EFFECT OF HEALTHCARE EMPLOYEES' PERCEPTIONS ABOUT COVID-19 ON ANXIETY LEVEL

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ABSTRACT

The aim of this study was to examine the effects of healthcare employees' perceptions about the COVID-19 on their anxiety levels. Determining pandemic-related anxiety levels of healthcare employees may shed light on developing policies for reducing healthcare employees' anxiety levels and increasing their motivation and performance. Cross-sectional study design was used. The research was conducted on 408 healthcare employees reached using social media tools. Healthcare employees' perceptions about the COVID-19 had significant impact on their anxiety levels. Nurses had higher levels of anxiety compared to other healthcare employees and this difference was found to be statistically significant (p<0.05). The anxiety levels of women were higher than men in this study. COVID-19 is one of the most important sources of anxiety in healthcare employees. The results of this research may lead to reduction of the level of anxiety caused by COVID-19 in nurses and physicians. Policies and implications for reducing healthcare employees' anxiety in COVID-19 may increase their motivation and performance.

Keywords: COVID-19, anxiety, healthcare employees, pandemic.

ARTICLE INFO

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SAĞLIK ÇALIŞANLARININ COVID-19 İLE İLGİLİ ALGILARININ KAYGI DÜZEYİNE ETKİSİ

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ÖZ

Bu çalışmanın amacı sağlık çalışanlarının COVID-19 ile ilgili algılarının kaygı düzeylerine etkisini incelemektir. Sağlık çalışanlarının pandemiye bağlı kaygı düzeylerinin belirlenmesi, sağlık çalışanlarının kaygı düzeylerinin azaltılmasına, motivasyonlarının ve performanslarının artırılmasına yönelik politikaların geliştirilmesine ışık tutabilir. Araştırmada kesitsel çalışma tasarımı kullanılmıştır. Araştırma, sosyal medya araçları kullanılarak ulaşılan 408 sağlık çalışanı üzerinde gerçekleştirilmiştir. Sağlık çalışanlarının COVID-19 ile ilgili algılarının kaygı düzeyleri üzerinde önemli etkisi olduğu görülmüştür. Hemşirelerin diğer sağlık çalışanlarına göre kaygı düzeylerinin daha yüksek olduğu ve bu farkın istatistiksel olarak anlamlı olduğu belirlenmiştir (p<0,05). Bu çalışmada kadınların kaygı düzeyleri erkeklere göre daha yüksek bulunmuştur. COVID-19, sağlık çalışanlarının en önemli kaygı kaynaklarından biridir. Bu araştırmanın sonuçları, hemşire ve hekimlerde COVID-19'un neden olduğu kaygı düzeyinin azalmasına yol açabilir. Sağlık çalışanlarının COVID-19'daki kaygısını azaltmaya yönelik politikalar ve uygulamalar, motivasyonlarını ve performanslarını artırabilir.

Anahtar kelimeler: *COVID-19, kaygı, sağlık çalışanları, pandemi.*

I. INTRODUCTION

COVID-19 (Corona Virus Disease 2019) has significantly resulted in a large number of psychological consequences (Li S. et al., 2020). In December 2019, health officials in Wuhan, China detected an infection that caused severe pneumonia symptoms such as fever, fatigue, dry cough, and respiratory distress in a group of patients with unknown etiology associated with the city's South China Seafood Market (Kooraki et al., 2020; Lake et al., 2020; Li Q. et al., 2020). It was stated that this infection was caused by a newly identified coronavirus and was named by the World Health Organization (WHO) as this new coronavirus the COVID-19 (SARS-CoV-2) (Guo et al., 2020).

The COVID-19, which is in the same group with viruses causing severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), spreads 2 times faster than these (Singhal et al., 2020; Özcan et al., 2020). The COVID-19 spread to other parts of China and to the whole world shortly after it was first seen in Wuhan, China, and caused a major health crisis (Lai CC. et al., 2020). The World Health Organization (WHO) announced on March 12, 2020, that it declared coronavirus as a global pandemic.

Widespread outbreaks of infectious disease, such as COVID-19, are associated with psychological distress, anxiety and symptoms of mental illness in health care professional and populations (Bao et al., 2020; Xiao et al., 2020). Healthcare employees involved in the diagnosis, treatment and care of COVID-19 disease may face an increase in psychological problems and anxiety levels. Increasing number of confirmed and suspicious cases of COVID 19, overwhelming workload, depletion of personal protection equipment, coverage of common media, lack of specific medicines and insufficient support to contribute to the mental burden of these healthcare employees. An ever-increasing number of COVID-19 confirmed and suspicious cases, overwhelming workload, depletion of personal protection equipment, extensive media coverage, lack of specific medicines, and insufficient support can raise healthcare provider's anxiety levels and cause psychological distress and other mental health symptoms (Lakhan et al., 2020; Pappa et al., 2020). Previous studies have reported negative psychological reactions among healthcare employees to the 2003 SARS outbreak (Lai J. et al., 2019). Research has reported that these healthcare employees are afraid of the contamination and infection of their families, friends and colleagues, they feel uncertainty and stigma, are reluctant to work, or are thinking of resigning, and experience high levels of stress, anxiety, and depression (Bai et al., 2004; Lee et al., 2007). Similar concerns arise about mental health, psychological adjustment, and recovery of healthcare employees who treat and care for patients with COVID-19 in Turkey and other countries. Lai J. et al. (2020) investigated determining the magnitude of mental health outcomes and associated factors among health care human resources treating patients exposed to COVID-19 in China. They conducted a cross-sectional, survey-based, region-stratified study collected demographic data and mental health measurements from 1257 health care human resources. They reported that a considerable proportion of participants reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%), and distress (71.5%). More than 70% of health care human resources in China during this current COVID 19 pandemic reported psychological distress including insomnia, anxiety, and depression. Moreover, they found out that nurses, women, frontline health care human resources, and those working in Wuhan, China, reported more severe degrees of all measurements of mental health symptoms than other health care human resources. Tan et al. (2020) examined the psychological issues such as anxiety and stress experienced by health care human resources in Singapore in the midst of the COVID-19 outbreak. They revealed that the prevalence of anxiety was higher among nonmedical health care human resources than medical personnel.

This study based on the Spielberger Trait-State Anxiety theory. When COVID-19 treatment is not fully determined, the vaccine has not yet been found and is a fatal pandemic, causing high anxiety in people and healthcare employees. Anxiety is defined as "a sense of anxiety about an un objective danger". The Spielberger Trait-State Anxiety theory has two different types of anxiety, state and trait anxiety. State anxiety is the anxiety that occurs when a dangerous or unwanted situation is encountered. On the other hand, constant anxiety is a long-term and severe type of anxiety that exists, whether or not there is a concrete reason. Trait anxiety can be defined as feelings of stress, worry,

discomfort, etc. that one experiences on a day to day basis (Spielberger and Sydeman 1994; Gökçe and Dündar, 2010). One of them is anxiety caused by pandemic diseases. Epidemic and pandemic diseases are one of the most important sources of anxiety in healthcare employees. Health anxiety is the belief that the person has a serious disease or fear that he will get caught by serious disease (Şimşekoğlu and Mayda, 2016).

There is very limited research on the psychological impact of COVID 19 on health workers, mental health problems and anxiety levels. Only a limited number of studies have been conducted on the psychological and mental health problems of COVID-19 on health personnel in China and Singapore (Liu et al., 2020; Tan et al., 2020). Investigating the impact of COVID-19, which is an international pandemic today, on healthcare provider's anxiety levels may be important to fill the literature gap in this area. No research was found to determine the relationship between the views of healthcare employees about COVID-19 and their anxiety levels, and to determine the effect of COVID-19 on healthcare staff anxiety levels in Turkey and other countries. Due to the high rate of spread of the COVID-19 outbreak, it is expected to cause more anxiety on healthcare employees, especially on those who are in close contact with patients for the treatment. In the conducted literature review, no study was found on the relationship between the COVID-19 pandemic and anxiety levels of healthcare employees. In pandemic periods, determining pandemic-related anxiety levels of healthcare employees may shed light on developing policies for reducing healthcare employees' anxiety levels and increasing their motivation and performance. The aim of this study is to examine the effects of healthcare employees' perceptions about the COVID-19 on their anxiety levels. In the study, it was also examined whether the anxiety levels of healthcare employees differed according to the occupational and demographic variables.

II. MATERIAL AND METHODS

2.1. Participants

This study has a cross sectional research methodology. During the pandemic periods it is difficult to fill out a questionnaire by contacting the participants directly. Therefore, questionnaires were sent to healthcare employees via e-mail and social media. The questionnaires were sent to the healthcare employees in the social network, and they were asked to send the questionnaires to the healthcare employees in their social networks. The participants were asked to fill the questionnaire in an electronic environment. The research was conducted on 434 healthcare employees who were reached in this way and completed the questionnaire. Incompletely filled questionnaires were not taken into consideration. The number of incompletely filled questionnaires is 26. The analysis and evaluations were conducted over the remaining 408 questionnaires. Participation in the research was ensured from 43 different provinces in Turkey. The highest participation in the study was from the city of Batman (80). This was followed by Istanbul (77), Ankara (62), Diyarbakır (33), İzmir (25) and Balıkesir (22), respectively. The research was carried out between 04-15 April 2020.

2.2. Instruments

In order to evaluate the perceptions of healthcare employees about the COVID-19 The COVID-19 Perception Scale, which was adapted from the scale developed by Çırakoğlu (2011) to determine the perception of pandemic diseases, was used. Exploratory factor analysis was performed to test the validity of the COVID-19 Perception Scale. Kaiser-Meyer-Olkin (KMO) coefficient and Barlett sphericity tests were performed to test the suitability of the data structure for factor analysis. It is expected that KMO coefficient to be above 0.60 and Barlett's sphericity test is to be significant. In our study, the KMO coefficient was found 0.817 and the Barlett sphericity test was significant ($p < 0.05$). As a result of the exploratory factor analysis, it has been observed that that the COVID-19 Perception Scale consists of five dimensions as "dangerousness" (3 items), "contagiousness" (2 items), "macro-control" (4 items), "personal control (5 items) and "inevitability" (3 items). 2 items from the dangerousness dimension, 1 item from the contagiousness dimension, 1 item from the macro-control

dimension and 1 item from the inevitability dimension were excluded from the scale because they had a low factor load (<0.30).

The scale consisting of 22 items at the beginning was evaluated as 17 items. The eigenvalue of all dimensions was found to be greater than 1. Factor loads vary between 0.880 and 0.547. The total variance announced was calculated as 62.92. Confirmatory factor analysis was also performed to test the validity of the scale. As a result of the analysis, when the scale fit indexes were examined, it was observed that they were X2 / sd (2.12), RMSA (0.053), CFI (0.94), GFI (0.93) and AGFI (0.91) The five-factor structure consisting of a total of 17 items was confirmed. The reliability of the scale was evaluated by looking at the Cronbach alpha coefficients. The Cronbach alpha coefficients for dimensions vary between 0.61-0.81 (Table 2). The scale is structured as a 5-point Likert type (1 = strongly disagree, … 5 = strongly agree). While the averages of the dimensions of dangerousness, contagiousness and inevitability approaching 5, are considered as a negative perception about the COVID-19; Approaching the macro-control and personal control dimensions to 5 is considered as a positive perception.

In order to evaluate the state anxiety level of the employees. The State-Trait Anxiety Inventory (STAI) is a commonly used measure of trait and state anxiety in health care systems (Spielberger et al., 1983). In this study, only the state anxiety part of the STAI. Because for an international pandemic that has just begun, trait anxiety may not yet occur and measuring trait anxiety may not be appropriate. In many studies, the validity and reliability of the scale were stated in Turkey (Çırakoğlu, 2011; Kara, 2012). The scale (only state anxiety) consists of 20 items, 10 of which being inverted. Reversed expressions express positive emotions, while straight expressions express negative emotions. The responses given to the scales are structured in a 4-point Likert type as (1 = None, 2 = a little, 3 = a lot, 4 = completely). In straight questions, answers in the value of 4 indicate a high level of anxiety; In reverse questions, questions in the value of 1 indicate a high level of anxiety. In calculating the level of anxiety, the answers given to the straight and reversed expressions are summed up. In order to determine the level of anxiety, the total score of the answers given to the reverse expressions is subtracted from the total score of the answers given to the straight expressions on the scale and the calculation is made by adding a predetermined score (50 points). Maximum 80 points and minimum 20 points could be taken on the scale. The anxiety level is high when the score approaches 80; approaching 20 is considered to be a low level of anxiety (Spielberger et al., 1983; Kara, 2012). In order to evaluate the reliability of the scale, the Cronbach alpha coefficient was examined and this value was found to be quite high (0.90). In the questionnaire form used as a data collection tool, there are also 8 questions prepared to determine the professional and demographic characteristics of the participants.

2.3. Statistical Analysis

The data obtained from the research were analyzed with the Statistical Package for the Social Sciences (SPSS 21) program. The dangerousness, contagiousness, inevitability, macro-control and personal control dimensions that constitute the perceptions of healthcare employees about the COVID-19 are regarded as independent variables, and the level of anxiety is considered as the dependent variable, and the relationship between the variables is analyzed by Pearson correlation analysis; The effect of independent variables on the dependent variable was tested by multiple linear regression analysis. Whether COVID-19 perception and anxiety level differed according to the socio-demographic variables of the participants, was analyzed by the difference between the two averages t-test and one-way analysis of variance (ANOVA). To evaluate whether the normality assumption of variables is met for parametric tests, the kurtosis and skewness values of the variables and histogram graphics were examined.

III. RESULTS

Table 1 shows occupational and demographic characteristics of participants. More than half (55.4%) of the healthcare employees participating in the research are women. About half of those (44.6%) are between the ages of 31-40. More than half of the participants (56.1%) are working as nurses and more than half of them (56.1%) have children. When the education levels of the participants are analyzed, it is seen that university graduates are predominant (58.6%). More than half of the participants (55.9%) work in a state hospital. The rate of those who have individuals over the age of 65 in their houses is 22.1%

Table 1. Occupational and Demographic Characteristics of Participants

Variables / Characteristics	Group	n	%
Age	21-30	131	32.1
	31-40	182	44.6
	>41	95	23.3
Gender	Female	226	55.4
	Male	182	44.6
Occupation	Nurse	229	56.1
	Doctor	71	17.4
	Health Technician	74	18.1
	Other*	34	8.3
Child Status	Yes	229	56.1
	No	179	43.9
Education	High school	38	9.3
	Undergraduate	239	58.6
	Graduate	131	32.1
Marital Status	Single	153	37.5
	Married	255	62.5
Hospital Type	State Hospital (Ministry of Health)	228	55.9
	Education and Research Hospital (Ministry of Health)	104	25.5
	University Hospital	18	4.4
	Private Hospital	58	14.2
Individual over 60 Age At Home	Yes	90	22.1
	No	318	77.9
* 12 Physiotherapists, 9 Biologists, 7 Psychologists, 6 Social Workers			

The averages for the sub-dimensions of COVID-19 Perception scale were given in Table 2. Among the dangerousness, contagiousness and inevitability dimensions considered as negative perception about the COVID 19, the highest score belongs to contagiousness (4.47 ± 0.92). This was followed by the dangerousness dimension (4.15 ± 0.91). Among the macro-control and personal control dimensions, which are evaluated as positive perception, the highest score is of the personal control dimension (3.01 ± 0.85). The average of the anxiety level of the participants was calculated as 52.89 ± 11.78.

Table 2. Average, Standard Deviation, Factor Loads and Cronbach Alpha Values of the COVID-19 Perception Scale

Subscales	Mean	Standard Deviation	Factor Loads	Cronbach Alfa
Dangerousness	4.15	0.91		
This disease is not as dangerous as it was told *	3.84	1.43	0.798	
Media exaggerates COVID-19 pandemic *	4.13	1.12	0.784	0.66
Healthcare professionals exaggerate COVID-19 pandemic *	4.51	0.93	0.627	
Contagiousness	4.47	0.92		
COVID-19 can be infected to everyone	4.43	1.06	0.880	0.80
COVID-19 is an easily infecting disease	4.51	0.95	0.865	
Macro Control	*2.64*	*0.85*		
Preventive works in Turkey is sufficient	2.73	1.16	0.795	
It is enough what is being done to stop the spread of COVID-19	2.52	1.14	0.776	0.77
Works conducted by health institutions are sufficient	2.98	1.18	0.811	
Preventive works in the World is sufficient	2.35	0.95	0.547	
Personal Control	*3.01*	*0.85*		
If I pay attention to my personal hygiene. COVID-19 would not infect me	3.02	1.16	0.782	
This disease would not affect me if I pay attention to my nutrition	2.86	1.11	0.796	
It is possible to be protected from COVID-19 by taking personal measures	3.52	1.07	0.716	0.81
to stop the outbreak to stop the pandemic it is enough for everyone to wash their hands frequently	2.64	1.18	0.667	
The personal measures I take to prevent from this disease are sufficient	3.03	1.12	0.706	
Inevitability	*2.87*	*0.93*		
Getting sick is not in the person's own hands	2.80	1.23	0.732	
It is not possible to avoid a virus you cannot see	3.01	1.25	0.799	0.61
No matter how many measures we take. we may not be able to prevent the infection of the disease.	2.82	1.25	0.629	
Percentage of Total Variance: 62.92 KMO: 0.817 Bartlett's test: Chi-square: 2190.8620; Df: 136; p<0.01				

* Reverse coded items

Correlation coefficients between variables were shown in Table 3. Correlation coefficients between 0.00-0.30 are weak; between 0.31 and 70 moderate; and higher than 0.70 are considered as high relationships. There is a positive, moderate and statistically significant relationship between dangerousness, contagiousness and inevitability dimensions of the COVID-19 perception and the level of anxiety of healthcare employees (p<0.001). And a negative, moderate and statistically significant relationship was found between macro-control and personal control and anxiety level (p<0.001).

Table 3. Correlation Coefficients Between Covid-19 Perception Subscales and Anxiety Level

Variables	1	2	3	4	5	6
1. State Anxiety Level	1					
2. Dangerousness	0.382**	1				
3. Contagiousness	0.385**	0.344**	1			
4. Macro Control	-0.314**	-0.333**	-0.237**	1		
5. Personal Control	-0.451**	-0.304**	-0.202**	0.418**	1	
6. Inevitability	0.368**	0.290**	0.299**	-0.247**	-0.325**	1

**p<0.001

The results of the regression analysis carried out in order to examine the effect of the participants' the COVID-19 perception on anxiety levels are shown in Table 4. The established regression model is linear and the model was found statistically significant (F=42.360; p<0.001). In addition, besides the percentage of the independent variables' which was calculated as $R^2=0.345$ to explain the dependent variable was found to be 34.5%. According to the standardized regression coefficient (β), the relative importance order of the predictive variables on the anxiety level of the employees; personal control, contagiousness, dangerousness, inevitability, and macro-control. When the t-test results related to the significance of the regression coefficients are examined, it is seen that the variables of personal control, contagiousness, dangerousness, and inevitability are important (significant) predictors of employee anxiety (p<0.05). The macro-control variable, by the way, does not have a significant effect (p>0.05).

Table 4: Multiple Linear Regression Analysis Results on Determining the Effect of COVID-19 Perceptions on Anxiety Level

Independent variables	B	Std. Error	β	t	P	VIF
Constant	39.96	4.458	-	8.965	0.000	
Dangerousness	2.048	0.588	0.159	3.483	0.001	1.285
Contagiousness	2.741	0.566	0.215	4.843	0.000	1.206
Macro Control	-0.719	0.632	-0.052	-1.136	0.257	1.305
Personal Control	-3.950	0.637	-0.288	-6.200	0.000	1.322
Inevitability	1.905	0.565	0.151	3.373	0.001	1.225
Dependent variables: State Anxiety Level R: 0.587; R^2: 0.345; F:42.360; *p<0.001						

The results of the analysis regarding whether the COVID-19 perception and the level of anxiety of the healthcare employees participating in the study differ according to the professional and demographic variables are shown in Table 5. The level of anxiety of the participants shows a significant difference according to variables such as, gender (t=3.821; p<0.05), marital status (t=2.830; p0.05), child status (t=3.821; p <0.05), task (F=3.024; p < 0.05) and the presence of individuals over the age of 60 at home. Anxiety levels of women were found higher than men (t=3.821; p<0.05), married ones were higher than those who were single (t= 2.830; p<0.05), of nurses were higher compared to other employees (F=3.024; p <0.05), and those who had individuals over 60 years old at home (t=2,943; P<0,05) had higher levels of anxiety.

Table 5. Comparison of Participants' Anxiety Levels According to Occupational and Demographic Characteristics

Variables	Group	n	Mean	Std. Deviation	t/F	p
Age	21-30	131	54.41	11.165	2.320	0.100
	31-40	182	51.57	11.630		
	>41	95	53.33	12.731		
Gender	Female	226	54.85	11.48	3.821	**0.000***
	Male	182	50.44	11.73		
Marital Status	Single	153	50.77	11.60	2.830	**0.005***
	Married	255	54.16	11.73		
Child Status	Yes	229	53.93	11.90	2.033	**0.043***
	No	179	51.55	11.52		
Education	High school	38	54.66	12.257	0.821	0.441
	Undergraduate	239	53.09	11.852		
	Graduate	131	52.02	11.551		
Occupation	Nurse	229	54.24	11.411	3.024	**0.030***
	Doctor	71	52.44	12.108		
	Health Technician	74	50.97	12.523		
	Other	34	48.91	10.903		
Hospital Types	State Hospital	228	51.86	11.820	2.613	0.051
	Education-Res. Hosp.	104	53.49	12.528		
	University Hosp.	18	51.06	9.956		
	Private Hosp.	58	56.45	10.193		
Individual over 60 Age At Home	Yes	90	56.08	10.788	2.943	**0.003***
	No	318	51.98	11.917		

*p<0.05

IV. DISCUSSION AND CONCLUSION

In this study, the effects of healthcare employees' perceptions about the COVID-19 on anxiety levels were examined. In the study, it was seen that there was a statistically significant relationship between the anxiety level and the levels of dangerousness, contagiousness, inevitability, macro-control and personal control, which constituted the COVID-19 perception. Additionally it was observed that the variables determined in connection with the COVID-19 perception explained 34.5% of the change in the anxiety level. In various studies, it was found that pandemics have various psychological effects on people. In a study by Lau et al. (2005), it was stated that a significant part of the participants felt helpless terrified and worried due to severe acute respiratory syndrome. In a study by Cao et al. (2020), conducted on 7143 students after the COVID-19 pandemic in China, a relation was found between the economic effects of the pandemic and its effect on daily life and due to postponements in academic activities and anxiety level. Although pandemics have various effects on everyone, it can be said that they have more negative effects on healthcare employees. One of the reasons for this may be the high probability of infection of the disease to healthcare employees. It may be said that healthcare personnel to have close contact with patients increases the likelihood that the disease will infect healthcare employees. In our study, it was determined that the contagiousness perception of the COVID-19 was an important predictor of anxiety level. It has been reported that the COVID-19 spreads 2 times faster than SARS and MERS diseases (Singhal, 2020). Accordingly, it can be said that the fact that the contagion and spreading rate of COVID-19 and the possibility of contagion to healthcare employees is high, increases the anxiety on healthcare employees.

In the study, it was observed that the average level of anxiety of the participants was 52.89 ± 11.78. In a study conducted by 288 healthcare employees by Atıcı and Deveci (2019), this value was found

36.70 ± 10.34. The mentioned studies were carried out in the pre-pandemic period. Compared to these studies, it can be said that the anxiety level of the healthcare employees participating in our research is higher.

In the study, it was seen that healthcare employees' perception of dangerousness regarding the COVID-19 had an important effect on anxiety level. COVID-19 caused many deaths throughout the world. In the conducted studies, it has been determined that fear of death increases the level of anxiety (Ding et al., 2020). In addition, it has been stated that healthcare employees working in risky units have more fear of death and that fear affects the physical and mental health of human resources negatively (Brady, 2015). Therefore, it can be said that the perception of dangerousness related to the COVID-19 increases the level of anxiety of the employees.

It can be said that another factor that increases the anxiety level of healthcare employees participating in the research is the control perception regarding the COVID-19. In the study, it was seen that the participants' perceptions of control regarding the infection of the disease were negatively related to their anxiety levels. In other words, those who have low control perception about the COVID-19 (preventing the transmission of the disease, thinking that the measures to be taken are sufficient, etc.) were found to have higher anxiety levels. In a study conducted by Savaş and Tanriverdi (2010), it was determined that the anxiety levels of healthcare employees who think that there is no protective feature of the H1N1 vaccine are higher than those who think that it is possible to be protected by vaccination.

In our study, it was seen that the level of anxiety of women was higher than that of male participants and this difference was statistically significant. This result is consistent with the result that women are more anxious in stressful situations and perceives environmental health risks higher (Canbaz et al. 2007; Çırakoğlu, 2011). It is known that women generally reflect their feelings that they are more emotional while men are more coldblooded. Accordingly, it can be said that anxiety levels of women are being found high. In addition, women take a closer look at other family members in their home life. This result is consistent with the result that women are more anxious in stressful situations and perceives environmental health risks higher (Canbaz et al. 2007; Çırakoğlu, 2011). It is known that women generally reflect their feelings that they are more emotional while men are more coldblooded. Accordingly, it can be said that anxiety levels of women are being found high. In addition, women take a closer look at other family members in their home life. During the SARS outbreak, a study conducted among health care human resources in emergency departments also showed that nurses were more likely to develop stress and anxiety than physicians in the SARS outbreak (Chan-Yeung, 2004; Wong, et al., 2005). Our results further indicate that woman healthcare employees reported more level of anxiety. In the fight against COVID, especially nurses are more intensely interested in patients in intensive care units and pandemic hospitals, and the probability of patient contact is very high (Lai J. et al., 2020).

Consistent with the results of previous studies related to SARS and COVID-19 (Maunder et al., 2004; Lai J. et al., 2020; Nickell et al., 2004; Tam et al., 2004). Our study showed that nurses and medical technicians presented higher rates of psychological stress than doctors. In our study, it was observed that the anxiety levels of nurses were higher than doctors, health technicians and other healthcare employees. While all healthcare employees are in close contact with patients, nurses spend up to 90% of their time with patients (El-Jardali et al., 2008).

This study revealed that healthcare employees' perceptions of dangerousness, contagiousness, inevitability, and control about the COVID-19 are important determinants of their anxiety levels. In the study, it was determined that the anxiety levels of women, of those who are married, those who have children, those who have individuals over 60 years of age in their homes and of nurses were high. A certain level of anxiety can contribute to the development of positive avoidance behaviors. However, high levels of anxiety can lead to various psycho-social problems in employees and negatively affect employee morale, motivation, and performance. Therefore, in order to reduce healthcare employees' anxiety, especially during pandemic periods, policies and practices should be

developed. Providing the necessary protective equipment in full, providing in-service training, informing about the methods of coping with stress, carrying out various facilitating practices for families (such as providing isolation) can be given as examples of practices that can control the level of anxiety of healthcare employees.

Limitations

This study has several limitations. This research is the first study on perceptions about the Covid-19 and anxiety levels of health personnel in Turkey. Our study investigating psychological problems of COVID-19 on health personnel is important in terms of being pioneering research in Turkey. The results of the research are limited to the evaluations of healthcare employees who are reached through social media and who agree to participate in the research.

Directions for Future Research

The effect of COVID-19 on healthcare employees' anxiety level can be measured and analyzed in different countries with similar research scales and so international comparisons can be made. Research investigating COVID-19's psychosocial and anxiety levels on healthcare employees and individuals often involves one or four weeks of survey data collection (Lai J. et al., 2020; Lee et al., 2007; Tan et al., 2020). Long-term data collection methods can be selected by conducting qualitative research in future studies.

Practical and Research Implications

COVID-19 is one of the most important sources of anxiety in healthcare employees and nurses. The perceptions about COVID-19 significantly affect the level of anxiety in nursing health services. The results of this research may lead to reduction of the level of anxiety caused by COVID-19 in nurses and physicians. The ever-increasing number of confirmed COVID-19 cases and deaths, overwhelming workload, depletion of personal protection equipment, widespread media coverage, lack of specific drugs, and feelings of being inadequately supported may all contribute to the mental burden, psychological, mental issues and high anxiety of healthcare employees. Some investigators suggested that interventions to promote mental well-being for human resources exposed to COVID-19 need to be implemented, with particular attention to women, physicians, nurses, and frontline human resources (Adams and Walls, 2020; Lai J. et al., 2020). In this pandemic period, it is essential to take the necessary precautions to protect the healthcare employees, especially the healthcare personnel involved in the treatment of COVID-19, to perform the necessary medical equipment and preventive applications and not to infect the disease. Nurses and physicians play an important role in the care and treatment of COVID-19. Necessary nursing and health management policies and practices should be developed to reduce nurses' anxiety levels with pandemic diseases such as COVID-19. In the fight against pandemic diseases, nurses must apply protective equipment, clothing equipment, necessary disinfection, quarantine rules. Encouragement and financial support should be provided to nurses and other healthcare employees who take an active role in the fight against COVID-19, especially nurses.

Ethical Approval: This study was approved by the Batman Regional State Hospital Ethics Committee (Date: 03.04.2020; Number: 233).

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