MEDICAL AND HEALTH SCIENCES

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CHAPTER 8

BEING A HEALTHCARE PROFESSIONAL IN DIALYSIS DURING COVID-19 PANDEMIC

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INTRODUCTION

Fatal effect potentials of epidemics experienced one after another in the past 20 year such as SARS (severe acute respiratory syndrome), MERS–CoV infection (Middle East Respiratory Syndrome Coronavirus) and Influenza have gradually increased the awareness of policy makers and the society. The COVID-19 pandemic, which started at the end of December 2019 and which is still continuing today, is defined as a phenomenon that is spread globally on a larger scale than all these epidemics (Tuncay, Koyuncu, & Özel, 2020).

In terms of the emergence process of COVID-19 pandemic; the first signals of the outbreak started when Wuhan Municipal Health Committee announced new pneumonia cases of unknown causes on December 31, 2019. On January 12, 2020, the coronavirus newly discovered by the World Health Organization (WHO) was temporarily named "2019-nCoV". This single-chain, positive-polar, enveloped RNA has been recognized as the seventh identified coronavirus (CoV) that can infect humans (Dikmen, Kına, Özkan, & İlhan; Jia Wang & Wang, 2020). On January 31, 2020, WHO announced that 2019-nCoV is an international emergency public health situation. On February, 2020, WHO named the virus that caused severe acute respiratory tract disease as "Coronavirus Disease-2019 (COVID-19)" and declared a pandemic, which means global epidemic. The word COVID-19 is coined from co' in 'corona', vi in 'virus' and d' in 'disease'. Although it is the same coronavirus type with SARSCoV and MERS-CoV, the origin of the genetically different COVID19 is unknown. However, it

is estimated that it originates from the Huanan Seafood Market (a wholesale fish and live animal market where different animal species are sold) in Wuhan, China's 11 million population city (Zhou et al., 2020). The disease is transmitted through droplets emanating from coughing and sneezing and from the surfaces that patients touch (through touching the eye, mouth and nose mucosa with hands) (Ministry of Health, 2020). It has been observed that average incubation period is 5-6 days (2-14 days) and that in some cases it can extend up to 14 days (Alıcı, Beyan, & Şimşek, 2020). The epidemic was first detected in Turkey on March 10, 2020 and as of 06.07.2020, 3.682.673 individuals were tested (polymerized chain reaction (PCR) method), COVID-19 was detected in 206.844 individuals and the number of individuals who lost their lives was reported as 5.241 (Covid19.saglik.gov.tr, 2020).

COVID-19 can cause clinical pictures in humans and animals coursing with various degrees of respiratory, enteric, hepatic, nephrotic and neurological involvements (Alıcı, Beyan, & Şimşek, 2020). It has been reported that 81% of COVID-19 cases have asymptomatic clinical picture (no or mild pneumonia), while 14% have severe disease clinical picture (for exp. dyspnoea, hypoxia or more than 50% lung involvement in imaging within 24 – 48 hours) and 5% have critical disease clinical picture (for exp. respiratory failure, shock or multiorgan dysfunction) (Z. Wu & McGoogan, 2020). The main symptoms at disease onset have been reported as fatigue, fever, dry cough, myalgia and dyspnoea, while less common

symptoms have been reported as nasal congestion, headache, runny nose, sore throat, vomiting and diarrhoea. In severe cases, dyspnoea and/or hypoxemia usually develop a week after onset and following this patients develop septic shock and Acute Respiratory Distress Syndrome (Çöl & Güneş, 2020).

Healthcare professionals are fighting at the forefront against COVID-19 infection. Healthcare professionals, who are directly interested in the diagnosis, treatment and care of patients are on the one hand making efforts to prevent the spread of the virus and on the other hand learning information, conducting scientific studies and frequently updating their approaches to patients (Lai et al., 2020). Infectious diseases are among the most common causes of occupational death among healthcare professionals (Sepkowitz & Eisenberg, 2005). In almost all infectious diseases, the places where contamination takes place the most are hospitals and other health institutions (Fessell & Cherniss, 2020; Styra et al., 2008). Therefore, the hygiene and personal protection rules of the working environment are a priority. For healthcare professionals, being infected with external infections in the hospital environment or being in the same environment with people diagnosed with COVID-19 increases mental symptoms (Kaya, 2020).

Four exposure levels have been defined according to the risks of employees' being faced with the virus. According to this classification, healthcare professionals are considered as the occupation group with the highest risk due to their close contact with

patients affected by COVID-19 (Alıcı, Beyan, & Şimşek, 2020). According to Ministry of Health data, 7428 healthcare professionals have been infected with COVID-19 (İstanbul Chamber of Medical Doctors, 2020). In addition to being a medical phenomenon, pandemic is also a social phenomenon that affects the individual and the society at many levels and causes disruptions. This is because as the perception of threat caused by infectious disease increases, individuals who experience panic and stress show different behaviours than usual. When faced with a condition the effects of which are unpredictable such as epidemic disease, individuals experience a sense of fear and panic (Karataş, 2020).

Healthcare professionals are exposed to both physical and psychological stress during this pandemic process (Lu, Wang, Lin, & Li, 2020; Zeng & Zhen, 2020). In the fight against this very serious epidemic disease, healthcare professionals are exhausted physically and they also suffer psychologically. They experience feelings of desperation, anxiety and fear because it is not known when this extraordinary situation will end and they are in the highest risk group for COVID-19 infection (Zeng & Zhen, 2020). Having too many cases and insufficient number of staff in health institutions is a factor that is usually common in pandemics and it can increase psychological stress (Porten, Faensen, & Krause, 2006). Working time is a factor that directly affects the severity of stress responses of healthcare professionals. As the working time in the relevant service of the hospital increases, the frequency of interaction with patients increases,

the load of clothing and equipment which are used to protect from contamination increases and these can be accompanied with increasing emotional exhaustion. Undoubtedly, the intensity of these processes can cause burnout symptoms in employees (Sasangohar, Jones, Masud, Vahidy, & Kash, 2020). In addition, healthcare professionals are also afraid to infect the virus to their families and loved ones when they come across critical patients (Lu et al., 2020). This situation triggers various psychological problems such as panic disorder, anxiety and depression (Pappa et al., 2020). It has been found that healthcare professionals are twice as likely to experience anxiety and depression than administrative staff (Lu et al., 2020).

This study was carried out to find out the Covid-19 knowledge and anxiety levels of healthcare professionals working in dialysis units during the COVID 19 pandemic process. In literature review, no studies were found on the Covid-19 knowledge and anxiety levels of healthcare professionals working in dialysis units. This study is thought to be important in terms of filling the gap in literature.

1. METHODS

1.1. Setting and Characteristics of the Study

This descriptive and cross-sectional study was carried out to find out the Covid-19 knowledge and anxiety levels of healthcare professionals working in dialysis units during the COVID 19 pandemic process.

1.2. Sample of the Study

The study was carried out between April 1 and 9, 2020. Data collection forms prepared in GoogleDocs program was sent online to dialysis technicians and the nurses in whatsapp group of Turkish Nephrology, Dialysis and Transplantation Nurses Association and they were asked to fill in the forms. 88 individuals who responded to the survey were included in the study.

1.3. Data Collection Instruments

The data were collected by using Personal Information Form prepared by the researchers and Coronavirus Anxiety Scale (CAS).

1.3.1. Personal Information Form

The form prepared by the researchers includes questions such as the participants' socio-demographic characteristics (age, gender, marital status, etc.), work information (years of working, unit they worked in and their job) and questions about COVID-19.

1.3.2. Coronavirus Anxiety Scale (CAS)

The scale developed by Lee (2020) is used to find out the level of anxiety related with COVID-19. Turkish validity and reliability study of the scale was conducted by Evren et al. (2020). 5-Likert type CAS scale has 5 questions and a single dimension. The scale is scored as "0" "Not at all", "1" "Rare, less than a day or two", "2" "Several days", "3" "More than 7 days" and "4" "Nearly every day over the

last two weeks". As the score from the scale increases, the level of anxiety also increases. Cronbach's Alpha value of the scale was reported as 0,80 (Evren et al., 2020). In the present study, Cronbach's Alpha value was found as 0,81.

1.4. Data Assessment

Numbers, percentage, mean, standard deviation, Mann Whitney U test, Kruskall Wallis and Pearson Correlation Coefficient were used in the assessment of the data obtained from the study. Statistical analyses were conducted with SPSS 25 program and significance in statistical analyses was taken as 0.05 (p-value).

1.5. Ethical Principles of the Study

The study was conducted in accordance with the principles of Helsinki Declaration of Human Rights. (2020/06 numbered) approval was taken from the Ethics Committee of a Foundation University and required permissions were taken from T. R. Ministry of Health Scientific Researches Committee (2020-05-23T13_10_15).

2. RESULTS

Table 1 includes sociodemographic characteristics and work information of the participants. Average age of the participants was 38.66±7.73, while their average years in the profession was 18.24±8.48, average years of working in the dialysis unit was 13.7±7.61 and average daily number of patients cared for was 42.7±27.69. 94.3% of the healthcare professionals were women, 75%

were married, and 61.4% had undergraduate degree. It was found that 83% of the participants were working as dialysis nurse, 77.3% were working in haemodialysis unit, the spouses of 19.3% were healthcare professionals, 25% had a chronic disease, 31.8% were smoking and 8% were using psychiatric medication.

Table 1. Sociodemographic Characteristics and Work Information of the Participants

		Ave±Sd	**Min-Max (Median)**
Age		38.66±7.73	20-52 (40)
Number of Children		1.34±0.95	1-4 (2)
Years in the Profession		18.24±8.48	1-32 (20)
Years of working in haemodialysis		13.7±7.61	1-27 (15)
Average number of daily patients		42.7±27.69	2-130 (40)
		n	**%**
Gender	Woman	83	94.3
	Man	5	5.7
Marital Status	Married	66	75.0
	Single	22	25.0
State of having children	Yes	65	73.9
	No	23	26.1
Educational Status	Vocational School of Health	7	8
	Two year degree	18	20.5
	Undergraduate	54	61.4
	Master	8	9.1
	Doctorate	1	1.1
Job description	Dialysis Nurse	73	83.0
	Dialysis Technician	15	17.0
Type of dialysis	Haemodialysis	68	77.3
	Peritoneal	20	22.7
The state of having a health professional spouse	Yes	17	19.3
	No	71	80.7
Presence of Chronic Disease	Yes	22	25.0
	No	66	75.0
The state of smoking	Yes	28	31.8
	No	60	68.2
The state of using psychiatric medication	Yes	7	8.0
	No	81	92.0

27.3% of the participants stated that they needed psychological counselling since the first COVID-19 case emerged; 59.1% stated that they felt more exhausted when compared with pre-COVID-19; 93.2% followed news about COVID-19; 53.4% stated that patients and their relatives did not take the situation seriously; 76.1% stated that they had sufficient information about COVID-19; 60.2% stated that the possibility of being infected with COVID-19 was higher when compared with other healthcare professionals (Table 2). It was found that 84.1% of the participants worried about infecting COVID-19 to their patients, 93,2% worried about infecting COVID-19 to their families, 89.8% worried about infecting COVID-19 to their colleagues and 34.1% worried about getting infected with COVID-19 themselves (Table 2). 86.4% of the healthcare professionals stated that they had sufficient information about how to protect from COVID-19, 64,8% stated that they were supplied with sufficient protective equipment for isolation, 47,7% stated that they felt psychologically safer when compared with healthcare professionals working in intensive care and infection clinics, 37.5% stated that they felt safer when compared with healthcare professionals working in intensive care and infection clinics in terms of being infected (Table 2).

Table 2. Information of the Participants about the COVID-19 Process

		n	%
Feeling the need to get psychological help since COVID-19 started	Yes	24	27.3
	No	49	55.7
	Undecided	15	17.0
Feeling more exhausted than pre COVID-19	Yes	52	59.1
	No	28	31.8
	Undecided	8	9.1
Following news with the first COVID-19 case	Yes	82	93.2
	No	4	4.5
	Undecided	2	2.3
Thinking that patients and their relatives are not taking the situation seriously	Yes	47	53.4
	No	23	26.1
	Undecided	18	20.5
Thinking that one has sufficient information about COVID-19	Yes	67	76.1
	No	6	6.8
	Undecided	15	17.0
Thinking that the risk of being infected with COVID-19 is higher than the other healthcare professionals	Yes	53	60.2
	No	19	21.6
	Undecided	16	18.2
Worrying about the possibility of infecting patients when infected with COVID-19	Yes	74	84.1
	No	10	11.4
	Undecided	4	4.5
Worrying about the possibility of infecting family when infected with COVID-19	Yes	82	93.2
	No	2	2.3
	Undecided	4	4.5
Worrying about the possibility of infecting colleagues when infected with COVID-19	Yes	79	89.8
	No	7	8.0
	Undecided	2	2.3
Worrying about being infected with COVID-19	Yes	30	34.1
	No	38	43.2
	Undecided	20	22.7
Having sufficient information about how to protect oneself	Yes	76	86.4
	No	2	2.3
	Undecided	10	11.4
Thinking that one does not have sufficient equipment to protect oneself	Yes	57	64.8
	No	16	18.2
	Undecided	15	17.0
Feeling psychologically safer than healthcare professionals working in intensive care and infection clinics	Yes	42	47.7
	No	22	25.0
	Undecided	24	27.3
Feeling safer than healthcare professionals working in intensive care and infection clinics in terms of this disease	Yes	33	37.5
	No	30	34.1
	Undecided	25	28.4

Table 3 includes data on level of information about COVID-19. 96.6% of the healthcare professionals answered the first question as correct, 27.3% answered the second question as incorrect, 83% answered the third question as correct, 36.4% answered the fourth question as incorrect, 100% answered the fifth question as correct, 59.1% answered the sixth question as correct, 75% answered the seventh question as incorrect, 62.5% answered the eighth question as incorrect and 95.5% answered the ninth question as incorrect (Table 3).

Table 3. Information levels about COVID-19

	Correct n(%)	**Incorrect n(%)**	**No Idea n(%)**
1. COVID-19 agent is a coronavirus.*	85 (%96.6)	0	3 (%3.4)
2.Coronavirus is not a virus family that causes disease in animals.*	58 (%65.9)	24 (%27.3)	6 (%6.8)
3.The coronavirus family is transmitted from animals to humans due to a mutation they develop.*	73 (%83.0)	7 (%8.0)	8 (%9.1)
4. The coronavirus family can be transmitted to pets though humans after they are transmitted from animals to humans.**	24 (%27.3)	32 (%36.4)	32 (%36.4)
5. The coronavirus family is transmitted from human to human through droplet*.	88 (%100.0)	0	0
6. COVID-19 virus is a different virus family than the agents of Sars and Mers epidemics.**	52 (%59.1)	26 (%29.5)	10 (%11.4)
7.The novel coronavirus group viruses become inanimate by applying salty water and vinegar to the nose. **	11 (%12.5)	66 (%75.0)	11 (%12.5)
8.The only organ affected by the novel coronavirus group viruses is the lung.**	28 (%31.8)	55 (%62.5)	5 (%5.7)
9. The novel coronavirus group viruses causes disease only in individuals who are older than 65 years of age and who have a comorbid disease**.	3 (%3.4)	84 (%95.5)	1 (%1.1)

*Correct answers, ** Incorrect answers

CAS total average score of healthcare professionals was found as 2.5±2.98 (Min-Max: 0-14. Median:2). High CAS scores of single participants (X:2.95±2.03), participants with a master degree (X:3.88±3.48) and those working in peritoneal dialysis unit (X: 3.05±2.42) were found to be statistically significant (Table 4;p<0.05).

Table 4. Comparison of participants' sociodemographic characteristics and average CAS scores

		CAS		
		Ave±ss	**Min-Max (Median)**	**p**
Gender	Woman	2.4±2.78	0-12 (2)	0.507
	Man	4.2±5.63	0-14 (3)	
Marital Status	Married	2.35±3.24	0-14 (1)	0.033*
	Single	2.95±2.03	0-7 (3)	
State of having children	Yes	2.48±3.23	0-14 (1)	0.347
	No	2.57±2.21	0-7 (3)	
Educational Status	Vocational School of Health	2.86±5.24	0-14 (0)	0.012*
	Two year degree	3.78±2.9	0-10 (3)	
	Undergraduate	1.87±2.41	0-10 (1)	
	Master	3.88±3.48	1-12 (3)	
Job description	Dialysis Nurse	2.42±3.18	0-14 (1)	0.079
	Dialysis Technician	2.87±1.81	0-6 (3)	
Type of dialysis	Haemodialysis	2.34±3.13	0-14 (1)	0.047*
	Peritoneal	3.05±2.42	0-8 (2)	
The state of having a health professional spouse	Yes	2.59±3.83	0-14 (1)	0.726
	No	2.48±2.78	0-12 (2)	
Presence of Chronic Disease	Yes	3±2.86	0-10 (3)	0.181
	No	2.33±3.02	0-14 (1)	
The state of smoking	Yes	2.68±3.35	0-12 (2)	0.916
	No	2.42±2.82	0-14 (1.5)	
The state of using psychiatric medication	Yes	4±4.47	0-10 (2)	0.625
	No	2.37±2.82	0-14 (2)	

Table 5 gives post-COVID 19 information of healthcare professionals and their CAS score averages. It was found that high CAS scores of participants who felt the need to get psychological help since the beginning of COVID-19 (X:4±3.86), those who felt more exhausted when compared with pre- COVID-19 (X: 3.58±3.36), those who thought their risk of being infected with COVID-19 was higher than other healthcare professionals (X:3.15±3.4) those who were undecided about worrying for themselves on being infected with COVID-19 (X: 3.4±2.66), those who had sufficient information about how to protect from COVID-19 (X:4.4±3.31) and those who stated that they were undecided about having been provided equipment (X:4.67±3.11) were statistically significant (Table 5; $p<0.05$).

Table 5. Comparison of participants post- COVID-19 information and CAS score averages

		CAS		
		Ave±sd	**Min-Max (Median)**	**p**
Feeling the need to get psychological help since COVID-19 started	Yes	4±3.86	0-14 (3)	0.008*
	No	1.71±2.47	0-12 (1)	
	Undecided	2.67±1.95	0-6 (3)	
Feeling more exhausted than pre COVID-19	Yes	3.58±3.36	0-14 (3)	0.001*
	No	0.86±1.15	0-5 (1)	
	Undecided	1.25±1.39	0-3 (1)	
Following news with the first COVID-19 case	Yes	2.56±3.06	0-14 (2)	0.810
	No	1.5±1.91	0-4 (1)	
	Undecided	2±1.41	1-3 (2)	
Thinking that patients and their relatives are not taking the situation seriously	Yes	2.64±2.67	0-10 (2)	0.462
	No	2.17±3.19	0-12 (1)	
	Undecided	2.56±3.58	0-14 (1)	
Thinking that one has sufficient information about COVID-19	Yes	2.28±3.1	0-14 (1)	0.084
	No	2.33±1.51	1-4 (2)	

	Undecided	3.53±2.77	0-10 (3)	
Thinking that the risk of being infected with COVID-19 is higher than the other healthcare professionals	Yes	3.15±3.4	0-14 (2)	0.032*
	No	1.16±1.61	0-5 (0)	
	Undecided	1.94±2.05	0-7 (1.5)	
Worrying about the possibility of infecting patients when infected with COVID-19	Yes	2.73±3.14	0-14 (2)	0.266
	No	1.3±1.49	0-4 (1)	
	Undecided	1.25±1.89	0-4 (0.5)	
Worrying about the possibility of infecting family when infected with COVID-19	Yes	2.63±3.04	0-14 (2)	0.159
	No	1±1.41	0-2 (1)	
	Undecided	0.5±1	0-2 (0)	
Worrying about the possibility of infecting colleagues when infected with COVID-19	Yes	2.68±3.06	0-14 (2)	0.118
	No	0.86±1.57	0-4 (0)	
	Undecided	1±1.41	0-2 (1)	
Worrying about being infected with COVID-19	Yes	3.13±3.92	0-14 (2)	0.013*
	No	1.53±1.87	0-7 (1)	
	Undecided	3.4±2.66	0-10 (3)	
Having sufficient information about how to protect oneself	Yes	2.32±2.89	0-14 (1)	0.016*
	No	0±0	0-0 (0)	
	Undecided	4.4±3.31	0-10 (3.5)	
Thinking that one does not have sufficient equipment to protect oneself	Yes	2.12±3.02	0-14 (1)	0.006*
	No	1.81±1.68	0-6 (1.5)	
	Undecided	4.67±3.11	0-10 (5)	
Feeling psychologically safer than healthcare professionals working in intensive care and infection clinics	Yes	2.55±3.28	0-14 (1)	0.304
	No	1.73±1.98	0-7 (1)	
	Undecided	3.13±3.15	0-10 (2.5)	
Feeling safer than healthcare professionals working in intensive care and infection clinics in terms of this disease	Yes	7.3±3.31	5-19 (6)	0.370
	No	7.2±2.46	5-15 (7)	
	Undecided	8.12±3.13	5-15 (7)	

3. DISCUSSION

The findings obtained as a result of the analysis of research data have been discussed in the light of related literature. It was found that 96.6% of the participants answered the question “COVID-19 agent is a coronavirus” correctly, while 65.9% answered the question “Coronavirus is not a virus family that causes disease in animals” correctly, 83% answered the question “The coronavirus family is transmitted from animals to humans due to a mutation they develop” correctly and 100% answered the question “The coronavirus family is transmitted from human to human through droplet” correctly. In addition, 75% of the participants answered the question “The novel coronavirus group viruses become inanimate by applying salty water and vinegar to the nose” as incorrect, 65.5% answered the question “The only organ affected by the novel coronavirus group viruses is the lung” as incorrect, 95.5% answered the question “The novel coronavirus group viruses causes disease only in individuals who are older than 65 years of age and who have a comorbid disease” as incorrect, 36.4% answered the question “The coronavirus family can be transmitted to pets through humans after they are transmitted from animals to humans” as incorrect and 29.5% answered the question “COVID-19 virus is a different virus family than the agent of Sars and Mers epidemics” as incorrect and thus gave the correct answer. Only in two questions (Question 4 and Question 6) the rate of correct answers was below 50%. In addition, 76.1% of the participants stated that they had sufficient information about COVID-19. According to

these results, it can be said that healthcare professionals had moderate level of information about COVID-19. Studies conducted have also reported that healthcare professionals have sufficient level of information about COVID-19 (Bhagavathula, Aldhaleei, Rahmani, Mahabadi, & Bandari, 2020; Huynh, Nguyen, Vo, & Pham, 2020; Nemati, Ebrahimi, & Nemati, 2020; Saqlain et al., 2020).

In the study, average CAS total score of the healthcare professionals was found as 2.5±2.98. According to this result, COVID-19 anxiety of healthcare professionals was found to be in moderate level. In their study, Du et al. (2020) found that healthcare professionals had high level of anxiety. In their study they conducted with healthcare professionals, Tan et al. (2020) found that anxiety level of healthcare professionals who provided medical care (doctors and nurses) was 2.45±4.28. In Lu et al.'s (2020) study conducted with healthcare professionals (doctors and nurses), anxiety level was found as 4.73±6.29. The fact that COVID-19 infection has a highly infectious potential and high mortality rates increases the anxiety level of healthcare professionals in the risk group.

In the study, the fact that single healthcare professionals had high CAS scores (X:2.95±2.03) was found to be statistically significant. During the pandemic, healthcare professionals prefer to stay away from their homes and family members for long periods of time and communicate with their loved ones without physical contact and usually on the phone. During this process, the obvious decrease in the emotional and

social support from the family and friends (Tuncay et al., 2020) has caused single healthcare professionals to experience higher anxiety.

High CAS scores of healthcare professionals who felt the need to get psychological support since COVID-19 started (X:4±3.86) and those who felt more exhausted than pre- COVID-19 (X: 3.58±3.36) were found to be statistically significant. Studies conducted have also reported that pandemic process causes fatigue and exhaustion in healthcare professionals, healthcare professionals are psychologically extremely sensitive and that this situation increases anxiety levels (Lai et al., 2020; Rana, Mukhtar, & Mukhtar, 2020; Jialin Wang et al., 2020). During the COVID-19 pandemic, continually increasing number of confirmed and suspected cases, overwhelming work load, depletion of personal protection equipment, lack of specific drugs and feelings of insufficient support can contribute to psychological and mental burden in healthcare professionals (Lai et al., 2020). Within the framework of measures taken in dialysis units due to the COVID-19 pandemic, the number of daily 2-3 sessions has been increased and the number of patients in each session has been decreased. This situation has increased the workload of healthcare professionals working in dialysis units. In addition, healthcare professionals provided care to COVID-19 diagnosed patients in isolation rooms prepared in the same centres. This situation wears the participants psychologically and can cause exhaustion.

High CAS scores of the participants who thought that the risk of being infected with COVID-19 was higher than the other healthcare professionals (X:3.15±3.4) and those who were undecided for themselves about being infected with COVID-19 (X: 3.4±2.66) were found to be statistically significant.

Safety is a primary concern in healthcare professionals. Seeing their colleagues intubated, losing the patients they provide care for, being afraid of infecting the disease to their families and loved ones can damage their feelings of safety. These problems have been reported especially in healthcare professionals working to fight SARS (Lee et al., 2005; P. Wu et al., 2009). These concerns may increase due to factors such as prolonged outbreak and uncertainties in the treatment. In a study in which the effects of SARS outbreak on 248 healthcare professionals working in Toronto (Canada) were examined, high psychological distress and anxiety symptoms were found in healthcare professionals. Although the variables that increase these factors are not fully explained, the effect of uncertainties in treatment protocols have been reported (Styra et al., 2008).

High CAS scores of the participants who stated that they had sufficient information about how to protect themselves against COVID-19 (X:4.4±3.31) and the participants who stated that they were undecided about not having sufficient equipment (X:4.67±3.11) were found to be statistically significant.

In line with the results of the present study, it was reported in a study conducted in Pakistan that high infection risk, isolation and insufficient security equipment increased the level of anxiety (Rana et al., 2020). The stressors that accompany the pandemic process have been reported as the fear of being infected, distress, insufficient personal protection equipment and insufficient information (Tuncay et al., 2020).

4. CONCLUSION

COVID-19 anxiety levels of the healthcare professionals (nurses and dialysis technicians) working in dialysis units were found to be in moderate levels. Feeling of exhaustion, the risk of being infected with COVID-19 and level of information about protection from COVID-19 affect healthcare professionals' level of anxiety. Considering that it is necessary to maintain mental health and that mental health plays an important role in strengthening immunity, administrators should take the necessary measures to decrease anxiety levels of healthcare professionals. It is also recommended to give the necessary trainings on strategies to deal with anxiety.

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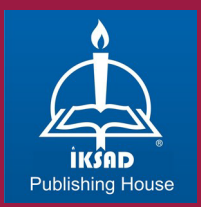

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