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Original Article

Anxiety Status of Instagram Users during Coronavirus Disease in Iran in 2020: A Cross-sectional Study

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Abstract

Background and aims: Today, with the increasing prevalence of COVID-19 in the world, the general population with excessive worry due to media reports has a higher level of psychological distress. Therefore, the present study aimed to determine the state of anxiety among Instagram users in 2020.

Methods: This is a cross-sectional study that was conducted from June to July 2020 on 313 Instagram users. Coronavirus Anxiety Scale was used to measure anxiety caused by coronavirus in Iran. The subjects entered the study by availability sampling and filled out the questionnaire through the features of Instagram such as posts and stories. Chi-square test was used to analyze the relationship between independent and dependent variables according to the nature of the variable. The significance level was considered to be $P<0.05$.

Results: Out of 313 participants in the study, 218 (69.6%) were in the age range of 19-35 years. Additionally, 50.5% of them were male and the majority of the participants had academic education. Overall, 21.4% of the participants had moderate to severe anxiety. There was no significant relationship between the participants' levels of anxiety and demographic variables (age groups, gender, and level of education) ($P>0.05$).

Conclusion: The results of chi-square test showed that no significant relationship was observed between the dimensions of anxiety based on the demographic characteristics of individuals such as age groups ($P=0.256$), gender ($P=0.644$), and level of education ($P=0.415$).

Keywords: Coronavirus, COVID-19, Anxiety, Social network, Instagram users

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Introduction

In early December 2019, several cases of pneumonia due to a newly identified β-coronavirus were observed in Wuhan, Hubei province, China.[1] Since the first case of COVID-19 was reported in Wuhan, China, the disease has spread rapidly throughout China, as well as many countries and regions of the world despite public and global efforts to prevent its spread.[2] The World Health Organization (WHO) declared COVID-19 as the sixth public health emergency of international concern after H1N1 (2002), polio (2014), Ebola in West Africa (2014), Zika (2016), and Ebola in the Democratic Republic of the Congo (2019).[3,4] Coronavirus has caused two epidemics in the past; one was acute respiratory syndrome (SARS) and the other was Middle East respiratory syndrome (MERS).[5] The most common symptoms are fever, cough, fatigue, shortness of breath, sputum production, headache, and diarrhea. The clinical status of patients varies from asymptomatic to severe respiratory failure requiring mechanical ventilation, support, and care in the intensive care unit (ICU).[6] Quarantine and social distancing are the classic public health measures to curb the epidemic.[7] Often, there are unpleasant feelings in people who experience isolation and quarantine, which is accompanied by a lot of negative psychological burden. Distance from loved ones, lack of freedom and security due to the illness, and boredom are unpleasant feelings that are associated with serious mental disorders such as anxiety, depression, and dysfunction.[8] Moreover, in previous experiences of the prevalence of this virus (MERS and SARS), coronavirus exposure and disease conditions have been associated with neurological and mental illnesses and disorders and problems such as post-traumatic stress disorder, depression, panic disorder, anxiety, obsessive-compulsive disorder, suicide, and psychosis.[9-11] Fear and anxiety caused by the outbreak of the disease and the resulting conditions can negatively affect people's mental health.[12] In addition to disease and immunological mechanisms, fear of disease, uncertainty about the future, the traumatic risks of severe disease, and social isolation

experienced by patients during COVID-19 outbreaks are significant psychological stressors which can lead to psychological problems, especially anxiety.[13] Anxiety and fear caused by the outbreak of COVID-19 pandemic can be overwhelming and intense. In addition, poor mental health during the outbreak of infectious diseases can lead to misinterpretation and misunderstanding of natural health stimuli (physical emotions and normal and routine changes), so that these people may interpret physical feelings and harmless changes as signs of infection and disease which can lead to too much discomfort.[14]

A study conducted by Wang et al. in China focused on the possibility of generalized mental illness following the outbreak of COVID-19. According to the results of this research, in terms of psychological anxiety of the population, there were significant differences in terms of age, marriage, concern about media reports, and the effects of disease onset. In general, in the early stages of COVID-19 outbreak, people who followed the worrying news of COVID-19 mostly through the media experienced higher levels of psychological distress.[15] The present study was designed to determine the anxiety status of Instagram users from June to July 2020.

Materials and Methods

Type of Study

This is a cross-sectional study conducted on Instagram users from June to July 2020.

Data Collection Tools

The researchers collected the data using the Coronavirus Anxiety Inventory. Coronavirus Anxiety Scale has been prepared to measure anxiety caused by coronavirus in Iran.[16] This questionnaire consists of 18 items that are designed in two dimensions and scored using a 4-point Likert scale (0 = never, 1 = sometimes, 3 = more often, and 4 = always). The first dimension is related to psychological symptoms including 9 questions and the second dimension is related to physical symptoms which also includes 9 questions. Therefore, the scores in this study range from 0 to 54. A score of 0-16 indicates no anxiety or mild anxiety, a score of 17-29 is considered moderate anxiety, and a score of 30-54 indicates severe anxiety. The validity and reliability of the above-mentioned questionnaire have been confirmed in Iran. The reliability of this questionnaire using Cronbach's alpha has been estimated to be 91%.[16]

Sampling

A total of 313 Instagram users entered the study by convenience sampling and completed the questionnaire through the features of Instagram such as posts and stories. Initially, a post and a story were posted on the researcher's Instagram account with the subject of inviting to participate in the present project, and people wishing to participate in the study were asked to refer to the bio section of the Instagram account, receive the online questionnaire link, and complete the questionnaire. Each person was asked to complete the questionnaire only once. Sampling continued until the number of participants reached 313 people and after sampling, the questionnaire link was removed from the bio section. The inclusion criteria were having an active account in the social network Instagram, having knowledge of the Persian language, and signing the informed consent form. The exclusion criteria included not completing the questionnaire and taking medications to reduce anxiety and depression. In the initial message, the criteria for entering and leaving the study were mentioned. Therefore, people who did not intend to participate in the study and were taking medication due to depression and anxiety were not allowed to complete the questionnaire. The participants' information remained confidential throughout the study.

Statistical Analysis

After data collection, SPSS version 25.0 was used to analyze the data. Frequency (percentage) was used to report descriptive statistics. Chi-square test was used to analyze the relationship between independent and dependent variables according to the nature of the variable. The significance level was considered to be $P < 0.05$.

Results

Out of 313 participants in this study, 218 (69.6%) were in the age group of 19-35 years. Moreover, 50.5% of them were male and the majority of the participants had academic education (Table 1).

By classifying the anxiety scores obtained into different levels of anxiety, it was found that 68.1% of the participants had a moderate level of anxiety in terms of psychological dimension. Physically, about 41.5% of them had moderate to severe anxiety levels. Overall, about 21.4% of the participants in the study reported moderate to severe anxiety (Table 2).

The results of chi-square test showed that no significant relationship was observed between the dimensions of anxiety based on the demographic characteristics of individuals such as age groups ($P = 0.256$), gender ($P = 0.644$), and level of education ($P = 0.415$).

Table 1. Demographic Characteristics of the Participants in the Study

Variables	Number	Percent
Age, year		
≤18	42	13.4
19-35	218	69.6
>35	53	16.9
Gender		
Male	158	50.5
Female	155	49.5
Level of education		
High school	36	11.5
Diploma	35	11.2
Academic	242	77.3

Table 2. Frequency (%) of Anxiety Levels in the Study Participants by Anxiety Dimensions

Dimensions of Anxiety	Anxiety Levels		
	Lack of Anxiety or Mild (%)	Moderate (%)	Severe (%)
Psychological	83 (26.5)	213 (68.1)	17 (5.4)
Physical	183 (58.5)	112 (35.7)	18 (5.8)
Total	246 (78.6)	55 (17.6)	12 (3.8)

Discussion

Today, coronavirus is a catastrophe and a public concern and it has become one of the fundamental health crises in communities; on the other hand, worries can cause fear and anxiety in people, which are considered as serious and important factors in the development of mental illnesses in communities.[17-19] According to the results of this study, in general, 78.6% of the subjects had no or mild anxiety, while 17.6% of them had moderate anxiety. Additionally, 3.8% of the participants had severe anxiety levels. According to the questionnaire categories, in terms of physical anxiety, 41.5% of people reported that severe or moderate anxiety caused by the outbreak of coronavirus had a negative effect on their physical health. In terms of mental health, it was found that anxiety and worry were present in 73.5% of the participants. Although anxiety was observed in most people in this study, at the level of severe anxiety, 5.8% of the participants reported severe physical anxiety and 5.4% of them reported severe mental anxiety. In a cross-sectional study carried out by Gao et al on 18-year-old Chinese citizens from January 31 to February 2, 2020, it was found that out of a total of 4872 participants from 31 provinces, 22.6% were anxious because of the information they received from the media during the outbreak of coronavirus.[20] Liu et al who surveyed 4679 physicians and nurses in 348 hospitals in 31 provinces in China found that 16% of them were anxious. The study found that people with characteristics such as being middle-aged, being disabled, living alone, being a nurse, working in high-risk wards, being treated for COVID-19 or other infectious diseases, and having at least one of the mental health problems such as psychological distress are at risk of anxiety and depression.[21] According to a study by Cao et al on the students' mental health during the coronavirus outbreak, it was shown that about 75% of the students had no anxiety symptoms and among those who had symptoms of anxiety, 21.3% had mild anxiety and only 3.8% reported moderate to severe anxiety. In this study, factors such as not living with their parents and having a relative infected with coronavirus disease increased the likelihood of anxiety.[22] Another study by Du et al, which aimed to identify the mental symptoms of health care workers at the forefront of the fight against coronavirus in Wuhan, China, found that about 20% of these people had at least mild anxiety symptoms. Among the factors that increase anxiety are the lack of knowledge about COVID-19 and the infection of friends or family members with the virus.[23] Similar previous studies on SARS outbreaks have shown that in Wuhan city, front-line health care workers experienced moderate to severe stress at the peak of the outbreak, mostly experiencing symptoms of anxiety and depression.[24-26] Another study assessed the mental health of people during the outbreak of COVID 19 in China and found that anxiety was present in about half of the participants (44.7%).[27] The differences shown can be due to the environmental and spatial conditions of the study, the study time, and demographic characteristics of the participants such as age, gender, marital status, and level of education.[20]

Limitations of the Study

One of the major limitations of the study was the sampling environment. It seems that since the environment of Instagram is crowded and users experience some daily anxiety while using it, the results of the study might have been affected.

Conclusion

The results of the study showed that a significant number of the participants had moderate to severe anxiety. In general, due to the increasing prevalence of coronavirus, it is necessary to control the level of anxiety and stress by developing educational programs and organizing workshops, as well as holding counseling sessions for Instagram users.

Conflict of Interest Disclosures

There is no conflict of interests.

Ethical Approval

The present article was the result of a research project at Larestan University of Medical Sciences, which was approved by the Ethics Committee with the code of IR.LARUMS.REC.1399.004.

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