THE EFFECT OF COVID-19 KNOWLEDGE LEVEL OF HEALTH PROFESSIONALS ON SOCIAL CLOSENESS AND RISK AVOIDANCE BEHAVIORS DURING THE PANDEMIC

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Abstract

Healthcare professionals struggle with disease on the front lines by risking their lives in all pandemics. The main purpose of this study is to determine the effect of the COVID-19 knowledge level of employees on social closeness and risk avoidance behaviors during the pandemic. A hospital-based cross-sectional research design was used in the study. The research universe consisted of all healthcare professionals of two public hospitals providing secondary care in Ankara. The convenience sampling method was preferred in the survey. The total number of questionnaires evaluated and used to analyze the data is 521. It has been determined that the direct causal effect of the COVID-19 knowledge level of health professionals on risk avoidance behaviors is positive and 0.29 units. In comparison, the direct causal effect on the social closeness behaviors is positive and 0.17 units. In addition, a significant relationship was found between female gender and risk avoidance behavior. The level of knowledge experienced among healthcare professionals during the COVID-19 epidemic increases their tendency to show risk avoidance and social closeness behaviors.

Keywords: COVID-19 knowledge level, Risk aversion, Social closeness, Healthcare professionals.

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SAĞLIK ÇALIŞANLARININ COVID-19 BİLGİ DÜZEYİNİN PANDEMİ SIRASINDA SOSYAL YAKINLIK VE RİSKTEN KAÇINMA DAVRANIŞLARINA ETKİSİ

Özet

Sağlık çalışanları tüm pandemilerde hayatlarını riske atarak hastalıklarla ön saflarda mücadele etmektedir. Bu çalışmanın temel amacı, çalışanların COVID-19 bilgi düzeyinin pandemi sürecinde sosyal yakınlık ve riskten kaçınma davranışlarına etkisini belirlemektir. Araştırmada hastane temelli kesitsel araştırma deseni kullanılmıştır. Araştırma evrenini Ankara'da ikinci basamak sağlık hizmeti veren iki farklı kamu hastanesinin tüm sağlık profesyonelleri oluşturmuştur. Ankette kolayda örnekleme yöntemi tercih edilmiştir. Değerlendirilen ve verilerin analizinde kullanılan anket sayısı toplam 521'dir. Sağlık çalışanlarının COVID-19 bilgi düzeyinin riskten kaçınma davranışları üzerindeki doğrudan nedensel etkisinin pozitif ve 0,29 birim olduğu tespit edilmiştir. Sosyal yakınlık davranışları üzerindeki doğrudan nedensel etki pozitif ve 0.17 birimdir. Ayrıca kadın cinsiyeti ile riskten kaçınma davranışı arasında anlamlı bir ilişki bulunmuştur. Sağlık

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çalışanlarının COVID-19 salgını sırasında kazandıkları bilgi düzeyi, riskten kaçınma ve sosyal yakınlık davranışları gösterme eğilimlerini artırmaktadır.

Anahtar Kelimeler: COVID-19 bilgi düzeyi, Riskten kaçınma, Sosyal yakınlık, Sağlık çalışanları.

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Introduction

All health professionals working in health institutions, physicians, nurses, and all other allied health personnel are exposed to the stress of epidemics at the highest level and try to cope with the psychological consequences for a long time. Healthcare workers have always been the group most at risk from all new and deadly epidemics such as SARS, Ebola, and MERS (Ji et al., 2017; Suwantarat & Apisarnthanarak, 2015). In addition, it has been determined healthcare workers are infected from the hospital environment with external contamination (Kaya, 2020). At the same time, the fact that the concrete case burden of health institutions is high and the number of employees is insufficient is a situation that can generally be seen in pandemics and is seen as a factor that increases psychological strain (Porten et al., 2006).

A. LITERATURE REVIEW

Health professionals have always been at the highest risk of being caught against pandemic factors. In addition, healthcare professionals have struggled with the disease on the front lines by risking their lives in all pandemics. Physicians, nurses, and all other allied health workers working in all health institutions are both exposed to the stress of epidemics at the highest level and try to cope with the psychological consequences for a long time. (Wang et al., 2020).

Healthcare professionals, who take part in the diagnosis and treatment team with great devotion during the epidemic process, are in the risk group for COVID-19 disease and mental problems due to their positions. In addition to experiencing the risk of a fatal illness and the negative consequences of the measures taken in this process, healthcare professionals also face the burden of fighting on the front line in this struggle. Studies examining the adverse effects of epidemics on healthcare workers have found that these individuals show signs of post-traumatic stress, anxiety, burnout, and depression during and after the epidemic (Lee et al., 2007).

In a study conducted with 546 healthcare workers during the SARS epidemic, it was stated that 10% of the sample experienced psychological stress symptoms since the epidemic. In addition, it has been noted that healthcare workers who have to stay away from their families face the risk of contracting illness because they have to work with people who have been diagnosed and who have to bear a heavier burden than their usual workload are adversely affected (Huremović, 2019; Li et al., 2020). They also complained that they felt lonely due to increased workload and consequently mental and physical wear, had to stay away from their social environment, were easily distracted due to the disruption of their sleep patterns, and had difficulties in decision-making processes (Reynolds et al., 2008).

As a result, the COVID-19 pandemic, which surrounded the world for a short time, had significant effects in medical and health-related fields and triggered many social changes. The sharing of

the necessary tools to combat the pandemic and the spread of the pandemic is taking place at the same pace. However, this struggle does not cause equal participation, the formation of solidarity structures among healthcare workers, and unity in the total war against the common enemy virus, as it is believed, in any case, the COVID service emerges as a social environment that also witnesses various conflicts (Turkish Medical Association, 2020).

1. Knowledge of COVID-19 and Risk Aversion Behaviour

When the source of the danger is clear, the emotion experienced is called knowledge. On the other hand, from a physiological perspective, knowledge of COVID-19 and anxiety are basic emotions that activate the sympathetic nervous system's "fight or flight" response and provide a rapid response when faced with an imminent threat. The contagious nature of the infection, its imminent threat and invisibility to the eye, and the increasing influence of the virus are the most important reasons why the COVID-19 pandemic causes knowledge of COVID-19 or anxiety in both social aspects and healthcare workers (Pappas et al., 2009).

In an epidemic, the first emotions commonly occur in humans are intense anxiety and knowledge. Here are just a few of the many factors that cause intense feelings of knowledge and anxiety in humans: (i) unlike many viruses seen before, a carrier individual can transmit this virus without any symptoms, (ii) the presence of certain groups in terms of life-threatening, (iii) the epidemic is entirely (iv) the length of the vaccine development process and the insecurities about the long-term consequences that it may cause in the human body, even if it is developed, (v) the short and long-term effects on the economy, as well as the second and third mutations of the virus in the epidemic. Is the probability of waves occurring (Taştan et al., 2020).

Studies have found that healthcare professionals and administrative staff, who are at the forefront of combating the COVID-19 pandemic, develop anxiety, depression, and post-traumatic stress disorder (Kang et al., 2020; Öztürk et al., 2021; Pamuk Cebeci & Kara, 2021; Polat & Coşkun, 2020). In the survey study conducted for hospital staff in the initial COVID-19 pandemic, it was stated that healthcare workers had knowledge of infecting their families, and their ability to cope with treatment incompatibility was lacking due to their poor psychological aspects (Chen et al., 2020).

On the other hand, risk aversion tends to stay away from risk and is considered a personality trait. Thus, risk aversion is an important attribute used to distinguish between those who avoid or those who do not avoid risk situations (De Matos et al., 2007). In this context, the level of risk people perceive and their risk tolerance levels can be considered factors that affect their risk-taking tendencies and behaviors towards risks (Shiffman & Kanuk, 2000).

In addition to the adverse effects of isolation measures and quarantine on society, it is known that healthcare professionals who treat the infection and try to prevent its spread by filtering are at significant risk both physically and psychologically (Rogers et al., 2020). It has been determined that the high working hours, the pandemic hospital of the hospital, the increased caseload in the hospital, the infection of the coworkers, the lack of protective equipment, and the uncertainty of the treatment protocols increase the psychosocial influence levels and risk perceptions of healthcare workers (Lee et al., 2005).

In addition, people with constant knowledge and anxiety tend to see the world as dangerous and threatening. Harm aversion refers to the tendency to avoid potential risks. People with a high level of harm avoidance tend to be knowledgeable and highly anxious (Taylor, 2019). In addition, it has been reported that high personal risk perception predicts post-traumatic stress disorder symptoms (Stuijfzand et al., 2020). Based on this, the following hypothesis has been developed:

H1: Knowledge of COVID-19 has a significant effect on risk aversion behavior.

2. Knowledge of COVID-19 and Social Closeness

One of the possible risk factors is working in the area where the virus is most likely to be transmitted. In a study conducted during the H1N1 epidemic, it was found that those who work in places where the risk of transmission of the virus are high feel more anxious than those who work in environments with less risk and that these individuals have more post-traumatic stress symptoms (Matsuishi et al., 2012). It has been observed that healthcare workers who play an active role in the treatment of SARS have higher levels of knowledge, burnout, psychological stress, and post-traumatic stress compared to healthcare workers who do not play a role in the treatment (Maunder et al., 2006). It has been found that healthcare professionals dealing more with MERS-related tasks show post-traumatic stress symptoms (Lee et al., 2018). Rossi et al. (2020) found that being a healthcare worker and working more than usual was associated with increased perceived stress levels, post-traumatic stress symptoms, and adjustment disorder in the COVID-19 pandemic.

The most important reason for the pandemic to create significant knowledge and anxiety both on the social and health workers is that the infection is contagious, poses an immediate threat, is not visible, and increases its area of influence (Pappas et al., 2009). At the same time, it has been reported that healthcare workers working with patients diagnosed with COVID-19 are at high risk in terms of mental problems such as psychological distress, insomnia, alcohol use, depression, anxiety, burnout, anger, high-stress perception, and they use coping strategies that are not adapted more (Stuijfzand et al., 2020). Based on this, the following hypothesis has been developed:

H2: Knowledge of COVID-19 has a significant impact on work interaction avoidance.

B. METHODS

1. Participants

Data collection was carried out by a hospital-based survey at one public hospital and one private hospital in Ankara. The population consisted of 5.500 healthcare professionals from these hospitals. The random sampling method was used because it is easily accessible. Participants were required to have an internet connection to voluntarily participate in an online questionnaire. A total of 521 healthcare workers took part in the research. Of the full sample, 70.2% were women (n=365) and 29.8% men (n=156). Before conducting the study, we obtained informed consent from the participants. The quantitative research methodology was used because it is suitable for the purpose and main problem of the research. The data set analysis was performed using IBM SPSS Statistic Base 23 V and AMOS statistical software.

2. Research Design and Procedure

The hospital-based cross-sectional study design was used at public hospitals in Ankara. The study was conducted in a public hospital and one private hospital secondary hospital in Ankara, Turkey. The study began on February 15, 2021, during the second peak of the COVID-19 outbreak, and weekly online data were collected from participants during the COVID-19 epidemic in Turkey. This study was a prospective cross-sectional survey conducted online through a structured questionnaire from February 15 to April 15, 2021. Online consent was received from all the participants.

3. Measurements of Variables

We applied the Turkish version of the seven items Likert-type COVID-19 knowledge scale (Ahorsu et al., 2020). The measuring tool has been found to provide high reliability for the study sample (α=0.89). And then, We applied the Turkish version of a seven items Likert-type risk propensity scale (Meertens & Lion, 2008). The measuring tool has been found to provide high reliability for the study sample (α=0.73).

In the first stage, permission was requested from the researchers who developed the original scales for the adaptation process, and their approval was obtained. The scales were translated into Turkish separately by three experts who know both the language of the original scale and the Turkish language very well. In the second stage, the translations made by the authors and the translation group consisting of experts were compared. While comparing, each item was examined whether the translations were appropriate for the intended meaning. The third stage is the provision of the previous step. At this stage, the scales translated into Turkish were given to a group of 3-5 people who are experts in the language of the original scale and independent from the experts in the second stage; these experts were asked to translate the rankings from Turkish back to the original language. Later, the authentic expression of each item was compared one-to-one with the expression resulting from this translation. With the translation in the third stage, it was seen that the original scale was appropriate.

The concept of language equivalence is also named language validity in the literature. For this purpose, the original scale and the draft scale were applied to a group of at least 20 people who know the languages of both scales well. The application process first used the original scale and then the Turkish scale at two-week intervals. After the application, the total scores of each individual in the study group obtained from both the original scale and the Turkish scale were calculated. It was observed that the Pearson correlation coefficient of the relationship between the two applications was significant (p<0.01), and the degree of the coefficient was 0.86, which shows a very high degree of harmony.

4. Data Analysis

The data were evaluated by using IBM SPSS Statistic Base 23 V and AMOS package program version. Descriptive statistics, independent samples t-test, and ANOVA were used. Then, path analyses, using structural equation modeling (SEM) in AMOS, were performed to assess different latent structure models of the impact of healthcare professionals' knowledge of COVID-19 on risk aversion and work interaction avoidance. Examined models were based on the results from previous research on factor

structures of the impact of healthcare professionals' knowledge of COVID-19 on risk aversion and work interaction avoidance. Criteria for determining structural equation modeling analysis model fit and measurement invariance were based on conventional standards (Brown, 2015; Munro, 2005).

C. RESULT

1. Demographic Findings

Table 1 shows that 70.2% of females were the respondents for this study, 59.8% were 30 to 39. Most participants were unmarried (51.5%). Most respondents were nurses (41.1%), and other occupations such as doctors, paramedics, technical staff, medical laboratory assistants, health officers, and patient consultants accounted for 20.2%, 17.2%, 9.5%, 5.2%, 3.7%, and 3.1%, respectively.

There was a statistically significant difference in risk aversion score according to sex (t = -2.659; P < .05). However, there was no significant relationship between the partiparticipant's marital status and the participants' specialty. Therefore, there was a statistically significant difference in social closeness score according to marital status (t = -3.031; P < .05). However, there was no significant relationship among the sex, age of the participants, and the participant's specialty. Moreover, there was no significant relationship with the knowledge of COVID-19 among the sex of the participants, among the age of the participants, the participants' marital status, and the specialty of the participants (Table 1).

Table 1. Socio-Demographic Characteristics of Healthcare Workers (N=521) Regarding Knowledge of COVID-19, Risk Aversion, and Work İnteraction Avoidance

Variables	Frequency (n)	Percentage (%)	Risk Aversion (RA)		Social Closeness (SC)		COVID-19 Knowledge Level (COVID-19KL)	
			t-Test/ ANOVA(t/F)	p	t-Test/ ANOVA(t/F)	p	t-Test/ ANOVA(t/F)	p
Gender								
Male	156	29.8	-2.659[a]	**.008**	-1.435[a]	.152	-1.265[a]	.207
Female	365	70.2						
Age categories								
20-29	2	.3						
30-39	311	59.8						
40-49	167	31.9	.517[b]	.723	2.147[b]	.075	.601[b]	.662
50-59	37	7.1						
>59	6	.9						
Marital Status								
Married	252	48.5	-.620[a]	.536	-3.031[a]	**.003**	.458[a]	.648
Unmarried	268	51.5						
Specialty								
Doctors	105	20.2						
Nurses	215	41.1						
Paramedics	90	17.2						
Medical laboratory assistant	27	5.2	1.057[b]	.388	.715[b]	.638	.869[b]	.518
Patient consultant	16	3.1						
Health officer	19	3.7						
Technical staff	49	9.5						

(a Independent sample t-test, b ANOVA test)

2. Descriptive findings related to factors

Descriptive statistics, averages, standard deviations, reliability coefficients, number of participants, and variance values are given in Table 2. Participants' Risk Aversion (RA) levels are high, Knowledge of COVID-19 (FCOVID-19) levels are above average, and Social closeness (WIA) is below average.

Table 2. Descriptive Statistics Related to Factors

Factors	N	Mean	Standard Deviation	Variance	Cronbach's alpha
Risk Aversion (RA)	521	3.7104	.72261	.522	.73
Social closeness(WIA)	521	2.2849	.72991	.533	.89
Knowledge of COVID-19 (FCOVID-19)	521	2.7187	.90364	.817	.89

As a result of the confirmatory factor analysis, the overall reliability coefficient was Alpha= 0.837. Because $0.80 \leq \alpha < 1.00$, the scale is highly reliable. Ensuring validity and reliability shows a structural relationship between knowledge of COVID-19, risk aversion, and social closeness of the healthcare professionals.

3. The Model Fit Measures

Table 3 shows that different model fit indicators tested the model fit. The 22 questions constitute three latent variables, and two items were removed because of poor communality extraction.

Table 3. Model fit Measures

Measure	Estimate	Threshold	Interpretation
CMIN/DF	2.472	Between 1 and 5	Acceptable range
CFI	.924	≥ 0.90	Within range
GFI	.883	≥ 0.85	Within range
SRMR	.063	≤ 0.08	Within range
RMSEA	.067	≤ 0.10	Within range
RMR	.068	<0.08	Within range
TLI	.911	≥ 0.90	Within range

4. The Results of the Measurement Model

It was assumed that the reasoning between the variables in the research model could be explained. CFA was performed to test the validity of the scales used, and the structure of all scales was verified. Figure 1 shows the confirmatory factor analysis results and model fit for the variables of knowledge of COVID-19, risk aversion, and work interaction avoidance.
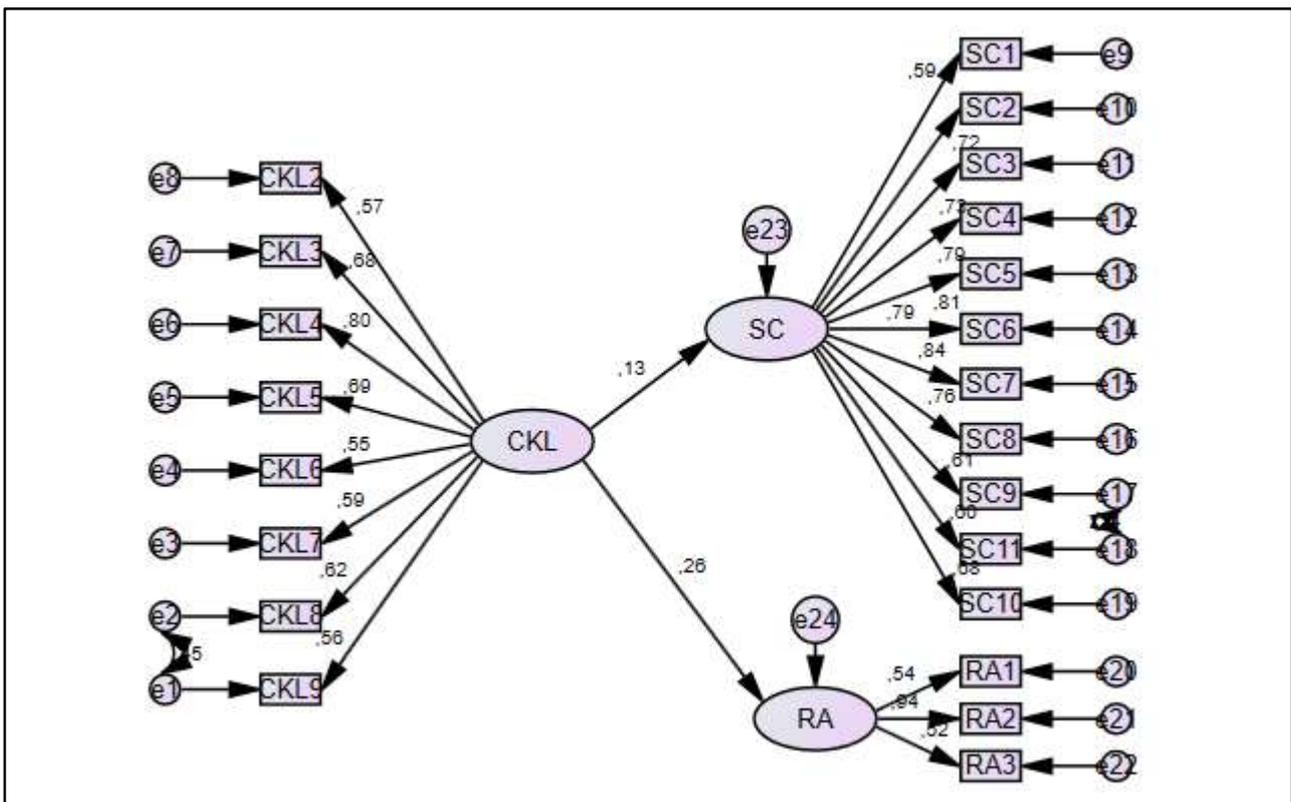

Figure 1. The results of the entire model

Finally, for average variance extracted (AVE) and construct reliability (CR), Fornell and Larcker (1981) stated that although the AVE value is below 0.50, if the CR value is above 0.70, AVE values below 0.50 can be accepted.

Table 4. The Items' Estimate and The Constructs' Cronbach's α, Aves, And CRs

Constructs	Items	Estimate	Cronbach's α	AVE	CR
Risk Aversion (RA)	RA7	.624	.736	.377	.73
	RA2	.674			
	RA3	.904			
	RA5	.372			
	RA1	.290			
COVID-19 Knowledge Level (COVID19KL)	COVIDKL7	.753	.898	.536	.86
	COVIDKL6	.876			
	COVIDKL3	.767			
	COVIDKL4	.715			
	COVIDKL1	.607			
	COVIDKL2	.652			
	COVIDKL5	.725			
Social Closeness (SC)	SC4	.514	.890	.503	.89
	SC7	.732			
	SC3	.597			
	SC1	.648			
	SC5	.725			
	SC6	.884			
	SC2	.635			
	SC8	.858			

Since the CR values are more significant than 0.7, the factors have high construct reliability. The fit values were examined to show that the data fit the model well.

Table 5. Consequences of Hypotheses

Hypothesis	Paths	Estimate	S.E.	C.R.	P	Result
Effect of COVID-19 Knowledge Level on Risk Aversion						
H1	RA <---- COVID19KL	.257	.059	4.345	***	H1 supported
Effect of Knowledge of COVID-19 on Social Closeness						
H2	WIA <--- COVID19KL	.107	.040	2.683	,007	H2 supported

The obtained fit values show that the model fit is achieved. There is a positive impact of healthcare professionals' COVID-19 knowledge levels on social closeness and risk aversion behavior. The increase in the level of COVID-19 knowledge causes an increase in work interaction aversion and risk aversion behaviors. The COVID-19 knowledge level directly impacts social closeness and risk aversion behaviors. It is found that with a direct effect of 'knowledge of COVID-19', there is a significant impact established on risk aversion. Thus, H1 is statistically supported. Therefore, there is a significant impact shown on work interaction avoidance. Thus, H2 is statistically supported (Table 5).

D. DISCUSSION

COVID-19 disease is currently seen as a global public health problem as it can be potentially fatal. Because of their direct contact with patients, healthcare professionals play a critical role in preventing the COVID-19 outbreak through proper care and preventive procedures. Health workers, who are the most important source of both countries and health systems in the fight against the pandemic, have experienced significant psychological pressure all over the World (Liang et al., 2020, Polat & Coşkun, 2020). Frontline healthcare giving treatment and care to COVID-19 patients has shown that providers have greater risks for psychological health problems such as anxiety, depression, insomnia, and stress. Being isolated, working in high-risk positions, new and uncertain processes, and coming into contact with infected people are common causes of psychological problems (Aktura Çevik & Özden, 2020). In pandemic situations, the resilience of healthcare workers can be further compromised by isolation and loss of social support, risks or infections from friends and relatives, as well as drastic, often disturbing changes in the way they work. Healthcare workers are therefore particularly vulnerable to mental health problems such as fear, anxiety, depression, and insomnia (Pappa et al., 2020). In the meta-analysis study by Salari et al. (2020), 29 studies with a sample size of 22,380 were examined. According to the study findings, the prevalence of depression was 24.3%, the prevalence of anxiety was 25%, and the prevalence of stress was 45% in healthcare workers who were in contact with Covid-19. Tengilimoğlu et al. (2021) have found that the situations that cause stress in healthcare professionals during the pandemic process are infecting their families and relatives with Covid-19, being infected, experiencing death in the family, being separated from their families, not being able to meet the social needs of their families, and fear of death. Huang et al. (2020) reported that 23% of the employees experienced clinical anxiety symptoms and 27.4% had post-traumatic stress disorder in their study with 230 physicians and nurses during a pandemic. In the study conducted by Keskin et al. (2021) with 122 physicians during the pandemic, as the anxiety levels of the physicians increased, their depression levels also increased strength and the physicians' hopes decreased. Lai et al.'s (2020) studies with 736 healthcare workers determined that working conditions and social problems were moderately affected by pandemics, but anxiety levels were highly affected. In the study carried out by the Family Physicians Association Scientific Commission (2020) with 1068 healthcare workers, it was determined that the reasons that increase the stress in healthcare professionals are unconscious of the patients, not knowing whether the patient presenting has COVID-19, and lack of personal protective equipment (AHEF, 2020). As the risk of exposure to the disease increases, the fear of being infected by healthcare workers also increases. Fear of infecting their relatives and children, and efforts to balance personal fears with their duties and sacrifices can cause conflict and disharmony for many healthcare professionals (Bekaroglu & Yılmaz, 2020). Risk factors for mental health include overwhelming situations, social disruption of daily life, feeling vulnerable. One of the negative situations experienced by health workers during the pandemic process is that they are at risk of being stigmatized (Shaukat et al., 2020).

It has been reported that being infected by contamination from the hospital environment or externally, or being in the same environment with people diagnosed with COVID-19, increases mental

symptoms for healthcare workers (Kaya, 2020). Furthermore, infection knowledge is higher for healthcare workers than for the general population. On the other hand, this knowledge is experienced as a knowledge that the health professional will infect her family and close relations rather than the knowledge of being exposed to the virus herself. It has been determined that the knowledge and anxiety of healthcare workers in China and Canada who are struggling with SARS of infecting their family members are high (Robertson et al., 2004).

Studies conducted during COVID19 outbreaks showed that the front-line medical profession has high levels of stress that result in depression, knowledge, and post-traumatic stress disorder due to the outbreaks (Chen et al., 2020). In a study supporting the result of our research, it was emphasized that interacting with COVID-19 patients and the level of stress are among the reasons that affect employees' commitment to their jobs and companies. Further, work-related knowledge plays a mediating role between inputs and employees' outcomes (Chen et al., 2016).

Conclusion and Recommendations

While studies are carried out in areas such as virus recognition, vaccine and drug studies, and alternative treatment methods in the COVID-19 pandemic, developed and developing countries are also going through a major test regarding their health system infrastructures. The pandemic has affected everyone physically, mentally, and socially, especially healthcare workers.

The main goal of this paper is to determine the effect of the level of knowledge experienced during the COVID-19 epidemic on risk aversion and social closenessbehaviors. This COVID-19 knowledge level creates a significant threat to the healthcare professionals exposed to COVID-19 patients as part of their role. For this, the study hypothesized 'knowledge of COVID-19' directly impacts risk aversion. Furthermore, 'knowledge of COVID-19' directly impacts work interaction avoidance. And also, by conducting confirmatory factor analysis, the structural equation analysis revealed that the positive impact of healthcare professionals' COVID-19 knowledge levels on social closeness and risk aversion behavior has an acceptable fit index.

The empirical result reveals that the increase in the level of COVID-19 knowledge causes an increase in work interaction aversion and risk aversion behaviors. The COVID-19 knowledge level directly impacts social closeness and risk aversion behaviors. The level of knowledge experienced among healthcare professionals during the COVID-19 epidemic increases their tendency to show risk avoidance and social closenessbehaviors.

Considering the risks and working conditions undertaken by healthcare professionals working at the forefront of pandemics due to the pandemic, healthcare professionals should be morally supported in this process. As seen in the COVID-19 pandemic, the group that needs to be strengthened to effectively combat the epidemic is the active health workers. Therefore, to be prepared for pandemics from now on, it is recommended that hospital management establish supportive systems to strengthen the psychological resistance of healthcare workers. To minimize the risk of contracting diseases by healthcare workers, it is recommended to eliminate the deficiencies of all other materials (medicine, vaccine, ventilator, etc.), especially personal protective equipment, and to create a safe working

environment. By planning the resting needs of healthcare professionals, working and resting environments should be created that will ensure that not only the risk of contamination but also other risk factors that may arise due to insomnia and fatigue are controlled. It is recommended to determine the needs of health personnel in health institutions and to make workforce planning.

Ethics Committee Permission

This research was carried out with the Duzce University Scientific Research and Publication Ethics Committee (Date: 11.02.2021, decision no: 2021/38).

Contribution Rate Statement

The authors contributed equally to the article.

Conflict of Interest Statement

There is no conflict of interest between the authors.

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Kaynakça

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