

study of anxiety caused by the Corona pandemic and its relationship with demographic characteristics in families of Kerman

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Abstract

Introduction: Nowadays, it is necessary to study the effects of Coronavirus disease on mental problems in family members based on demographic characteristics. This study aimed to evaluate the outbreak of anxiety caused by the Corona pandemic and its relationship with demographic factors in families of Kerman.

Methods: This study is descriptive research. The statistical population included all Kermani citizens in 2021 who had at least one family member affected by the Coronavirus. A simple random sampling method selected three hundred eighty-four people from this population. The research tool was a Corona Anxiety questionnaire by Alipour. Data analysis was performed by descriptive and chi-square tests and SPSS_22 statistical software.

Results: 83.07% of people with corona disease had shown an average-high amount of anxiety. Those with physical symptoms of corona anxiety in this population were 55.98%. There was no significant relationship between the outbreak of anxiety disorders and gender. There was an essential relationship between the outbreak of anxiety disorders and age, marital status, educational grade, and the profession.

Conclusion: according to the high spread of anxiety disorders during the outbreak of Corona disease and its consequences, the implementation of psychological interventions is recommended according to their demographic characteristics.

Keywords: Anxiety Disorders, Corona Crisis, Demographic Characteristics, Family

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Introduction:

The mental hygiene of society is one of the pivots of health assessment in different communities. Mental hygiene plays a significant role in ensuring the mobility and efficiency of any society, which is affected by numerous factors, including the outbreak of disease (1). From the beginning of the new century A.D, a disease which belongs to coronavirus type called Covid-19, rapidly spread around the world, which has drastically affected various aspects of social life in countries and its negative effects are obvious in a range of economic, cultural and health fields (2).

The most important symptoms of this disease are fever, chills, dry cough, diarrhea, vomiting, and in severe cases, acute respiratory problems, cardiac and cerebral arrest may happen. These three factors, particularly severe lung infection, cause the patient to die within a short period (3). according to the outbreak and spread of this disease, the World Health Organization (WHO) announced a state of emergency on February 4th and recommended that countries reduce the spread of the disease by preventing the contact of people with each other, especially in patients, healthcare workers, and hospital staff to control it globally (4). unfortunately, this method alone was not practical, and the number of patients increased every day. Some of these patients were asymptomatic carriers that caused a daily increase in the number of coronary deaths and caused hospitals to be filled with Covid -19 patients. As a result, several countries established particular areas that were wholly quarantined (such as China and Italy), or preventive care plan was implemented at the national and macro scale (such as Iran, UAE, and South Korea) in the city, province, or even the whole country (5).

Though the positive consequences it had, the administration of these health policies has led to negative mental impacts in society. Fear of illness, fear of death, disarray in daily activities, regulations about prohibiting or restricting travel and transit, reduction of social relations (between colleagues, friends, family), the occurrence of occupational and financial problems, and dozens of other consequences. in result, these factors threaten the mental health of people in the society. Undoubtedly, one of the most important of these factors is anxiety related to the corona-virus disease (6).

During an epidemic of a disease, for instance, corona disease, fear of illness and death, and the disarray in daily activities cause healthy people to get involved with disease anxiety (7). this kind of epidemic of a disease is an extraordinary social event raised not only on a regional scale but also on the country scale and the whole world. It is necessary to evaluate its social effects (8). from the viewpoint of Sociology, the outbreak of infectious diseases is the same as natural disasters. Incidents occur once in a while and lead to social catastrophes. Events that human beings have not played a role in creating. Epidemics of dangerous diseases in a society like a corona that cause many human casualties are also considered natural disasters. The broader the outbreak and prevalence of the disease, the wider its social effects are. (9).

Health experts worldwide have emphasized that the current epidemic is not just a phenomenon with a physiological problem but also impacts the psychological aspect of individuals and will cause a wide range of panic disorders and anxiety. The negative impact of the corona epidemic on the mental health of individuals has been considered remarkably by WHO since the beginning of the disease outbreak and it has been recommended along with personal hygiene during the outbreak of the Coronavirus (10). The mental state of people in society is critical because the overall health and welfare of any society rely on the people's mental health. It is a serious matter to controlling the Coronavirus, which is the primary role of cutting the transmission chain, mental support, and mental health promotion that country's Politicians have to consider it as an undeniable matter (11).

Alizadeh Fard and Saffarinia, in their research, showed that Corona anxiety is a predictor of individual mental health (6). Lee et al. Found that anxiety and depression were more prevalent among Chinese people (12). Sheer showed in his study that people have anxiety and sleep disorders during the corona crisis (13). Nasirzadeh et al. Also showed that anxiety and depression increased during corona disease and on the other hand, their resilience decreased (1).

In the high-risk situation of the corona crisis, recognizing people prone to psychological disorders at different levels of society is necessary to maintain the health of these people with appropriate psychological strategies. Therefore, this study aimed to investigate the outbreak of anxiety caused by the Corona pandemic and its relationship with demographic characteristics in families of Kerman.

Research method:

This research is descriptive. The statistical population of the present study, including the whole population living in the city of Kerman in 1400 that was 632,162 people, which according to Cochran's formula, taking into account the 95% confidence interval and 5% error level, the sample size was 384 people. The sampling method in this study was simple random. The data collection method was as follows: according to the outbreak of the disease and the impossibility of face-to-face communication, the questionnaire was designed online on the Porsline website, and its link was provided to Kerman participants via WhatsApp, Telegram, and Eitaa. Data collection tools include:

Coronavirus Anxiety Scale :This tool has been developed and validated to measure anxiety caused by the Coronavirus outbreak in Iran. The final version of this tool has 18 items and 2 components (factors). Items 1 to 9 measure psychological symptoms and items 10 to 18 measure physical symptoms. The instrument is rated in a 4-point Likert scale (never = 0, sometimes = 1, Very Often = 2, and always = 3); Therefore, the highest and lowest scores that the respondents get in this questionnaire are between 0 and 54. High scores in this questionnaire indicate a higher level of anxiety in persons. The reliability of this tool was obtained using Cronbach's alpha method for

the first factor is 0.879, the second factor 0.861 and for the whole questionnaire is 0.919. Also, the extent of Guttman $2-\lambda$ was obtained for the first factor ($2-\lambda = 0.882$), the second factor ($2-\lambda = 0.864$) and for the whole questionnaire is ($2-\lambda = 0.922$). To evaluate the correlation-dependent validity of this questionnaire, correlation of this tool with the general health questionnaire was used. The results showed that the corona anxiety questionnaire with the total score of a general health questionnaire and anxiety component, physical symptoms, social dysfunction, and depression, sequentially is equal to 0.483, 0.507, 0.418, 0.333, and 0.269 and all these coefficients were significant at the level of 0.01 (14). Data analysis was accomplished using descriptive statistics tests, chi-square, and SPSS_22 statistical software.

Results:

384 citizens from Kerman participated in this research. 11 (28.9%) were male, and 273 (71.9%) were female. The average age was 35 to 44 years. 282 (73.4%) of the participants were married. The average education of persons was a bachelor. 209 people (54.31%) and 175 people (45.69%) expressed that they or their relatives have an underlying medical condition. 158 people (41.15%) are expected to affect by a coronavirus. 155 people (40.42%) expected to recovery if they had Coronavirus. 264 patients (68.75%) had a waiting time for the end of the corona pandemic of more than one year. The outbreak of anxiety in terms of mental symptoms is presented in Table 1, the outbreak of anxiety according to corona pandemic in terms of physical symptoms is presented in Table 2 and the outbreak of anxiety according to corona pandemic is presented in Table 3.

Table 1. the outbreak of anxiety due to the Corona pandemic in terms of mental and physical symptoms.

The severity of anxiety disorder	Number (mental symptoms)	percent (mental symptoms)	Number (physical symptoms)	percent (physical symptoms)
Lack of anxiety or mild anxiety	65	16.92	157	40.88
Moderate anxiety	268	69.79	165	42.96
Severe anxiety	51	13.28	65	16.16

According to Table 1, the percentage of people with corona disease who have moderate to high anxiety in this population in terms of mental symptoms was equal to 83.07%. Those with physical symptoms of corona disease in this population were 55.98%.

Table 2. an outbreak of anxiety due to the Corona pandemic of the whole questionnaire.

The severity of anxiety disorder	Number	percent	Average score	anxiety
Lack of anxiety or mild anxiety	215	55.98	8.69	
Moderate anxiety	120	31.26	22.13	
Severe anxiety	49	12.76	39.37	

The chi-square test results to compare the frequencies of the two groups in terms of demographic characteristics and anxiety caused by the corona pandemic are presented in Table 3.

Table 3. Chi-square test results to compare the frequency of the two groups in terms of differences in anxiety caused by the Corona pandemic.

Variable	Anxiety disorder				P-value *	
	+		-			
	Frequency	Percentage Frequency	Frequency	Percentage Frequency		
Age	Under15years	5	55.5	4	44.5	0.02
	15 to 24 years	26	38.2	42	61.76	
	25 to 34 years	37	56.06	29	43.94	
	35 to 44 years	53	41.08	76	58.92	
	45 to 54 years	40	42.55	54	57.45	
	55 and older	8	44.44	10	55.56	
Gender	Male	47	42.3	64	57.7	0.67
	female	122	44.7	151	55.3	
	single	32	35.2	59	64.8	0.012
	married	136	48.2	146	51.8	
	divorced	1	25	3	75	

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marital status	Death of spouse	0	0	7	100	
Education	Under Diploma	22	39.3	34	60.7	0.001
	Diploma	25	49	26	51	
	Associate	16	59.3	11	40.7	
	Bachelor	67	39.2	104	60.8	
	Masters	33	47.1	37	52.9	
	PhD	6	66.7	3	33.3	
occupation	Unemployed	44	31.3	43	49.4	0.016
	Studying	17	30.9	38	69.1	
	Employee	22	40.74	32	59.26	
	Cultural and educational	53	49.5	54	50.5	
	Health	12	52.17	11	47.83	
	Freelancers	16	38.9	26	61.9	
	Retired	5	31.25	11	68.75	
Having an underlying disease or close relatives	Yes	118	56.5	91	43.5	0.04
	No	78	44.6	97	55.4	
The expectation for corona disease (how likely it is to effected)	low	17	51.5	16	48.5	0.001<
	Medium	95	6.1	63	39.5	
	High	136	70.5	57	29.5	
Expect a person to recover (how likely they are to recover) if they have corona disease	low	54	71.1	32	28.9	0.001<
	Medium	62	40	93	60	
	High	85	55.9	67	44.1	

The outbreak of anxiety according to the corona pandemic is examined by characteristics, and the relationship between these characteristics and anxiety is shown in Table 4. According to the Smirnov-Klemgrove test, the proportions of this study were not normal, and the research variables were non-parametric. A Chi-square test was used to compare the frequency of the two groups in terms of anxiety demographic disorder.

The highest outbreak of anxiety caused by the Corona pandemic was observed in the age of 25 to 34 years (56.06%), and the lowest rate was observed in the age of 15 to 24 years (38.2%). The difference between age groups was significant in terms of anxiety severity, and there was a significant relationship between anxiety severity and age ($p = 0.02$). The outbreak was 42.3% in men and 44.7% in women. The difference in the outbreak on gender was not significant, and there was no significant relationship between gender and anxiety severity ($p = 0.62$). Married people (48.2%) and those whose spouses had died (0%) sequentially had the highest and lowest disorder rates. The difference in outbreak between persons with different marital statuses was significant, and there was a significant relationship between the severity of anxiety and marital status ($p = 0.012$). People with a doctoral degree had the highest level of anxiety (66.7%), and those with a bachelor's degree had the lowest level of anxiety (39.2%). The difference in outbreak between educational levels was significant, and there is a significant relationship between anxiety severity and education level ($p = 0.001$). The highest outbreak in healthcare staff was 52.17% and the lowest outbreak in students was 30.9%. This difference is significant with the employment situation, and there is a significant relationship between the severity of anxiety and job ($016 / 0 = p$). The highest outbreak of anxiety in people themselves or one of their relatives had an underlying medical condition with a frequency count of 56.5%, a significant difference in the underlying medical conditions group ($p = 0.04$). The highest rate of anxiety disorder in people who were most likely to catch Coronavirus with a frequency of 70.5% and the difference in the response groups is significant ($p < 0.001$). Also, the group with the highest expectation of anxiety disorder with a frequency of 71.1 had the highest anxiety disorder and the difference between the groups in this variable was significant ($p < 0.001$).

Discussion and conclusion:

This research aimed to investigate the outbreak of anxiety caused by the Corona pandemic and its relationship with demographic characteristics in families that live in Kerman. The results of this study demonstrated that anxiety disorders were widespread in Kerman families during the coronary crisis. The prevalence of these disorders was 41.1% in the general population. The results of this study are consistent with the results of other studies. Alizadeh Fard and Saffarinia, in their research, showed that coronary anxiety is a predictor of good health (6). Lee et al. found that with the widespread of the corona crisis, anxiety and depression were outbreak among the Chinese people (12). Sheer's research also showed that people experienced anxiety and sleep disorders during the Corona crisis (13). Nasirzadeh et al. As well as expressed, that anxiety and depression increased during the coronary pandemic, while resilience decreased (14).

This study indicates that anxiety is not a personality trait but is acquired through learning and that it can pose a real or imaginary threat based on the results. Even though anxiety can reflect internal states such as general anxiety, it is usually triggered by stressful events, and some people are more prone to experiencing it than others (15).

A lot of stress and mental pressure is identified on both individuals and society during epidemics, especially the Corona epidemic, which has caused fear and quarantine of individuals. This, in turn, threatens their mental health in various ways. It can also impair the quality of interpersonal relationships within the family and the feeling of exclusion from society, a combination of which can predispose a person to mental illnesses such as depression, anxiety, and stress (16).

The advent and rapid spread of the coronary epidemic have led to greater anxiety in the population, which has had a detrimental effect on health in the community. Mental health experts recommend avoiding exposure to negative news and using alternative communication methods such as social networks and digital communication platforms to prevent social isolation (17).

When people are emotionally affected by coronary disease, they become more depressed and anxious, weakening their immune system and compromising their health. People who follow the protocols are shocked and scared by the news of Corona. This causes them to become more obsessed (17).

People have been psychologically traumatized and anxious by the bad news about Corona. The loss of a loved one can lead to a grief disorder, harming a person's mood (17). The bad news about Corona has made people psychologically traumatic and anxious. Some people suffer from grief disorder due to the loss of their loved ones, which can harm their mood (17).

A person's functional anxiety alerts them to threats and helps them take preventive measures. This in turn, leads to making the right decisions such as avoiding meetings and crowded places, following health protocols, washing hands, and wearing a mask during a pandemic. By sharing accurate and reliable information about Corona, people can feel less stressed and can be contacted. (1)

The outbreak of anxiety disorders varies among different populations and cultures. This is not surprising since societies and cultures differ in various factors such as attitudes toward mental illness, stress levels, family relationships, and poverty prevalence. All of these factors contribute to anxiety disorders' manifestation or reporting. Nevertheless, it is important to note that this difference results from the different ways in which diagnostic tools, diagnostic systems, and sampling methods are applied. (14)

Research Limitations

One of the limitations of this research is the limitation of full access to the population in danger of anxiety disorders. Also, people without access to the Internet, mobile phones, and social media

could not participate in the sampling. Since a questionnaire was used to collect information, some people may refuse to answer the questions honestly or give an untruthful answer. A cross-sectional study was used in this study. As a result, causality cannot be determined.

Application of research

As a result of this research, it is recommended that studies be conducted to determine the type of anxiety disorders caused by Corona disease. The study plans to identify risk factors for anxiety disorders in the country. The treatment of anxiety disorders associated with Corona should be made available in this country. Write instructions to guide and help different people in the community and make them available to the public, like health protocols. Additionally, due to the high prevalence of anxiety disorders during the outbreak of Corona disease and its consequences, mental interventions tailored to the demographic characteristics of patients are advised.

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Declaration of conflicting interests

The authors state that there is no conflict of interest in this study.

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