the future (Banerjee, 2020), the severe economic sanctions imposed on the country, the doubts about the adequacy of measures and the provision of health and medical needs to control the disease can all be the reasons which may cause anxiety. While anxiety is a normal and expected reaction to the pandemic, too much anxiety can start to cause harm. Feeling stressed and fearful every day takes a toll on health and well-being very quickly. When anxiety and fear lead to panic, people may also take precautions that ultimately cause disruptions in their lives, like demanding a lot of tests or medical care when it isn't necessary or stockpiling certain supplies to the point that those supplies aren't available to people who are sick and need those items. Anxiety, when above its normal level, weakens the immune system and as a result the risk of the virus infection increases (Verikios *et al.*, 2016). In addition, people's anxious reactions trigger public disruptive behaviours as people rush to stores, health centres, and pharmacies and health supply become scarce and the country health care service provision is affected.

Although India has not yet reached the stable stage of the outbreak and perhaps the first action that seems to be key is the urgent control of the outbreak, mental health should not be neglected as the prevalence of mental disorders, especially anxiety, reduces individuals resiliency against the virus infection and may also cause irreparable economic, social, cultural and psychological problems to people in the future. The aim of this study is to explore the impacts of public health emergency COVID-19 on people's mental health.

#### The objectives of the study were:

- To assess the level of anxiety among general population due to Covid-19
- To determine the association between the level of anxiety and selected demographic variables.

## MATERIAL AND METHODS

The study is an online survey conducted through an online platform in India. A Snowball sampling technique was used. An online semi-structured questionnaire was developed by using Google forms. The link of the questionnaire was sent through e-mails, WhatsApp and other social media to the contacts of the investigators. The participants were encouraged to participate in the survey to as many people as possible. Thus, the link was forwarded to people apart from the first point of contact and so on. As they receive the form by clicking the link, the participants got auto directed to the information about the study and informed consent. First they have given their consent for the survey and then filled the demographic variables. Afterwards, a set of several questions appeared sequentially, which the participants were to answer. Participants with access to the internet could participate in the study. Participants with age 18 years and above, able to understand English and willing to give informed consent were included. The data collection was initiated on 5<sup>th</sup> May 2020 and closed on 7<sup>th</sup> May 2020.

We were able to collect data from across various states of India. The socio-demographic variables included age, gender, educational status, profession, marital status, family type, any previous history of anxiety. The online self-reported questionnaire developed by the investigators contained the anxiety developed during the pandemic of the novel coronavirus. Anxiety related to novel coronavirus infection had 15 items that were supposed to be rated on 4 point Likert scale ranging from never, sometimes, frequently and always. Descriptive statistics was been used in the study to analyse the findings. Mean and standard deviation was used to estimate the results of the study.

## RESULTS

**Sample characteristics:** The above table 1 depicts that maximum sample were from the age group of 18-30. Female sample (67.1%) outnumbered the male respondents. Maximum number of respondents were graduates (43.8%) followed by post graduated (39.5%). Highest number of respondents (36.7%) were students and (27.6%) from other professions like engineer, marketing. Maximum of them were married. Majority of the samples lived in nuclear family. Majority of the respondents had no history of anxiety.

**Assessment of level of anxiety:** Table 2 depicts that maximum respondents (53.51%) had mild anxiety level, whereas (42.66%) had moderate anxiety and only (3.33%) had severe anxiety level who needed consultation. The study also revealed that majority of the people (86%) were preoccupied with the thoughts of COVID-19 and reported that they wash their hand more than usual. Maximum number of sample (82%) also revealed that they think twice before going out and also they have started watching news more usually. The samples were also worried about the Virus post lifting the lock down. In a similar manner, 55.2% of the respondents were anxious about their job security. However, only few percentages of people felt that their anxious behaviour is affecting their families. The above figure depicts that the mean value of level of anxiety was 14.61 and standard deviation was 7.26 and range was 34.

**Association of level of anxiety and demographic variables:** The study revealed that the level of anxiety was dependent of education and profession as there is association of education and profession with anxiety. There is no significant association with other demographic variables and level of anxiety. This indicates that the level of anxiety was high in respondents who were students and are pursuing their higher studies and held a good professional role since they have access to the news and try to find out the details of the virus at grass root level are very much knowledgeable about the pandemic therefore they get more anxious.

## DISCUSSION

The study has assessed the level of anxiety due to COVID 19 among general population, where majority (53.51%) of the respondents had mild or no anxiety, (42.66%) had moderate anxiety and (3.33%) had severe anxiety who needed consultation, thus it was concluded that majority of the population were not dealing with anxiety as a whole but item wise respondents showed some symptoms of anxiety such as: 57.6 % of the participants feel tense and agitated than usual.

**Table 1. Frequency and percentage distribution of demographic variables N=210**

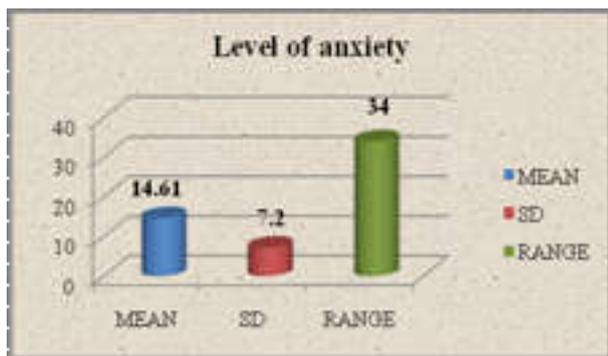
S.No	Demographic variables	Frequency	Percentage
1	Age		
	a)18-30	122	58.1%
	b)30-45	72	34.3%
	c)45-60	13	6.2%
	d)60 and above	3	1.4%
2	Gender		
	a)Male	69	32.9%
	b)Female	141	67.1%
3	Educational status		
	a)Matriculation	7	3.4%
	b)Higher secondary	24	11.4%
	c)Graduate	92	43.8%
	d)Post graduate	83	39.5%
	e)Doctorate	4	1.9%
4	Profession		
	a)Student	77	36.7%
	b)Medical Professional	37	17.6%
	c)Educational Sector	38	18.1%
	d)Others	58	27.6%
5	Marital status		
	a)Married	86	58%
	b)Unmarried	122	41%
	c)Separated	2	1%
6	Family type		
	a)Nuclear	168	80%
	b)Joint	42	20%
7	Any previous history of anxiety		
	a)Yes	26	12.4%
	b)No	184	87.6%

**Table 2. Frequency and percentage distribution of level of anxiety N=210**

Level of anxiety	Frequency	%
No anxiety (0)	0	0
Mild (1-14)	113	53.51
Moderate Anxiety (15-30)	90	42.66
Severe Anxiety (31-45)	7	3.33

Maximum score=45

Minimum score= 0

**Figure 1. Showing Mean, SD and range of level of anxiety**

Approximately 45 % of the participants had difficulty in concentrating in work and studies, About 47% of participants reported being worried about their health, approximately, 50 % of the participants reported that they were anxious about the virus post lifting the lockdown Among the participants, majority (50%) of them were worried about their families and friends living elsewhere. Maximum of the participants were scared that the virus can affect them also. A total of 40% of participants washed their hands more frequently than usual. 1.4% of the participants reported that their anxious behaviour is affecting their families.

These findings were supported by Deblina Roy, Sarvodya Tripathi, Sujita Kumar *et al* who conducted a study on the general population to assess the knowledge, attitude and anxiety during COVID 19 and found out that during this coronavirus pandemic, most of the educated people and health professionals are aware of this infection, possible preventive measures, the importance of social distancing and government initiatives were taken to limit the spread of infection. However, there are increased worries and apprehensions among the public regarding acquiring the COVID-19 infection. People have higher perceived needs to deal with their mental health difficulties. According to the second objective i.e. to determine the association of level of anxiety among general population with selected demographic variables and there was significant association of education and profession with the level of anxiety.

This result can be associated with the reason that majority of the respondents were students and were pursuing their next level of studies and they had high level of anxiety as being worried about their future and their career goals, and also professionals gained a lot of knowledge about the pandemic and were anxious about the loss of job. These findings were supported by Sir John Daniel who conducted a study on Education and COVID 19 pandemic and stated that The COVID-19 pandemic has disrupted the lives of students in different ways, depending not only on their level and course of study but also on the point they have reached in their programmes. Those coming to the end of one phase of their education and moving on to another, such as those transitioning from school to tertiary education, or from tertiary education to employment, face particular challenges. They will not be able to complete their school curriculum and assessment in the normal way and, in many cases; they have been torn away from their social group almost overnight. Students who make the transition to tertiary education later this year are unlikely to take up offers to sit their year-end school exams

## Conclusion

The COVID-19 disease has now achieved pandemic status. The World Health Organization has issued guidelines for managing the problem from both biomedical and psychological points of view. While preventive and medical action is the most important at this stage, emergency psychological crisis interventions for people affected by COVID-19 are also critical. The long-term mental health impact of COVID-19 may take weeks or months to become fully apparent, and managing this impact requires concerted effort not just from psychiatrists but from the health care system at large.

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