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Attitudes of Healthcare Workers Towards COVID-19 and Affecting Factors

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Abstract **Research Article**

The COVID-19 outbreak, which was first reported in December 2019, has affected the whole world. The first case in Turkey was confirmed on March11, 2020. Healthcare workers fight at the frontline against this virus with intense infectivity and are the occupational group under the highest risk. 7.428 health workers were infected in Turkey in late April 2020. Anxiety levels of healthcare workers have increased due to this high risk exposure. The aim of this study is to examine the attitudes of healthcare workers towards COVID-19 and the affecting factors. The study is cross-sectional. The study population consists of the healthcare workers working in the province of Samsun (N = 11926). The sample size of the study was determined as 370 people within the 5% margin of error and 95% confidence interval. The study data were collected between April 1, 2020 and April 30, 2020. Questionnaires were used as a data collection tool in the study. The questionnaire consists of two parts. The first part includes descriptive questions to determine individual characteristics. The second part is the covid attitude survey created by reviewing the literature. Descriptive statistics, Student's t test and One-Way Anova were used to evaluate the data. The age distribution of the participants is 34.81 ± 8.54. In the study, it was determined that gender, marital status, title, working year, having children or not, chronic disease status, and health and life satisfaction were the factors affecting the attitude towards Covid-19 ($p < 0.05$). It was ascertained that the COVID-19 attitudes of women, those who were still married, midwives, those who had been working for 11-20 years, those with children, those with chronic diseases, and those with a poor health perception and life quality were more negative compared to others. COVID-19 causes especially healthcare workers to become concerned both for themselves and their relatives since it is an unrecognized infection and easily transmitted. It might be important to follow different strategies particularly for healthcare workers who are married, have children and have health problems.

INTRODUCTION

An unidentified case of pneumonia was reported in Wuhan city, the People's Republic of China towards the end of December 2019. Its clinical features were emphasized to be very similar to viral pneumonia. Following the analysis on respiratory samples, experts from Chinese Center for Disease Control and Prevention explained that the pneumonia- later known as new coronavirus pneumonia - was caused by the new coronavirus [1]. The World Health Organization named officially the disease as COVID-19. Determining an official name for the new coronavirus and the disease it causes is a suitable approach in terms of using a common language in clinical and scientific studies [2].

In the first quarter of 2020, the World Health Organization declared it as a global pandemic on March 11, 2020, when many countries started taking emergency measures due to Covid-19. As of April 2020, people living in 180 countries and regions were affected by the virus of Covid-19 [3,4]. Symptoms of COVID-19 include fever, dry cough, fatigue, myalgia, and dyspnea [5,6], and mortality rates fluctuate from country to country. While the mortality rates at the beginning of the pandemic were about 15%[7], this rate was later found to be between 4.3% and 11% [5,8]. Given the Covid-19 outbreak, it was detected that the infection became widespread among healthcare workers after the first 15 cases reported in Wuhan. It was estimated that a total of 1.716 Chinese health workers were infected until February 11, 2020 [9].

According to the statements of the Ministry of Health, 7.428 healthcare workers were infected in our country from March 11, 2020, when the first case was seen, to April 29, 2020[10]. With the purpose of the Ministry of Health to prevent more healthcare workers being infected, a guideline was published by the General Directorate of Public Health[11]. As a result, the COVID-19 infection poses an occupational risk for healthcare workers. Therefore, that health institutions act in line with the guideline reduces the risk of transmission for

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healthcare workers[9]. Some practices have been implemented in our country to positively support healthcare workers' attitudes in their struggle against COVID-19. Some of those are as follows: Healthcare workers with chronic diseases, who would be most affected by the COVID-19 outbreak, have not been employed indefinitely and thus, their contact with the patient has been prevented. In order to overcome their fear of transmitting coronavirus to their relatives, healthcare workers have been provided to accommodate for free in public guesthouses through the presidential decree. The Ministry of Health led the public from televisions to applaud healthcare workers on the balconies every evening at 21.00 from the beginning of the pandemic to support healthcare workers psychologically.

COVID-19 causes especially healthcare workers to worry both for themselves and their relatives since it is an unrecognized infection and easily transmitted, which is inevitable to affect the health service quality negatively. It is therefore important to identify possible factors related to people's attitudes towards COVID-19. In this study, it is aimed to reveal the attitudes of healthcare workers towards Covid-19 and the factors affecting these attitudes.

MATERIALS and METHODS

Ethical implementations

Ethical committee permission for the study was granted by Alanya Alaaddin Keykubat University Local Ethics Committee. In addition, legal permission was obtained from the hospitals to conduct the research. Informed consent was obtained from the individuals who participated in the study.

Study population

The study population consists of healthcare professionals working in Samsun (N = 11926). The sample size of the study was determined as 370 people within the 5% margin of error and 95% confidence interval. The study data were collected between April 1, 2020 and April 30, 2020. The number of completed questionnaires was 406.

Data collection

The data were collected by the researchers between April 2020 and May 2020. Data meeting with face-to-face survey technique. The survey took about twenty minutes to complete.

Data collection tool

Questionnaires were used as a data collection tool. The questionnaire form consists of two parts. The first part includes descriptive questions to determine individual characteristics. The second part is the covid attitude survey created by reviewing the literature12,13,14. In the Corona Virus Attitude Survey, the level of agreement of the participants with the statements is Likert-type as (1) Strongly Disagree, (2) Disagree, (3) Slightly Agree, (4) Agree, and (5) Strongly Agree. While scoring, a total score was obtained based on the point given for each item. Scoring higher than the total score indicates a negative attitude towards COVID-19.

Item selection

A review of the literature about COVID 19 was conducted via systematic search in libraries and databases BIREME, PubMed, OVIDWeb, Scopus, Web of Science and SciELO with the following strategy: ("methodological studies" OR "validation studies" AND "COVID 19"). Published in the last 5 years in the English language were included. Then, through application of Delphi method to refine an initial list of items, an expert panel comprised five public health professional and one biostatistician suggested the items and domains from which to build the construct of COVİD 19 on the literature review and their personal experience.

Data analysis

The data collected between April 01, 2020 and April 30, 2020 were analyzed through the SPSS 25 package program. Descriptive statistics, Student's t test and One-Way Anova were used to evaluate the data

RESULTS

54.7% of the participants are men, 69.7% are married and 30.5% are healthcare officers / technicians. The age distribution is 34.81 ± 8.54 (20-62). Working year of 51.5% of the participants is ten years or less (Table 1).

Table 2 shows the distribution of the healthcare workers' health status. Accordingly, 4.2% of the participants had the COVID-19 infection, 21.9% have chronic disease, 69% do not smoke and 86.5% live at non-smoking homes. In addition, the participants' age of starting smoking is 19 ± 3.78 and they smoke an average of 12±7.7 cigarettes per day. Health perceptions of 89.2% are defined as good / very good (Table 2).

Table 1: Descriptive characteristics of the participants

Characteristics		n	%
Gender	Female	184	45.3
	Male	222	54.7
Marital Status	Married	283	69.7
	Single	123	30.3
Profession	Doctor	120	29.6
	Dentist	16	3.9
	Nurse	118	29.1
	Midwife	28	6.9
	Health Officer/Technician	124	30.5
Age	20-30	152	37.4
	31-40	154	37.9
	41-50	78	19.2
	51 and more	22	5.5
Working Year	1-10	209	51.5
	11-20	123	30.3
	21-30	64	15.8
	31 and more	10	2.4
Working history in the current hospital?	1-10	325	81.0
	11-20	60	14.8
	21 and more	21	5.2
Do you have any children?	Yes	250	61.6
	No	156	38.4
TOTAL		406	100.0

Table 2: Health status of the healthcare workers

Characteristics		n	%
Is there any relatives who have/had Covid-19?	Yes	17	4.2
	No	389	95.8
	Yes	0,00	0.00
Have you had Covid-19 infection?	No	406	100.0
Do you have any chronic diseases?	Yes	89	21.9
	No	317	78.1
How many chronic diseases do you have?	1	69	72.6
	2 and more	26	27.4
Type of Chronic Disease	Cardiovascular	27	28.4
	Metabolic diseases	29	30.5
	Respiratory diseases	13	13.6
	Neurological diseases	6	6.6
	Psychiatric diseases	7	7.3
	Gastrointestinal diseases	13	13.6
	No	280	69.0
	Yes, regularly	71	17.5
Do you smoke?	Yes, sometimes	22	5.4
	Quit	33	8.1
	Yes	33	8,1
	No	351	86.5
Does anybody smoke at your home?	Yes (sometimes)	22	5.4
	Good/Very Good	362	89.2
Health perception	Average/Poor	44	10.2
	Good/Very Good	338	83.3
Life quality perception	Average/Poor	68	16.7
	Good/Very Good	349	86.0
Perception of life satisfaction in general	Average/Poor	57	14.0
TOTAL		406	100

Table 3 shows the distribution of participants' Covid-19 attitudes. Accordingly, the highest percentage of the respondents belongs to the statement of "It is frightening for me that Covid-19 infects me or my relatives" with the rate of 51.2%, and it is followed by "I think I'm at risk because of Covid-19" with 47.8%, and "I think my family members are at risk because of Covid-19" with 44.3%; on the other hand, the lowest percentage is obtained as 2% for the statement of "I think of quitting my job due to the fear of Covid-19." (Table 3).

When Table 4 is analyzed, the variables of gender, marital status, title, working year, having children or not, chronic disease status and health and life satisfaction are the factors affecting the attitude towards Covid-19 ($p<0.05$). The COVID-19 attitudes of women, the married, midwives, those with 11-20-year working history, those who have children, those with chronic diseases and those with poor health perception and life quality are more negative compared to others (Table 4).

Table 3: Distribution of participants' attitudes towards COVID-19

STATEMENTS/PERCENTAGE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	%	%	%	%	%
1- I wonder a lot about Covid-19.	4.2	15	13.5	48	19,2
2- I am scared of the effects of the Covid-19 virus.	3.7	8.8	11.8	50.7	24.9
3- It is frightening for me that Covid-19 infects me or my relatives.	0.2	3.9	3.7	40.9	51.2
4- I think of quitting my job due to the fear of Covid-19.	54.2	32.3	10.3	1.2	2.0
5- Because of Covid-19, I panic whenever a new patient arrives.	16.7	28.1	18	26.4	10.8
6- I have started not enjoying life because of Covid-19.	7.9	24.6	18	33	16.5
7- I always feel nervous because of Covid-19.	5.4	26.1	21.7	32.8	14
8- I feel dizzy when I read the news about Covid-19.	17.7	38.9	15.5	20	7.9
9- I am having sleeping problem because of overthinking Covid-19.	23.6	36.9	14.5	16	8.9
10- I think I'm at risk because of Covid-19.	1	3.7	2.2	45.3	47.8
11- I think my family members are at risk because of Covid-19	0.5	3.0	4.2	48	44.3
12- I am concerned about the possibility of serious complications / death due to Covid-19.	4.2	19.2	18.5	41.4	16.7
13- It discomforts me to think about Covid-19.	4.2	13.5	11.3	47.8	23.2
14- I am terrified of Covid-19 infection.	3.7	17.7	17.7	41.9	19.0
15- My hands are sweating when I think of Covid-19.	30.3	47.5	11.6	7.6	3.0
16- I am afraid of passing away due to Covid-19.	11.1	23.9	19.0	34.7	11.3
17- I get nervous or anxious while watching news and stories about Covid-19 on social media.	7.1	23.9	17.7	41.1	10.1
18- Covid-19 is an unpredictable disease.	6.7	17.2	21.7	39.2	15.3
19- I would not want to work with Covid-19 patients.	11.8	20.4	17.7	30.0	20.0

Table 4: Comparison of COVID-19 Statements in accordance with descriptive variables

Variables	n	X	SS	p
Gender				
Female	184	3.37	0.65	0.007*
Male	222	3.18	0.70	
Marital Status				
Married	283	3.33	0.70	0.037*
Single	123	3.17	0.61	
Title				
Doctor	120	3.09	0.66	0.002**
Dentist	16	3.11	0.45	
Nurse	118	3.41	0.63	
Midwife	28	3.46	0.58	
Health officer/technician	124	3.32	0.74	
Working year				0,019**
1-10	209	3.22	0.64	
11-20	123	3.44	0.67	
21-30	64	3.18	0.77	
31 and more	10	3.28	0.53	
Do you have any children?				
Yes	250	3.35	0.68	0.010*
No	116	3.17	0.66	
Do you have any chronic diseases?				
Yes	89	3.42	0.65	0.025*
No	317	3.24	0.68	
How satisfied are you with your health?				
Poor/Average	171	3.48	0.63	0.000*
Good/Very Good	235	3.14	0.67	
How satisfied are you with your life?				
Poor/Average	208	3.44	0.66	0.000*
Good/Very Good	198	3.12	0.66	

*Student's t Test, **One way ANOWA

DISCUSSION

It was attempted within this study to put forward the attitudes of healthcare workers towards the COVID-19 pandemic which had started to be seen in Turkey in March 2020. The results of the study indicate that the attitudes of healthcare workers towards the pandemic are affected by some demographic characteristics.

In the study, women were determined to have higher attitudes towards the COVID-19 pandemic. Similarly, the same result was also obtained in the study conducted by Ekiz et al. (2020)15. Furthermore, a parallel conclusion was reached in the study conducted by Leung et al. (2005)16 for the SARS outbreak in Hong Kong. Unlike these findings, there was no significant difference observed in anxiety and depression levels regarding the COVID-19 pandemic by the gender variable according to the study conducted by Zhang et al. (2020)17 with healthcare professionals. It is possible that working in the health sector, in which the risk level is very high, during the pandemic has increased the significant difference between genders.

In the study, it was found that the COVID-19 attitudes were not affected by the age variable. Similarly, the study conducted by Aharsu et al. (2020)13 suggested no significant difference between the age variable and the COVID-19 fear scale. On the other hand, the study by Ekiz et al. (2020)15 concluded that the COVID-19 anxiety was affected by the age variable.

Another finding of the study is that chronic disease status affects the COVID-19 attitude. This result can be an indicator of that the COVID-19 virus affects individuals who have more chronic diseases and the mortality rate is high in these individuals 11. In addition, it has been determined that the health and life satisfaction affects the COVID-19 attitude. The attitudes of healthcare workers, whose quality of life and health perception are not good, tend to be more negative than others. This might suggest that healthcare professionals with health concerns are more worried about catching and coping with COVID-19 compared to others. This finding is in line with the conclusion that the study group was anxious at the first stage of the COVID-19 outbreak in China within the study conducted by Wang et al. (2020)17. When the literature is analyzed, it is seen that anxiety levels of individuals differ from country to country during an epidemic. In the study, in which the psycho-social evaluation of the equine influenza outbreak was performed by Taylor et al. (2008)18, it was found that individuals' anxiety level was high; and the study of Zhang et al. (2020)17 conducted on health workers revealed that the level of anxiety of health workers who had contact with infected patients was higher than those who did not. In the study conducted by Kwok et al. (2020)20, they stated that almost the entire study group was worried about COVID-19 and their daily routines were impaired.

When the results of the COVID-19 attitude questionnaire are evaluated, the highest average score of the study group is seen to be the fear of transmitting the infection to their relatives. In our country, the Ministry of Health has allocated guesthouses and hotels to healthcare workers in order to enable them to overcome this fear 21. In this process, healthcare workers have preferred to stay away from their families because of this fear. Many private institutions have opened their hotels to healthcare workers free of charge to support them. This situation can be said to cause the level of fear of health workers to decrease. The lowest mean score in the findings was found to be the statement of “I want to quit my profession due to the pandemic". Likewise, parallel results were obtained in the study conducted by Huynh et al. [22].

CONCLUSION

COVID-19 causes especially healthcare workers to become concerned both for themselves and their relatives since it is an unrecognized infection and easily transmitted. It might be important to follow different strategies particularly for healthcare workers who are married, have children and have health problems.

Conflict of interest

The authors declare that they have no conflict of interest.

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