

The Level of Fear Experienced by the Individuals and their Applications to Health Institutions during the Covid-19 Pandemic

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Abstract

Aim: The study aims to investigate the effect of the level of fear experienced by individuals during the COVID-19 pandemic on their application to health institutions. **Method:** This descriptive study was conducted between July and September 2020 with the participants who met the inclusion criteria in Turkey. When the mean COVID-19 Fear Scale score was considered and the standard deviation values were taken as 18.83 ± 6.01 , the sample size was determined as 98 individuals, with 95% confidence level, 90% test power, and 0.331 effect size. With the snowball sampling method, the study was carried out with 577 people who filled out the Google form. The Personal Information Form and the COVID-19 Fear Scale were used as data collection tools. The data were analyzed with SPSS 20.0. Descriptive statistics, correlation, Mann-Whitney U (U), and Kruskal-Wallis tests were performed to analyze the data. Ethics committee approval was obtained prior to the study. **Results:** The mean age of the participants was 32.06 ± 11.25 (min 18-max 71); 77.8% were female; 66% were university graduates, and 54.9% were single. The total mean score of the participants from the COVID-19 Fear Scale was determined as 16.84 ± 5.68 (min 7-max 34), which points to moderate level of fear. The COVID-19 Fear Scale scores of the female participants, the participants with high income, and those living with their families were found to be higher ($p < 0.05$).

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The COVID-19 Fear Scale scores were found to be higher in those who sleep less than 7 hours a day, who have a psychological disorder, who applied to health institutions during the coronavirus process, and who postponed their application to health institutions in an emergency due to the fear of infection ($p < 0.05$). Conclusion: It has been determined that during the coronavirus process, 21.5% of individuals attend in person to health institutions and 40.7% of individuals attend in person to health institutions in emergencies. It was found that the level of fear was higher in the participants who applied to health institutions during the pandemic. The participants who postponed their application to health institutions in emergencies due to the fear of infection were found to have higher levels of fear.

Keywords

new coronavirus, COVID-19, fear, healthcare institutions

Introduction

In December 2019, a new coronavirus (COVID-19) emerged in the Chinese province of Wuhan, causing a worldwide health problem (WHO, 2021a). With the spread of COVID-19 cases in most countries and continents around the world, the World Health Organization declared a pandemic on March 11, 2020. COVID-19 is a droplet-transmitted infectious disease caused by a newly discovered coronavirus (WHO, 2021b). In order to reduce the risk of transmission of COVID-19 and the number of cases and deaths, some restrictions have gradually been imposed (WHO, 2020). Restrictions include at least one-meter physical distance, wearing a mask to cover the nose, mouth and chin, washing hands for at least 20 seconds, ventilating indoor environments well, and avoiding crowds (WHO, 2021c; Center for Disease Control and Prevention, 2021).

The restrictions introduced to protect from the pandemic have caused changes in family organization and work routines and led to social isolation and feelings of helplessness and abandonment. These experiences have negatively affected people's psychological well-being (Dubey et al., 2020; Magamela et al., 2021; Praveen et al., 2021). Due to the rapid spread of the disease and the continuous increase in the number of cases and deaths, the feelings of panic and anxiety have turned into a kind of fear, which has affected the tendency of individuals to visit health institutions (Kaya, 2020). This has caused individuals with any health problems to wait at home or find temporary solutions instead of going to a health institution. The threat of coronavirus in health institutions scares these people more than other health problems they experience (Shigemura et al., 2020).

When the studies on fear during the pandemic were examined, it was found that as one study reported, 50.9% of the pregnant women who visited a hospital for antenatal care in Northwest Ethiopia experienced fear of COVID-19 (Mariam et al., 2021). A

study by Sharifi et al. (2021) revealed a higher COVID-19 fear score in the elderly. Another study reported a significant relationship between fear of COVID-19 and intolerance to uncertainty and generalized anxiety disorder variables. Fear of COVID-19 and intolerance of uncertainty was found to explain 36% of the total variance in generalized anxiety disorder (Korkman & Çolak, 2021). The results of the research showed that individuals experienced a significant level of fear during the pandemic.

Examining the studies on admission to health institutions during the COVID-19 pandemic, it was determined that there was a 33.7% decrease in hospital admission rates and lower daily admission rates for acute medical conditions (Oseran et al., 2020). A study conducted in Italy revealed that applications to the emergency departments of hospitals decreased with the pandemic (Garrafa et al., 2020). The official hospital statistics for the period of 1–27 March 2020 shows that during the national quarantine in Italy, there were significant decreases in pediatric emergency room visits from 88% to 73% (Lazzerini et al., 2020). The results of the research revealed that the rate of visiting a health institution during the pandemic has decreased significantly. Few studies in the literature have so far examined the effect of fear experienced at a significant level during the pandemic on visiting health institutions. Thus, this study aimed to examine the effect of the level of fear experienced by individuals during the pandemic on their application to a health institution.

Desing and Methods

Research Type, Place, and Time: This descriptive study was conducted between July and September 2020 with individuals who met the inclusion criteria in Turkey. An announcement was made about the research study on social media, and the voluntary participation of the individuals interested was ensured.

Target Population and Sample: The research was carried out with 577 people who filled out the Google form with the snowball sampling method. A snowball sampling method was utilized in the distribution of the online questionnaires sent in the form of a link through social media outlets such as WhatsApp, Facebook and Instagram. These social media platforms have been chosen because they are widely used. Since the universe was not known in the study, an online questionnaire was sent to the individuals who met the inclusion criteria in the researchers' circle. First, 50 individuals were asked to fill in the form and share the survey link with the individuals in their social networks. When the mean COVID-19 Fear Scale score was considered and the standard deviation values were taken as 18.83 ± 6.01 , the sample size was determined as 98 individuals, with 95% confidence level, 90% test power, and 0.331 effect size (Satici et al., 2020, 2020b). As a result of the research, the mean score and standard deviation values of the COVID-19 Fear Scale were taken as 16.84 ± 5.68 . With 577 individuals participating in the research, the power of the test was obtained as 100% with 95% confidence and 0.331 effect size values.

Research Inclusion Criteria: The inclusion criteria were volunteering to participate in the research, being able to communicate, being 18 years old and over, being literate, and using a social media application.

Data Collection: Personal Information Form and COVID-19 Fear Scale were used as data collection tools. Data collection tools were prepared online via Google Forms and shared with the participants via their social media accounts.

Personal Information Form: The form was developed by the researchers based on the literature. The form includes questions on socio-demographic characteristics such as age, gender, educational status, occupation, marital status, the status of having children, employment status, income level, the status of having social security, family type, with whom the participant lives, and place of residence. The form also includes questions on sleep patterns, smoking habits, presence of chronic diseases, psychological discomfort, presence of a person diagnosed with coronavirus around, constantly following the coronavirus-related agenda, visiting healthcare institutions during the pandemic, and avoidance of visiting healthcare institutions in emergency situations due to the fear of coronavirus infection (Garrafa et al., 2020; Lazzarini et al., 2020; WHO, 2021c).

COVID-19 Fear Scale: The validity and reliability study of the scale was conducted by Ahorsu et al. in 2020, and it was adapted into Turkish by Satici et al. in 2020. The scale aims to determine the level of fear experienced by individuals due to coronavirus and reflects questions addressing COVID-19 concerns, emotional responses (e.g., nervous or anxious) and physical reactions (e.g., clammy hands, sleep disruption, palpitations). It includes seven items rated on a five-point Likert scale from strongly disagree (1 point) to strongly agree (5 points), with no reverse items. The lowest score that can be obtained from the scale is 7, and the highest score is 35. Higher scores indicate higher levels of fear.

Data Analysis: The data were analyzed with the SPSS 20.0 statistical package program. Descriptive statistics, correlation, Mann-Whitney U (U) and Kruskal-Wallis (KW) tests were performed to analyze the data. Reliability analysis was evaluated with the Cronbach's Alpha coefficient. Whether the obtained data were suitable for normal distribution was tested with the Kolmogorov-Smirnov and Shapiro-Wilk tests.

Findings

The sociodemographic characteristics of the participants were examined, and it was seen that the average age of the individuals was 32.06±11.25 (min 18-max 71) years; 77.8% of the participants were female; 66% were university graduates; and 54.9% were single. It was revealed that 58.9% of the participants did not have children, 62.4% were working, 53% were civil servants, and 86% had social security. It was determined that 84.7% of the participants had an average income level, 84.6% had a nuclear family structure, 83% lived with their family, and 73.5% lived in the city (Table 1).

Table 1. Distribution of Sociodemographic Characteristics of Individuals ($n = 577$).Average Age (year) $\bar{X} \pm SD$: 32.06 ± 11.25 ; Min-Max: 18–71

Characteristics	<i>n</i>	%
Gender		
Female	449	77.8
Male	128	22.2
Educational status		
Primary school	9	1.6
High school	75	13.0
University	381	66.0
Postgraduate	112	19.4
Marital status		
Married	260	45.1
Single	317	54.9
Having a child		
Yes	237	41.1
No	340	58.9
Employment status		
Employed	360	62.4
Unemployed	217	37.6
Profession		
Civil servant	306	53.0
Worker	18	3.1
Housewife	37	6.4
Retired	21	3.6
Private sector	39	6.8
Student	156	27.0
Social security presence		
Yes	496	86.0
No	81	14.0
Income level		
Low	52	9.0
Moderate	489	84.7
High	36	6.2
Family type		
Nuclear family	488	84.6
Large family	66	11.4
Broken family	23	4.0
People they live with		
Family	479	83.0
Friend	18	3.1

(continued)

Table 1. (continued)Average Age (year) $\bar{X} \pm SD$: 32.06 \pm 11.25; Min-Max: 18–71

Characteristics	<i>n</i>	%
Alone	80	13.9
Place of residence		
City	424	73.5
District	125	21.7
Village	28	4.9

When the distribution of some characteristics of participants regarding the disease during the COVID-19 pandemic was evaluated, it was seen that 67.4% of the participants sleep at least 7 hours a day, 80.2% do not smoke, 85.4% did not have a chronic disease, 94.5% did not have a psychological disease, and 74.5% did not see an individual diagnosed with coronavirus. It was further revealed that 81.5% of the participants constantly follow the agenda related to coronavirus, 78.5% have not visited health institutions during the pandemic, 42.6% prefer state hospitals in this process, and 59.3% are afraid of being infected with the virus and thus avoid going to a health institution even in emergency situations (Table 2).

The mean score of the participants from the COVID-19 Fear Scale was determined as 16.84 \pm 5.68 (min 7-max 34), which points to moderate level of fear during the pandemic. In our study, the Cronbach's Alpha value for the COVID-19 Fear Scale was found to be 0.85.

When the distribution of the total scores of the COVID-19 Fear Scale across the sociodemographic characteristics was examined, a significant difference was found between the gender of the individuals and the total scores of the COVID-19 Fear Scale ($p < 0.05$). The level of fear was found to be higher in women than in men. Moreover, a statistically significant difference was found between the income status of the participants and the COVID-19 Fear Scale mean score ($p < 0.05$). The level of fear was found to be lower in individuals with low income. A significant difference was found between with whom the participant lives and the total mean score of the COVID-19 Fear Scale ($p < 0.05$). The level of fear experienced by the participants living alone during the pandemic was found to be lower (Table 3).

No significant difference was found between the education level, marital status, the status of having children, working status, the status of having social security, family type, and place of residence of the participants, and the COVID-19 Fear Scale mean score ($p > 0.05$) (Table 3).

The difference between the characteristic of sleeping at least 7 hours a day during the pandemic and the total COVID-19 Fear Scale mean score is significant ($p < 0.05$). The level of fear was found to be higher in individuals who did not sleep at least 7 hours a day. Besides, a significant difference was found between the presence of a

Table 2. Distribution of Characteristics of Individuals Related to Coronavirus Disease.

Characteristics	<i>n</i>	%
Sleep situations of at least 7 hours a day		
Sleeping	389	67.4
Not sleeping	188	32.6
Smoking status		
Smoker	114	19.8
Non smoker	463	80.2
Presence of chronic disease		
Yes	84	14.6
No	493	85.4
Presence of psychological disease		
Yes	32	5.5
No	545	94.5
The situation of witnessing an individual diagnosed with coronavirus in the neighborhood		
Witness	147	25.5
Unwitnessed	430	74.5
Constantly following the agenda regarding the coronavirus		
Followers	470	81.5
Unfollowers	107	18.5
Application status to health institutions during the coronavirus process		
Applicant	124	21.5
Non-applicant	453	78.5
Health institutions preferences of individuals in the coronavirus process		
State hospitals	246	42.6
Faculty hospitals	76	13.2
Private hospitals	153	26.5
Family health centers	102	17.7
Cases of postponing application to health institutions in emergency situations due to the fear of contagion of the coronavirus		
Postponed	342	59.3
Not postponed	235	40.7

psychological illness and the total COVID-19 Fear Scale mean score ($p < 0.05$). The level of fear was found to be higher in individuals with a psychological illness. A statistically significant difference was found between the COVID-19 Fear Scale mean score and the status of visiting a health institution during the pandemic ($p < 0.05$). The level of fear was found to be higher in the participants who have applied to health institutions during the pandemic. Also, a significant difference was revealed between the status of postponing the application to health institutions in emergencies due to the fear of contagious coronavirus and the total mean score of the COVID-19 Fear Scale

Table 3. Distribution of the total mean scores of the COVID-19 Fear Scale according to the sociodemographic characteristics of the individuals.

Characteristics	COVID-19 Fear Scale Total Score Median (Min-Max)
Gender	
Female	18 (7–34)
Male	13 (7–28)
Statistics	U = 18628.500; p < 0,001
Educational status	
Primary school	19 (11–28)
High school	16 (7–34)
University	17 (7–34)
Postgraduate	16 (7–33)
Statistics	KW = 2.555; p = 0.465
Marital status	
Married	16 (7–34)
Single	16 (7–32)
Statistics	U = 42237.500; p = 0.606
Having a child	
Yes	16.5 (7–34)
No	16 (7–34)
Statistics	U = 39692.500; p = 0.742
Employment status	
Employed	16 (7–34)
Unemployed	17 (7–31)
Statistics	U = 40678.000; p = 0.404
Social security presence	
Yes	16 (7–34)
No	16 (7–28)
Statistics	U = 19409.000; p = 0.625
Income level	
Low	14 (7–31)
Moderate	17 (7–34)
High	17.5 (7–28)
Statistics	KW = 11.050; p = 0.004
Family type	
Nuclear family	17 (7–34)
Large family	16 (7–28)
Broken family	15 (7–28)
Statistics	KW = 0.164; p = 0.921
People they live with	
Family	17 (7–34)
Friend	15.5 (7–31)

(continued)

Table 3. (continued)

Characteristics	COVID-19 Fear Scale Total Score Median (Min-Max)
Alone	14.5 (7–28)
Statistics	KW = 6.254; p = 0.044
Place of residence	
City	16 (7–34)
District	16 (7–28)
Village	17 (8–28)
Statistics	KW = 0.328; p = 0.849

($p < 0.05$). The level of fear was found to be higher in participants who postponed visiting health institutions in an emergency due to the fear of infection (Table 4).

No significant difference was found between the presence of chronic disease, smoking, seeing an individual diagnosed with coronavirus around, constantly following the coronavirus-related agenda, and the preferences of individuals about healthcare institutions during the pandemic, and the total COVID-19 Fear Scale mean score ($p > 0.05$) (Table 4).

Discussion

Our study revealed that the participants experienced moderate level of fear during the pandemic. A study conducted in Germany with individuals aged 18 and over found that 59% of the participants experienced fear of COVID-19 (Bäuerle et al., 2020). A study conducted in Turkey during the COVID-19 pandemic found that the participants experienced moderate level of fear (Kaya et al., 2021). The fear participants experience during the pandemic may be attributed to factors such as restrictions, changes in lifestyle, helplessness, uncertainty, the rapid spread of the disease, the continuous increase in the number of cases and deaths, and the lack of an effective treatment method (Harper et al., 2020; Pakpour and Griffiths., 2020).

Our study revealed that the level of fear was higher in women than in men. The presence of chronic disease (15.1%) and psychological disease (6.9%) in women was found to be higher in men compared to chronic disease (12.5%) and psychological disease (0.8%). The study conducted by Broche-Pérez et al. in Cuba in 2020 also revealed that the female participants experienced significantly higher levels of fear of COVID-19 than men. In a study conducted in the United States, the female participants reported more fear and negative expectations about the health consequences of COVID-19 than men (Alsharawy et al., 2021). This finding may be attributed to the fact that women show more psychological sensitivity and vulnerability in adverse situations (Briscoe et al., 2016; Mortazavi et al., 2021). The closure of schools and kindergartens, which had a huge impact especially on working mothers, may have increased the level

Table 4. Distribution of the Total Mean Scores of the COVID-19 Fear Scale According to the Characteristics of Individuals Regarding the Coronavirus Disease.

Characteristics	COVID-19 Fear Scale Total Score Median (Min-Max)
Sleep situations of at least 7 hours a day	
Sleeping	16 (7–34)
Not sleeping	17 (7–34)
Statistics	U = 41364.500; p = 0.010
Smoking status	
Smoker	15 (7–34)
Non smoker	17 (7–33)
Statistics	U = 28475.500; p = 0.190
Presence of chronic disease	
Yes	19 (7–33)
No	16 (7–34)
Statistics	U = 18156.500; p = 0.071
Presence of psychological disease	
Yes	19.5 (7–34)
No	16 (7–34)
Statistics	U = 6725,000; p = 0,029
The situation of witnessing an individual diagnosed with coronavirus in the neighborhood	
Witness	17 (7–33)
Unwitnessed	16 (7–34)
Statistics	U = 29799.000; p = 0.300
Constantly following the agenda regarding the coronavirus	
Followers	17 (7–34)
Unfollowers	15 (7–28)
Statistics	U = 22178.000; p = 0.56
Application status to health institutions during the coronavirus process	
Applicant	18.5 (7–32)
Non-applicant	16 (7–34)
Statistics	U = 22784.500; p = 0.001
Health institutions preferences of individuals in the coronavirus process	
State hospitals	17 (7–34)
Faculty hospitals	17 (7–31)
Private hospitals	16 (7–34)
Family health centers	16.5 (7–31)
Statistics	KW = 0.537; p = 0.911
Cases of postponing application to health institutions in emergency situations due to the fear of contagion of the coronavirus	
Postponed	18 (7–34)
Not postponed	15 (7–34)
Statistics	U = 29783.500; p < 0.001

of fear of women by greatly increasing their childcare needs (Tayal & Mehta, 2022; Bender et al., 2022).

The level of fear was found to be lower in individuals with low income. A study examining the well-being and anxiety levels of pregnant women during the COVID-19 pandemic revealed that pregnant women with low income levels had higher anxiety levels (Mortazavi et al., 2021). A study conducted with individuals aged 18 and over in Turkey reported that the level of fear was higher in the unemployed participants (Özmen et al., 2021). The differences in the level of fear experienced by the participants according to income level may result from the difference between the income levels of individuals before and after the pandemic (Recio-Vivas et al., 2022).

The participants living alone during the pandemic were found to have lower levels of fear. In a qualitative study conducted with women living in Italy during the pandemic, the women reported that it is better to live alone due to the lower chance of spreading the virus to the elderly or those at risk and due to the fear of transmitting the virus to individuals at risk (Parisi et al., 2021). It can be expected that the level of fear of those who live alone will be lower than those who do not live alone because social isolation is more easily ensured in the home environment and the risk of transmitting COVID-19 to the elderly or to those at risk is low (Cabello et al., 2021).

The level of fear was found to be higher in individuals who did not sleep at least 7 hours a day. In a study by Son et al. examining the impact of COVID-19 on the mental health of university students in 2020, it was found that 86% of the students had irregular sleep patterns and 91% experienced fear and anxiety about their own health and the health of the loved ones. The uncertainties and restrictions experienced during the pandemic and the increase in the number of cases and deaths due to COVID-19 around the world may have increased the level of fear and anxiety in individuals, as well as negatively affecting sleep quality (Sharifi et al., 2021).

The level of fear was found to be higher in participants with a psychological illness. According to a study conducted in Turkey during the pandemic, anxiety and depression levels were higher in individuals with psychological illness history (Özdin & Özdin, 2020). During the COVID-19 pandemic, individuals with psychological illness history may be expected to have higher levels of fear due to the inability to leave the house due to social isolation, the inability of psychiatry clinics to provide active health services with the transformation of hospitals into pandemic hospitals, the decrease in the number of patients examined due to the risk of contamination, and the fact that their mental health diagnoses may make them more prone to be emotionally triggered by circumstances that include uncertainty, danger, and risk (Şimşir et al., 2021).

The level of fear was found to be higher in individuals who applied to health institutions during the pandemic. According to a study conducted by Oseran et al. in 2020, there was a 33.7% decrease in hospital admission rates in 2020 compared to 2019, and daily admission rates for acute medical conditions were lower. During the pandemic, the rate of admission to hospitals may decreased due to the fear of being infected with the virus. Individuals can delay going to the hospital as long as possible.

However, individuals who experience the symptoms of COVID-19 and have a high fear of getting sick and dying may also apply to health institutions (Garrafa et al., 2020).

The level of fear of the participants who postponed their application to health institutions in emergency situations due to fear of infection was found to be higher. According to a study conducted in Italy, the number of applications to the emergency departments of hospitals decreased after the pandemic (Garrafa et al., 2020). During the COVID-19 national quarantine in Italy, official hospital statistics for the period 1-27 March 2020 shows a significant decrease in pediatric emergency room visits from 88% to 73% compared to the same period in previous year (Lazzerini et al., 2020). The higher level of fear in individuals who postpone going to the hospital in emergency situations during the pandemic may be due to the high risk of infection due to the high number of individuals who have been diagnosed or who may be diagnosed with COVID-19 (Garrafa et al., 2020; Lazzerini et al., 2020).

Limitations

Among the limitations of the research are the participation of only individuals who can use WhatsApp, Facebook and Instagram, the inability to generalize the results of the research to the society, and the limitations of the studies conducted on this subject in the literature.

Conclusion

Our study revealed that the participants experienced moderate level of fear during the pandemic. The level of fear was found to be higher in women, individuals who do not sleep at least 7 hours a day and who have a psychological illness. In addition, the level of fear was found to be higher in individuals who applied to health institutions and postponed their application to health institutions in emergencies due to fear of contamination. The level of fear was found to be lower in the participants with low income and those living alone during the pandemic. It was found that 78.5% of the participants did not apply to health institutions during the pandemic, and 59.3% postponed their application to health institutions in emergencies due to the fear of infection.

In line with these findings, longitudinal studies should be conducted to determine what extent avoidance of hospitalization during the pandemic may affect patients' mortality, morbidity, and quality of life.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethical Considerations

Ethics committee approval was received from the Social and Human Sciences Ethics Committee on 23.06.2020 with decision number 2020/388. The individuals participating in the research were informed about the research and their consent was obtained and their voluntary participation was ensured.

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