

Assessment of healthcare professionals' perceptions and attitudes towards the COVID-19 pandemic in Turkey

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Abstract.

BACKGROUND: Determining the healthcare professionals' perceptions and attitudes towards the COVID-19 pandemic will contribute to managing and struggling their efforts against COVID-19.

OBJECTIVE: This study aimed to determine the perceptions and attitudes of healthcare professionals who are at the forefront in the fight against this pandemic.

METHODS: In the study, the survey technique used as the data collection method and 216 participants agreed to participate. The questionnaire consisted of three sections. Reliability analysis and descriptive statistical methods used to analyze the data obtained using the SPSS package program.

RESULTS: According to the study results, 80.4% of the participants perceive the probability of being infected with the COVID-19 to be very high, and 64% of them consider that the conditions are very favorable for them to be infected. More than half of them are afraid of being infected and believe that if they contract COVID-19, adverse effects may continue for a long time. Furthermore, almost all participants (96.20%) consider personal protective equipment beneficial and will protect them from the COVID-19 as a wise preventive measure. However, 82.30% of the participants stated that using personal protective equipment is uncomfortable, and 76.60% said it is challenging to take care of patients while using personal protective equipment.

CONCLUSIONS: The current study results show that healthcare professionals are aware of how serious COVID-19 is, understand the importance of protective equipment in protection from COVID-19, and are seriously afraid of COVID-19. Given that the fears of healthcare professionals may have adverse effects on them, it is recommended that healthcare administrators take measures to comfort healthcare workers and ensure that they maintain their positive attitude towards COVID-19.

Keywords: COVID-19 pandemic, healthcare professionals' challenges, fear of COVID-19, personal protective equipment, stigma and avoidance

1. Introduction

COVID-19 has affected the whole world since the day it emerged. Due to its rapid transmission rate, the World Health Organization declared it a pandemic

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on 11 March 2020 [1]. The COVID-19 pandemic has increased the need for healthcare professionals and healthcare services. Accordingly, the responsibilities of healthcare professionals have increased significantly. Healthcare professionals of all levels and groups are involved in the care of COVID-19 patients [2]. Physicians, nurses, and other healthcare professionals, who play an essential role in preventing the spread of the COVID-19 pandemic, are at risk of contracting the disease because they serve infected patients even if they have adequate protective equipment [3–5]. The problems faced by healthcare workers increase with the quarantine of infected healthcare workers and their inability to perform their profession for a few weeks [6]. The extraordinary density in hospitals due to COVID-19 also increases the workload of healthcare workers [7]. These situations show that healthcare workers face many difficulties in combating the pandemic.

Healthcare professionals who are heavily serving COVID-19 patients must have sufficient knowledge about COVID-19 [8]. However, the insufficient level of knowledge of healthcare professionals about COVID-19 can lead to the formation of false perceptions and attitudes against COVID-19, delay in diagnoses, ineffective control of infection, and the spread of the disease [9–11]. For this reason, it is essential to determine the COVID-19 perceptions and attitudes of healthcare professionals who reveal their lives while performing their duties. In addition, understanding healthcare professionals' knowledge and attitudes towards COVID-19 also help predict COVID-19 consequences [12, 13]. Therefore, determining the perceptions and attitudes of healthcare professionals about COVID-19 will contribute to managing the COVID-19 pandemic. From this idea, this study aimed to determine the perceptions and attitudes of healthcare professionals who are at the forefront of the fight against the COVID-19 pandemic. The research question developed in line with the aim of the study is as follows:

How are healthcare professionals' perceptions and attitudes towards the COVID-19 pandemic shaped?

2. Methods

The study sample included 815 physicians, 990 nurses, and 600 other healthcare professionals affiliated with Sakarya Provincial Health Directorate and work in Sakarya Training and Research Hospital, one of the two pandemic hospitals in Sakarya. As only

one campus of the hospital designated as a pandemic hospital, the study conducted on only this campus. This campus has 523 employees (153 physicians, 220 nurses, 150 other healthcare professionals). Therefore, we aimed to reach the whole sampling, and 216 (32 physicians, 61 nurses, 123 other healthcare professionals) participants filled out the questionnaire statements. In this study, a survey technique used as the data collection method. The questionnaire consisted of three sections:

1. In this part, there were eight questions to determine the employees' demographic information and opinions, including age, gender, educational status, number of children, type of profession, professional experience, number of COVID-19-positive healthcare professionals in their units, and whether the measures taken against the COVID-19 are sufficient.
2. Health Belief Model Scale. Champion [14] developed this scale, which was initially composed of 5 dimensions and 39 expressions and measured individuals' health beliefs related to lung cancer. Then, it was used by Bova [15] to measure health beliefs related to tuberculosis. In this study, the scale adapted from that used by Bova [15]. However, the motivation dimension, which is the last dimension of the scale, was not utilized because it measures long-term attitudes. In this study, the susceptibility (6 expressions), seriousness (12 expressions), benefit (5 expressions), and barriers (8 expressions) dimensions used. The susceptibility dimension measured the healthcare professionals' susceptibility to COVID-19. The seriousness dimension measured the perceived seriousness of the healthcare professionals regarding the COVID-19 issue and the associated anxiety and fear they experience. The benefit dimension measured the perceived benefits of the healthcare professionals about the use of personal protective equipment. Finally, the dimension of the barrier used to identify the barriers that impeded healthcare professionals' use of personal protective equipment. Studies have reported that the scale can be used in different situations. In this case, the scale used to measure healthcare professionals' perceptions regarding the COVID-19. The scale was designed with a 5-point Likert structure and scored as follows: 1, strongly disagree, and 5, strongly agree.

3. Perception of stigma and interpersonal scale. Maunder et al. [16] developed the scale, which consisted of 4 expressions and measured the health professionals' perceptions of stigma and individual isolation regarding their profession. The scale was designed with a 5-point Likert structure and scored as follows: 1, strongly disagree, and 5, strongly agree.

The data of the study were collected using the online survey method. An online questionnaire link was sent to the participants by the hospital administration. The volunteers of the participants completed the questionnaire. Before the study, approvals of the Ethics Committee of Sakarya University, Commission for Scientific Research from the Ministry of Health of Turkey, and Sakarya Provincial Health Directorate were obtained.

Reliability analysis and descriptive statistical methods were used to analyze the data obtained with SPSS package program version 22.0.

3. Results

The participants of this study included 170 women and 46 men. Most of them were undergraduate (32.4%), or associate (35.6%) graduates. A total of 139 participants have children. There were 32 doctors, 61 nurses, and 123 other healthcare professionals (laboratory staff, radiology technician, medical secretary, etc.). There are COVID-19 positive healthcare workers in the unit where 100 of the participants' work. One hundred thirty-six of the participants think that enough measures have been taken across the country for COVID-19. The ages of the participants varied between 21 and 57 years, with an average of $34.29 (\pm 7.00)$ years. The participants' professional experience varied between 1 and 31 years, with an average of $10.06 (\pm 6.56)$ years.

In this study, the reliability analysis findings of the scales are shown in Table 1. The reliability values of the scales varied between 0.60 and 0.91. Accordingly, the reliability value of the stigma and avoidance dimension was at an acceptable level. Moreover, the reliability of the susceptibility and barriers dimensions were well, whereas those of the seriousness and benefit dimensions were high.

As shown in Table 2, the average responses are provided for the scales. According to these results, it can be noted that the participants' susceptibility to the COVID-19 (3.57 ± 0.81) and their perceived stigma

Table 1
Cronbach's alpha values

	Cronbach's alpha	Number of items
Susceptibility	0.81	6
Seriousness	0.91	12
Benefit	0.85	5
Barriers	0.80	8
Stigma and avoidance	0.63	4

Table 2
Mean and standard deviation

	Mean	Standard deviation
Susceptibility	3.57	0.81
Seriousness	2.78	0.85
Benefit	4.25	0.63
Barriers	3.21	0.78
Stigma and avoidance	3.46	0.68

and avoidance (3.46 ± 0.68) are above the middle level, and the benefit perceptions are at a high level (4.25 ± 0.63).

Table 3 shows the frequencies and percentages of the participant's responses to the scale expressions. According to the results, the rate of participants participating in the option "I have a high risk of infection with the COVID-19" is 80.4%. On the other hand, the participation rate of the participants to the statement "The conditions are very favourable for me to be infected with the COVID-19" is 64%. Furthermore, the rate of the participants agreeing to the statement "I consider that I am favourably infected with the COVID-19 in the coming days" is 48.8%. These findings show that healthcare workers think they are at serious risk of contracting COVID-19 and are therefore worried.

When examined the answers given by the participants to the questions about the seriousness of COVID-19, 51.9% of the participants agreed with the statement "The mind of being affected by COVID-19 frightens me"; 58.9% participated in the statement "My social relationships can be compromised if I will be infected with the COVID-19" and 55.1% confirmed the statement "If I will be infected with the COVID-19, its negative effects may take a long time". These results show that employees are afraid of getting COVID-19 and believe it will affect them negatively.

Participants generally showed a high level of participation in the questions posed to them about the benefits of using protective equipment. As seen in Table 3, almost all participants (96.20%) agreed with the statement, "It is a wise precaution to use personal

Table 3
Frequencies of the answers provided by the participants

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Susceptibility						
I have a high risk of infection with the coronavirus	n	0	15	16	61	66
	%	0.0	9.5	10.1	38.6	41.8
The status of my physical health increases the risk of infection with the coronavirus	n	12	55	36	35	20
	%	7.6	34.8	22.8	22.2	12.7
I consider that I am likely to be infected with the coronavirus in the coming days	n	2	23	56	49	28
	%	1.3	14.6	35.4	31.0	17.7
The conditions are very favorable for me to be infected with the coronavirus	n	2	21	34	63	38
	%	1.3	13.3	21.5	39.9	24.1
I am very worried about being infected with the coronavirus	n	11	42	28	46	31
	%	7.0	26.6	17.7	29.1	19.6
I consider that I will be infected with the coronavirus in the coming days	n	5	32	63	36	22
	%	3.2	20.3	39.9	22.8	13.9
Seriousness						
The mind of being affected by coronavirus frightens me	n	9	32	35	52	30
	%	5.7	20.3	22.2	32.9	19.0
I feel bad when I think about the coronavirus	n	25	74	15	31	13
	%	15.8	46.8	9.5	19.6	8.2
My career could be compromised if I will be infected with the coronavirus	n	32	85	26	8	7
	%	20.3	53.8	16.5	5.1	4.4
My heart rate increases when I think of the coronavirus	n	32	77	12	25	12
	%	20.3	48.7	7.6	15.8	7.6
My social relationships can be compromised if I will be infected with the coronavirus	n	22	30	13	55	38
	%	13.9	19.0	8.2	34.8	24.1
Coronavirus is an urgent disease	n	35	70	37	7	9
	%	22.2	44.3	23.4	4.4	5.7
If I will be infected with the coronavirus, my thoughts about myself will change	n	33	71	33	15	6
	%	20.9	44.9	20.9	9.5	3.8
I am even afraid to think of the coronavirus	n	33	73	23	23	6
	%	20.9	46.2	14.6	14.6	3.8
My economic situation may worsen if I will be infected with the coronavirus	n	30	50	26	30	22
	%	19.0	31.6	16.5	19.0	13.9
If I will be infected with the coronavirus, its negative effects may take a long time	n	7	28	36	55	32
	%	4.4	17.7	22.8	34.8	20.3
Being infected with the coronavirus is worse than other diseases	n	17	56	39	27	19
	%	10.8	35.4	24.7	17.1	12.0
My life can change if I will be infected with the coronavirus	n	22	54	41	26	15
	%	13.9	34.2	25.9	16.5	9.5

(Continued)

Table 3
(Continued)

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Benefit						
The use of personal protective equipment prevents problems that I may encounter	n	7	4	25	94	28
	%	4.4	2.5	15.8	59.5	17.7
The use of personal protective equipment can greatly save me	n	5	3	12	98	40
	%	3.2	1.9	7.6	62.0	25.3
The use of personal protective equipment reduces the risk of infection with the coronavirus	n	3	2	9	91	53
	%	1.9	1.3	5.7	57.6	33.5
When treating patients infected with the coronavirus, I should use personal protective equipment	n	3	2	2	46	105
	%	1.9	1.3	1.3	29.1	66.5
It is a wise precaution to use personal protective equipment when treating patients infected with the coronavirus	n	3	0	3	47	105
	%	1.9	0.0	1.9	29.7	66.5
Barriers						
It is difficult to take care of patients while using personal protective equipment	n	3	16	18	55	66
	%	1.9	10.1	11.4	34.8	41.8
Using personal protective equipment is uncomfortable	n	3	12	13	72	58
	%	1.9	7.6	8.2	45.6	36.7
The use of personal protective equipment makes it difficult to perform my professional ability	n	10	45	36	41	26
	%	6.3	28.5	22.8	25.9	16.5
The drawbacks of using personal protective equipment may be more than its benefits	n	34	88	26	9	1
	%	21.5	55.7	16.5	5.7	0.6
My coworkers make fun of me while using personal protective equipment	n	77	65	7	6	3
	%	48.7	41.1	4.4	3.8	1.9
The use of personal protective equipment affects my relationships with patients	n	34	59	25	33	7
	%	21.5	37.3	15.8	20.9	4.4
Wearing protective devices would require starting a new habit, which is difficult	n	12	37	27	58	24
	%	7.6	23.4	17.1	36.7	15.2
The use of personal protective equipment causes more problems than the protection it offers	n	36	85	27	8	2
	%	22.8	53.8	17.1	5.1	1.3
Stigma and avoidance						
I think that people are avoiding me because of my job	n	17	32	46	47	16
	%	10.8	20.3	29.1	29.7	10.1
I think that people are avoiding my family because of my job	n	21	62	36	29	10
	%	13.3	39.2	22.8	18.4	6.3
I take precaution by avoiding crowded places because of the coronavirus	n	2	1	5	74	76
	%	1.3	0.6	3.2	46.8	48.1
I take precaution by distancing myself from my coworkers because of the coronavirus	n	2	21	29	81	25
	%	1.3	13.3	18.4	51.3	15.8

protective equipment when treating patients infected with the COVID-19". In addition, the participants highly agreed with the statements "When treating patients infected with the COVID-19, I should use personal protective equipment" with 95.60% and "The use of personal protective equipment reduces the risk of infection with the COVID-19" with 91.10%. These results show that the participants are aware of the importance and benefits of using protective equipment.

When examining the answers given by the participants to the questions about the negative aspects of the use of protective equipment, 82.30% of the participants stated, "Using personal protective equipment is uncomfortable"; 76.60% said "It is difficult to take care of patients while using personal protective equipment" and 51.90% said "Wearing protective devices would require starting a new habit, which is difficult". These results show that protective equipment makes working conditions and service provision difficult for healthcare workers.

When examined the answers given by the participants to the questions about the stigmatization and isolation of healthcare workers, 94.90% of the participants agreed with the statement "I take precaution by avoiding crowded places because of the COVID-19". 67.10% of the participants agreed with the statement "I take precaution by distancing myself from my coworkers because of the COVID-19". Accordingly, the participants are moving away from crowded environments and their colleagues within the scope of measures for COVID-19.

4. Discussion

During the pandemic process, intensive work, communicating with infected patients, and intensive personal protective equipment have affected healthcare professionals mentally. Therefore, this study aimed to determine healthcare professionals' perceptions, experiences, and attitudes regarding the COVID-19.

According to the study's findings, healthcare professionals believe that the COVID-19 is not an urgent disease. However, they are afraid of being infected with the COVID-19. Moreover, they consider that possible infection with the COVID-19 will adversely affect their social relationships and economic situations, and its adverse effects will continue for a long time. The high COVID-19 infection rate and the high risk of death cause people to be afraid of

being infected with COVID-19 [18], which gradually increases [19]. As an explanation, health professionals who had direct contact with infected individuals likely experience this fear. In addition, incomplete or incorrect information about COVID-19 pandemics increases the anxiety levels of healthcare professionals [20].

Healthcare professionals' feelings of being excluded and stigmatized are the harmful effects of the COVID-19 pandemic. According to the study results, it is a significant index that health professionals think that people are trying to avoid them. The fear experienced by society in such periods of infectious disease can cause stigmatization [21]. According to the Centers for Disease Control and Prevention [22], stigma is the tendency of individuals to blame a disease or some groups for fear of death and threaten the stigmatized groups' emotional, mental, and physical health. Especially, healthcare professionals are recognized as the high-risk group in terms of stigma, as they directly handle infected individuals. The idea that healthcare professionals who are in direct contact with COVID-19-positive patients will also fall ill with the disease and spread the virus to others may cause society to avoid them.

In this study, another significant result shows that healthcare professionals consider that they will be infected with the COVID-19 and conditions are very favourable for them to fall ill with the disease. According to Wang et al. [23], healthcare professionals are at an increased risk of being infected due to prolonged exposure to many infected patients and increased workload. Additionally, the lack of personal protective equipment poses a significant risk for healthcare professionals [20]. Under these situations, it is a normal consequence that health professionals who are in contact with infected patients believe that they may also be infected.

A study concluded that the most significant factor in protecting healthcare professionals from COVID-19 is the usage of personal protective equipment [17]. According to the study results, the opinions of health professionals about the benefits of using personal protective equipment support this argument. They consider that the use of personal protective equipment is a well-advised measure, reduces possible risks, and can save them from the disease. This result shows that healthcare professionals have a positive attitude toward using personal protective equipment. Wu et al. [24] also advise healthcare professionals to approach patients diagnosed with or suspected of COVID-19 with personal protec-

tive equipment. Healthcare professionals can only be protected from possible risks with the precautions to be taken. In this regard, the present study shows that healthcare professionals consider that getting used to personal protective equipment is complex, service with personal protective equipment is complicated and personal protective equipment are restricting their professional skills. However, they consider that personal protective equipment does not affect the patient–healthcare professionals' relationship and personal protective equipment are beneficial for their protection.

5. Conclusion

The pandemic process causes two significant pressures on healthcare professionals [17]: (1) the overwhelmingly increased workload and (2) the risk of becoming infected. The current study demonstrated that healthcare workers who constantly contact infected patients and use intensive protective equipment could mentally affect healthcare professionals during the pandemic process.

The study results showed that healthcare professionals have positive thoughts about personal protective equipment and attitudes toward personal protective equipment because of its associated benefit personal protective equipment. The present study also found that healthcare professionals have a negative perception of COVID-19, but they have a positive attitude and behaviour about COVID-19 protection. Moreover, it is observed that healthcare professionals experience fear and anxiety about being infected with the COVID-19. From the literature, fear and anxiety experienced in pandemic processes negatively affect health and well-being [21, 25]. As considered these findings, mental health support of healthcare professionals is vital for both well-being and health services.

Additionally, it is necessary to focus on the health professionals who feel excluded from society. The adverse effects of such stigmatization on professionals will affect not only them but also public health. Therefore, it is highly significant to investigate whether society has a negative opinion toward healthcare professionals and take measures against a possible negative attitude in terms of healthcare professionals' psychological well-being. Raising the awareness of society in this regard is another essential step that should be taken. A recent study conducted during the COVID-19 pandemic has supposed that

the social support perceived by professionals reduces their anxiety levels [26]. Based on other studies, another significant issue in the COVID-19 pandemic process is the usage of personal protective equipment. The current study results reveal that healthcare professionals have a positive attitude toward the usage of personal protective equipment. Therefore, rewarding and supporting of usage of personal protective equipment is essential for the continuation of this behaviour.

6. Limitation

Conducting the study using the online survey technique under COVID-19 pandemic conditions constitutes a significant limitation. Although the online survey technique offers some advantages, it has some risks. The most important of these risks is that it limits the researcher to help when they do not understand the questions or have something on their minds. Another limitation of the study is that the study was conducted only in a pandemic hospital. The fact that other pandemic hospitals in the province did not participate in the study because researchers could not obtain permission due to pandemic conditions restricts the generalizability of the study.

Conflict of interest

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