



ORIGINAL ARTICLE

Qualitative examination of the attitudes of healthcare workers in Turkey regarding COVID-19 vaccines

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Abstract

Purpose: The attitudes of healthcare workers toward COVID-19 vaccines ensure that health services are able to run without interruption and potentially have a role in the messaging about vaccination that they convey to the public. Hence, healthcare workers' attitudes ultimately have a significant role in controlling the pandemic. This study aimed to qualitatively investigate the attitudes of healthcare workers in Turkey in relation to COVID-19 vaccines.

Methods: The study used the phenomenological approach. The sample consisted of 36 healthcare workers who were employed during the COVID-19 pandemic. Data were collected online using focus group interviews. A total of four focus group interviews were conducted.

Findings: Following analysis of the data, the attitudes of healthcare workers in Turkey toward the COVID-19 vaccine were divided into three themes: “influencing factors,” “priority group” and “trust.”

Conclusions: Vaccination was found to create negative emotions among some of the healthcare workers. Their opinions about the COVID-19 vaccines were affected by the negative emotions and burnout they experienced during the pandemic. In addition, they saw the vaccination process as impacted by contraindications and uncertainty about the duration of the protection, the balance of the benefits and harm of the vaccines, and by vaccine myths and prejudices about the country where the vaccine was developed. Healthcare professionals expressed the need for trust to be established in the whole vaccination process. They suggested that different vaccine options should be offered, that the appointment and process notification system for vaccination should be improved, that evidence-based information about vaccines should be provided and that a safe environment should be created.

Practice Implications: Vaccine hesitancy can be addressed by careful attention to the application of vaccination programs, correct and effective use of social media, transparent, and precise management of political processes, and the provision of evidence-based information about the vaccines.

KEYWORDS

Coronavirus, healthcare workers, pandemics, Turkey, qualitative research, vaccination

INTRODUCTION

The COVID-19 pandemic has created many problems in the economic, health and social arenas (Calderon-Anyosa & Kaufman, 2021; Hossain, 2021; Mehraeen et al., 2020a, 2020b, 2021; Seyed Ali-naghi et al., 2020). Vaccinations are currently the most effective approach available to overcome the adverse consequences of the pandemic (Murphy et al., 2021). Nevertheless, vaccine hesitancy, a behavior that delays acceptance or rejects the vaccine, is increasingly regarded as a global health threat by the World Health Organization (WHO, 2019).

Vaccination to protect the health and ensure the safety of healthcare workers who are playing the leading role in fighting the COVID-19 pandemic is vitally important not only for the continuous and safe execution of healthcare services but also for controlling the pandemic (Chang et al., 2020; Dooling et al., 2021; Kwok et al., 2021). Due to factors such as constant exposure to patients and infection, lack of personal protective equipment, and insufficient infection control training, healthcare workers are at greater risk than any other group (Huang et al., 2020; Lai et al., 2020). Healthcare workers are three times more likely to contract the disease than members of the wider community (Nguyen et al., 2020). They are also at high risk for transmitting the disease (Gómez-Ochoa et al., 2021). For all these reasons, vaccination of healthcare workers has become a priority, and healthcare workers were identified as the first group to be vaccinated (Dooling et al., 2021).

Administration of COVID-19 vaccines has begun, and studies regarding their efficacy in providing protection are ongoing (Murphy et al., 2021). However, even if vaccination studies are quickly finalized and effective vaccines identified, a large part of the population may still refuse to be vaccinated (Murphy et al., 2021). A study conducted with samples from the adult populations of Ireland and the UK found that hesitancy against the COVID-19 vaccine was 35% in Ireland and 31% in the UK (Murphy et al., 2021). Similarly, in the USA, 25% reported that they would not be vaccinated against COVID-19 when the vaccine became available (Tyson, Johnson, & Funk, 2020).

The European Center for Disease Prevention and Control (eCDC) (2015) says healthcare workers are considered a reliable source of information about vaccination (Karafillakis et al., 2016), whereas the WHO (2020) has emphasized the role of healthcare workers in developing public trust in vaccines. It is believed that healthcare workers can have a positive impact on the public regarding the administration of the COVID-19 vaccine and eliminate patients' concerns about the newly developed vaccines (Kwok et al., 2021). Nevertheless, studies have highlighted that vaccine hesitancy also exists among healthcare workers (Dror et al., 2020; Kwok et al., 2021). It has been shown that 37% of nurses in China and 23.1% of healthcare workers in France do not intend to be vaccinated against COVID-19 (Gagneux-Brunon et al., 2021; Kwok et al., 2021). Likewise, it was determined in Croatia (2021) that one out of six healthcare workers had vaccine hesitancy, with nurses more hesitant than physicians (Tomljenovic et al., 2021). A study conducted in Israel showed that healthcare workers

who provided care to patients diagnosed with COVID-19 had positive attitudes toward vaccination, whereas healthcare workers who did not treat this group had negative attitudes (Dror et al., 2020). The eCDC reports that vaccination rates among healthcare workers range from 2.2% to 29% (eCDC, 2020). Some of these studies were conducted before COVID-19 vaccines became available, but others have shown high rates of hesitancy even since the vaccine became available (Qunaibi et al., 2021; Tomljenovic et al., 2021). It is suggested that even if the vaccination of healthcare workers was made mandatory, their vaccine hesitancy might still adversely influence society as they could recommend against vaccination and damage the public's trust in vaccination (Verger et al., 2015). Although quite extensive models have been developed for testing vaccine hesitancy, the stressors and psychosocial problems that healthcare workers have been exposed to during the COVID-19 pandemic may influence their vaccination process (Betsch et al., 2018; Kackin et al., 2020; Kwok et al., 2021). In addition, existing studies mainly address the influenza vaccine, and studies investigating the COVID-19 vaccine are quantitative studies focused on prevalence data about intention to be vaccinated rather than considerations of individual factors. The success of the vaccination program requires a determination of the reasons for the vaccine hesitancy of professionals. Developing strategies to address these concerns is critical (Maraqa et al., 2021). Thus, there is a need to explore, in depth, the attitude of healthcare workers toward the COVID-19 vaccine, including their perceptions of information about the vaccine. A better explanation of the multiple factors and complex structures that lead to vaccine hesitancy among healthcare providers is needed as this could play a key role in designing effective responses (Dube, 2017). The aim of this study is, therefore, to qualitatively investigate the attitudes of healthcare workers in Turkey in relation to the COVID-19 vaccine.

METHODS

This study observed the Standards for Reporting Qualitative Research guidelines (COREQ).

Design

The phenomenological approach was used in this study. This method focuses on phenomena of which we are aware but lack any in-depth or detailed understanding. Phenomena may be events, situations, perceptions, orientations, experiences, concepts, and more. The phenomenological approach focuses on individual experience: the researcher aims to investigate the participant's individual perceptions and the meanings they attribute to the phenomenon as well as their personal (subjective) experiences (Creswell, 2020). Focus group interviews are conducted within a framework of predetermined guidelines. The method prioritizes the subjective responses of interviewees, and attention is paid to the participants' discourse and to the social context of that discourse (Merriam & Tisdell, 2015). The purpose of the focus group

interview is to obtain in-depth, detailed, and multidimensional qualitative information about the perspectives, lives, interests, experiences, tendencies, thoughts, perceptions, feelings, attitudes, and habits of the participants in relation to the subject under discussion (Merriam & Tisdell, 2015). In this study, the phenomenological method was selected to examine, in-depth, the attitudes of healthcare workers in Turkey in relation to COVID-19 vaccines.

Research team and reflexivity

This study was performed by three female and one male researchers, all trained in qualitative research methods. Although the participants knew the researchers, no conflictual relationship existed among them. To promote reflexivity as is essential in qualitative research, the research team held regular meetings throughout data collection and analysis to assure their own assumptions were not influencing the findings expressed by the participants.

Setting and time

The study was conducted between January 17 and 30, 2021, using online platforms with participants from different provinces of Turkey.

Sample

The purposeful sampling technique was used in this study to collect information from individuals who had experienced similar situations. Healthcare workers who worked in any province in Turkey, who were employed during the pandemic and were 18 years or older were included in the study. The researchers contacted 40 healthcare workers by phone and e-mail before starting the study. Four of the potential participants reported that they would be unable to participate due to work situations changing at the last minute. Data saturation was reached by the end of four focus group interviews performed with a total of 36 healthcare workers, including 12 women and 24 men, who constituted the sample for the study ($N = 36$).

Measures

The data were collected with a survey form and from a semistructured interview. The survey form was prepared by the researchers and was distributed online (Barry et al., 2020; Karafillakis et al., 2016). It consisted of questions about the socio-demographic characteristics of the healthcare workers, such as age, gender, and educational status and also about their attitudes toward the COVID-19 pandemic. The semistructured interview consisted of three open-ended questions: (1) As a healthcare worker, what do you think about the COVID-19 vacci-

nations? (2) How do you feel about healthcare workers being the first to be vaccinated against COVID-19? (3) As a healthcare worker, what attitude do you have toward the vaccine administration?

Data collection method

The data for the research were collected from focus group interviews. Because of measures taken during the COVID-19 pandemic, the interviews were held online. Participants had completed the online survey form sent to their e-mail addresses prior to the interviews. Each focus group interview involved nine participants, a moderator, and an assistant. A semistructured interview form was used, and a total of four interviews were performed. A pilot study was performed first with a group of nine people who were not included in the study sample but were in the target group. This tested the data collection tools and the interview process. Interviews were conducted in quiet home environments, considered suitable for the interviews. The healthcare workers who met the criteria for inclusion in the study were informed about the research. Before the interview, the participants were reminded of the objective of the study. Interviews began after a warm-up exercise was performed to make it easier for group members to express themselves. Each focus group interview lasted for 80–90 minutes. During the interview process, the statements of participants were recorded with written notes and a voice recorder. The voice records were then transcribed, and the transcripts were confirmed by the participants.

Analysis of study data

The voice records collected from the interviews were transcribed by OK and EC. OSA and SK checked the consistency and accuracy of the transcripts. The transcripts obtained from the first focus group interview were encoded by all the researchers, independently. Afterward, the remaining transcripts were encoded by OSA and OK, and all the researchers met to agree on the codes and categories. These codes and categories were used to create themes. The findings of the study were examined and confirmed by an academic who was not one of the researchers and who is an expert in the field. The data were analyzed by using the MAXQDA 20.0 program and the phenomenological analysis steps of Colaizzi (1978). The steps of the analysis process are shown in Table 1 (Colaizzi, 1978).

Ethical aspects of study

The study was approved by the Noninvasive Clinical Research Ethics Committee (X- Decision No. X) and the Scientific Research Platform of the Republic of Turkey, Ministry of Health. Prior to the focus group interviews, verbal consent and written consent were obtained from the participants via the online survey form (1995 Declaration of Helsinki,

TABLE 1 Colaizzi's method of data analysis

1. Transcripts were read several times and short notes were taken. Thus, the meaning and emotion of the phenomenon were understood.
2. The important statements were chosen.
3. Important statements with common meanings were rendered systematic.
4. The systematic subthemes were organized by themes and categories.
5. The results obtained were combined with the life experiences of the individuals.
6. The basic conceptual structure of the phenomenon was determined.
7. The results were confirmed to accurately represent the experiences of healthcare workers.

as revised in Brazil, 2013). The written notes and sound records obtained were encrypted in the computer environment.

Trustworthiness

In this study, trustworthiness was achieved through the criteria of credibility, transferability, dependability, and confirmability, as proposed by Lincoln and Guba (1985). Credibility was achieved by using the MAXQDA 20.0 program for the analysis of the data, by obtaining participant confirmation, by the researchers holding regular meetings relating to the study process, and by including the qualifications of the researchers in the text. In addition, credibility was achieved by quoting participant statements in the text, by ensuring consistency between coders, and by ensuring that a variety of data collection tools were used. The working process and method were presented clearly and precisely to ensure transferability. Dependability was achieved by having an expert who was not involved in the study examine all data obtained. Confirmability was achieved by using multiple data collection methods and by different researchers encoding the data independently.

RESULTS

The findings of the research are presented in two parts. Part 1 contains the individual demographics of the healthcare workers, and Part 2 addresses the themes, subthemes, and categories obtained from the interviews.

Part 1. Individual demographics of the healthcare workers

The majority of the healthcare workers participating in the study were male and married, with an average age of 34 ± 19 years. In addition, 52.8% of the participants worked in a state hospital, the duration of their working lives was 11.31 ± 7.95 years, and the duration of their providing care to patients diagnosed with COVID-19 was 4.25 ± 5.73 months. The individual demographics of the healthcare workers are given in detail in Table 2.

Part 2. Categories, subthemes, and themes obtained from interviews with healthcare workers

Following the analysis of the data, the attitudes of healthcare workers in Turkey toward the COVID-19 vaccine were allocated to one of three themes: "influencing factors," "priority group," and "trust." The themes, subthemes, and categories are described below.

Theme 1. Influencing factors

The theme of "influencing factors" contained five subthemes, including "negative emotions," "social media," "vaccine and vaccination process," "political processes," and "intention to be vaccinated."

Negative emotions

Some participants emphasized that they felt anxiety, fear, suspicion, burnout, vulnerability, insecurity, hopelessness, and helplessness, and that these feelings affected their opinion about the vaccine. Below, are some of their statements:

"I am worried about the contraindications of the vaccine, I do not know what results it will create." (Healthcare Worker 20, Female)

"I think we're in a biological war. This is a product produced in a laboratory environment... I prefer not to be vaccinated." (Healthcare Worker 28, Female)

"...I do not know whether it causes any disease or deformation. I feel helpless and scared" (Healthcare Worker 24, Female)

"I cannot persuade myself to get vaccinated, I am a little paranoid about it. I do not trust it" (Healthcare Worker 27, Female)

"I have no hope for the effectiveness of the vaccine so I feel very helpless and vulnerable." (Healthcare Worker 28, Female)

"Given our psychological state, I need more time off and more rest than vaccination. I need to see my family more even if it is for two days. Yes, I also need vaccines, but I think they are doing it just to say that we are doing something for healthcare workers too, not because they are worried about us." (Healthcare Worker 3, Female)

Vaccine and vaccination process

Some participants reported that they did not want to be vaccinated due to the vaccine's reported contraindications and uncertainties about the duration of protection, the benefit-harm balance, myths, and confusion. However, they were left in a dilemma because of institutional pressures and the possibility of dismissal. Participants also noted that no medical history was taken before vaccination and no observations were performed after it.

"The explanations made and the evidence shown about the benefits, harms and effect of the vaccine are insufficient, so I am very confused about whether to be vaccinated or not, I can't be sure." (Healthcare Worker 10, Male)

TABLE 2 Individual characteristics of the healthcare workers (N = 36)

Variables	n	%	Min–Max	Mean ± SD
Age			21–53	34 ± 19
Gender				
Female	12	33.3		
Male	24	66.7		
Marital status				
Married	15	58.3		
Single	21	41.7		
Educational status				
High school	3	8.1		
Bachelor's degree	16	43.2		
Master's degree	7	18.9		
Doctoral degree	10	27.8		
Do you have kids?				
Yes	17	47.2		
No	19	52.8		
The number of people whom you live with at the same house.			0–9	3.03 ± 1.84
Do you have a chronic disease?				
No	29	80.6		
Yes	7	19.4		
Chronic disease (n: 7)				
Diabetes	1	2.8		
Hypertension	2	5.6		
Other	4	11.1		
Profession				
Physician	7	19.4		
Nurse	11	30.6		
Dentist	3	8.3		
Medical secretary	2	5.6		
Clinical psychologist	3	8.3		
Midwife	6	16.7		
Laboratory assistant	1	2.8		
Cleaning staff	1	2.8		
Physiotherapist	2	5.6		
The institution where you work				
State hospital	19	52.8		
Private hospital	4	11.1		
University Hospital	5	13.9		
Other	8	22.2		
Duration of working in the profession (years)			1–30	11.31 ± 7.95
Duration of providing care to patients diagnosed with the COVID-19 (months)			1–24	4.25 ± 5.73

(Continues)

TABLE 2 (Continued)

Variables	n	%	Min–Max	Mean ± SD
The unit where you worked while providing care to patients diagnosed with the COVID-19?				
Emergency service	2	5.6		
Surgical units	8	22.2		
COVID-19 service	1	2.8		
Covid-19 intensive care unit	2	5.6		
Internal units	2	5.6		
Filiation	5	13.9		
Outpatient clinic	2	5.6		
Other	14	38.9		
Have you been diagnosed with the COVID-19?				
Yes	8	22.2		
No	28	77.8		
Has any of your relatives been diagnosed with the COVID-19?				
Yes	33	91.7		
No	3	8.3		
Were you able to go home while providing care to the COVID-19 patients?				
Yes	34	94.4		
No	2	5.6		

“Recently, it has often been said that the COVID-19 vaccine causes infertility. I don’t want to be vaccinated when I hear them.” (Healthcare Worker 9, Female)

“...the possibility of removal from the profession is being discussed. Last week, it was reported in a country that sanctions such as removal from the profession were imposed on those who did not want to get vaccinated. It is believed that the same situation may be seen in Turkey.” (Healthcare Worker 5, Male)

“I wonder whether there will be certain prohibitions or sanctions for those who do not get vaccinated.” (Healthcare Worker 25, Female)

“While the vaccine is being administered, you are not asked the questions such as “do you have any illnesses, or do you have any allergies to any drug?”. They directly inject the vaccine and send you back. There is no observation. It seemed strange to me.” (Healthcare Worker 22, Male)

Social media

Participants mentioned that statements from the Ministry of Health and images on social media of healthcare workers being vaccinated had positive impacts on their opinions about vaccination.

“Watching the Minister of Health’s statements and the footage of him being vaccinated gave me confidence.” (Healthcare Worker 23, Female)

“I think the fact that healthcare workers share images of vaccination on social media increases the community’s trust in vaccination. I felt excited when I saw the images.” (Healthcare Worker 35, Male)

Political processes

Some participants reported feelings of bias toward the country in which the vaccine was developed. They considered the vaccine a commercial tool and preferred to wait for the production of a domestic vaccine. Moreover, some participants stressed that statistics about the safety and protection of the vaccine, as well as the case rate and number of deaths from COVID-19, were not identified correctly or shared transparently. They thought this was for political reasons, and that the main goal of national policy was to increase Turkey’s vaccination ranking.

“Now we have a vaccine produced by China. I’m afraid I have some prejudices about it. For example, it might have been better if it had been a vaccine produced in Germany.” (Healthcare Worker 2, Male)

“In this process, I think the vaccine has become a commercial tool between countries.” (Healthcare Worker 8, Male)

“I prefer to be vaccinated with a domestic vaccine. So I’ll wait for production of a domestic vaccine.” (Healthcare Worker 30, Female)

"The only thing that cannot convince me and that raises a question in my mind is the political aspect of this business. The state of health was politicized, the Ministry did not give the correct rates. From the number of patients to the number of deaths, from the introduction of the vaccine to the transport company... What is the rate of protection in other countries, what are the results? All of these leave a question mark in my head." (Healthcare Worker 31, Female)

Theme 2. Priority group

The theme of "priority group" contained two subthemes, including "attitude" and "intention to be vaccinated."

Attitude

Participants discussed the decision of the Ministry of Health to "vaccinate healthcare workers first." Some participants supported this decision, whereas others reported that they did not, feeling they were being used for advertising or as guinea pigs.

"It's definitely the right decision. I am happy that healthcare workers are vaccinated first because the quantity of vaccines is limited." (Healthcare Worker 30, Female)

"I certainly didn't find this decision right. That is because if the contraindications of the vaccine are severe, there will be no soldiers left to fight on the front." (Healthcare Worker 19, Male)

"The fact that the COVID-19 vaccine is administered first to the healthcare workers serves advertisement purposes, I think." (Healthcare Worker 31, Female)

"They tell us to get vaccinated first as healthcare workers, and then they want to be vaccinated, and I feel like a subject" (Healthcare Worker 11, Female)

"They're actually using us like guinea pigs, and trying to create a perception of "Look, doctors and nurses have been vaccinated" and lead society to be vaccinated." (Healthcare Worker 5, Male)

Intention to be vaccinated

Some participants mentioned that protection of family and society, prevention of loss of life and ending of the pandemic all depended on the vaccine, so they were placing their trust in the vaccine and wanted to be vaccinated.

"We have no other choice, and we have to consider the profit and loss status for ending this pandemic." (Healthcare Worker 34, Male)

"I live with my family, and I want to protect them. So I'll get vaccinated." (Healthcare Worker 21, Female)

Theme 3. Trust

Participants reported that they expected the vaccine to provide a high level of protection. They said they would place their trust in the vaccine when certain expectations were met: the Ministry of Health should

offer different vaccine options, improve the appointment and notification system, present evidence-based information about the vaccine, and establish a safe environment.

"I'm thinking why there is only one vaccine. There should be a few different options and we should be able to choose from them. If that were the case, my trust would be a little higher." (Healthcare Worker 11, Female)

"If the Ministry of Health improves the appointment and process notification systems for the vaccine, my trust in vaccination will be higher. After all, I think these practices show how carefully this process is performed." (Healthcare Worker 6, Male)

"...I need evidence-based information to trust in vaccination and convince those around me." (Healthcare Worker 29, Female)

"It would be good to be kept under observation during vaccination, and to provide an environment that can be intervened immediately in the event of any complications. There is no such environment. After vaccination, they send you back to home immediately. It would be good if it was done in a safe environment and then be observed for a certain period of time." (Healthcare Worker 13, Male)

DISCUSSION

In this study, which aimed to qualitatively investigate the attitudes of healthcare workers in Turkey toward COVID-19 vaccines, their attitudes were grouped into three themes: influencing factors, priority group, and trust.

Influencing factors

Some of the participants stressed that they felt negative emotions and experienced burnout, and that these affected their attitudes to vaccination. Other studies confirm that healthcare workers feel anxiety, fear, and worry about vaccination (Barry et al., 2020; Di Martino et al., 2020; Gadoth et al., 2020; Savaş & Tanrıverdi, 2010). During the COVID-19 pandemic, about half of nurses and a third of radiology technicians and pharmacists in Japan were reported to meet burnout criteria (Matsuo et al., 2020). During the COVID-19 pandemic, rapid increases in the number of cases brought health systems to the point of collapse, and the loss of life portrayed in the media may have increased the negative emotions. Moreover, insufficient management of the COVID-19 pandemic increased individual anxiety and burnout, affecting the vaccination process (Dror et al., 2020).

Some participants noted that they did not want to be vaccinated because of the vaccine's contraindications and uncertainties relating to duration of protection and the benefit-harm balance. A study conducted in Turkey in 2010 reported that healthcare workers believed that the flu vaccine was neither safe nor effective (Savas & Tanrıverdi, 2010). A study conducted in Australia revealed that doctors are often indifferent to the side effects of vaccines (Gil Cuesta et al., 2020). The rapid development of COVID-19 vaccines globally, ideas that they have not been used and tested for long enough, that a new vaccine is not needed, as well as limited public information and incorrect information may all contribute to vaccine hesitancy (Argüt et al., 2016; Dror et al., 2020; Fu et al., 2020).

Vaccine myths and confusion are identified as other important factors affecting intention to be vaccinated (Lewandowsky et al., 2021; Sahoo et al., 2020). The WHO (2019) identified vaccine hesitancy as one of the top ten threats to global health, and one of the reasons for the hesitation was reported as the “spread of myths about vaccines” (WHO, 2019). Due to the very recent emergence of the COVID-19 infection and its impact on almost all countries of the world, myths about its spread and transfer are far greater than for diseases such as leprosy and tuberculosis (Sahoo et al., 2020). Most people can access social media, and this makes it possible for myths to spread quickly and extensively. Myths may lead to confusion and endanger the health of individuals by inhibiting required practices (Sahoo et al., 2020).

It is evident that healthcare workers face dilemmas about being vaccinated due to institutional pressures and possible dismissals. In Italy, due to increasing vaccine hesitancy among health workers and falling vaccination rates, mandatory vaccination was introduced in some regions (Di Martino et al., 2020). In some countries, the use of a “vaccine passport” has been proposed, a document proving vaccination during the pandemic. The intention was that individuals holding this passport could participate in social, economic, and cultural activities without restriction. However, it is noted that this could create difficulties in the scientific, practical, egalitarian and legal areas (Grech et al., 2020; Phelan, 2020). The dilemmas faced by healthcare workers in this study may arise from the desire of institutions to implement the vaccination process quickly and to follow policies that would promote vaccination. These practices may have put pressure on healthcare workers (Di Martino et al., 2020).

Some participants noted that no medical history was taken before vaccination and no observations were performed after it, and this affected their vaccination acceptance. The COVID-19 vaccination guide recommends that those vaccinated should be kept under observation for some time after their injections to protect against unexpected events (Lewandowsky et al., 2021). These concerns about vaccine safety should be addressed both before and during the vaccination program. Individuals should be fully informed about the process (DeRoo et al., 2020). The healthcare workers’ observations on problems such as medical history not being taken and no observations being performed following the vaccination indicate the need for better organization if trust is to be increased in the vaccination process.

Some participants mentioned that statements from the Ministry of Health and images on social media of healthcare workers being vaccinated had a positive impact on their attitude toward vaccination. Studies suggest that the trust relationship between healthcare and politicians needs to be strengthened before healthcare workers will consent to be vaccinated (Larson, 2015; Paterson et al., 2016). It is recommended that both traditional and social media be used to create strong vaccination campaigns. Many studies confirm that doctors are the most important influencers in decisions to be vaccinated (Kempe et al., 2011; Smith et al., 2006). Even though most studies have focused on the role of physicians in affecting patients’ vaccination attitudes, other studies have focused on the role of nurses and other healthcare workers (DeRoo et al., 2020; Tomljenovic et al., 2021; Verger et al., 2015). Expo-

sure of healthcare workers to incorrect or incomplete information may lead to vaccine hesitancy (DeRoo et al., 2020).

Some participants reported that they were biased against the country in which the vaccine was developed and would prefer to wait for a domestic vaccine. Motta reached the similar conclusion that Americans would tend to accept vaccines if they were produced in the United States rather than in China, and this related to the suspicion that the Chinese government was involved in “creating” or “spreading” the virus (Motta, 2021). The fact that the COVID-19 pandemic has affected the whole world, together with the rapid spread of conspiracy theories through the social media, may have affected the trust of healthcare workers regarding vaccination.

Moreover, some participants stressed that, for political reasons, statistics concerning the safety and protection afforded by the vaccine, as well as the number of cases and deaths, were not shared correctly and transparently, and that the main goal of national policy was to increase its vaccination ranking. Various studies identified the following as reasons for vaccine hesitancy: lack of transparency by the media, pharmaceutical companies, government agencies and public health officials, and their suspected monetary gains. In addition, there were various conspiracy theories as well as a distrust of institutions in Europe and in the close ties between state and medical experts in China (Gil Cuesta et al., 2020; Prematunge et al., 2014; Yang et al., 2020). The perception that pharmaceutical industries are pursuing their financial interests rather than public health may lead to fear and distrust regarding vaccination. Being forced to be vaccinated and being of the opinion that transparency about vaccines cannot be achieved may both create adverse effects on vaccination practices (Argüt et al., 2016).

Priority group

Some participants noted that the protection of family and society, the prevention of loss of life and the ending of the pandemic all depend on vaccination, so they trusted the vaccine and wanted to be vaccinated. A study by Prematunge et al. (2014) shows that altruism, or the desire of healthcare workers to protect their loved ones, was the main reason for their accepting vaccination. Studies report that the beliefs of healthcare workers that vaccination is the most effective way to end the epidemic, that they are at high risk, and that there is a risk of their infecting patients are the main factors motivating them to be vaccinated (Barry et al., 2020; Prematunge et al., 2014). Other studies report that the percentage of health workers desiring to be vaccinated during the COVID-19 pandemic is much higher than that in the general population (Fu et al., 2020). In contrast, Dror et al. (2020) highlight that healthcare workers trusted the COVID-19 vaccine less than the general population did, and that nurses were more hesitant about the vaccine than doctors or the general population. This study reports that healthcare workers are willing to be vaccinated for reasons such as unemployment and job insecurity, school closures, difficulty in caring for their children, and the desire to end the COVID-19 pandemic (Dror et al., 2020).

Some participants supported the Ministry of Health’s decision to vaccinate healthcare workers first, whereas others reported that they

did not support this decision because they felt they were being used for advertising and as guinea pigs. Other studies note that the reasons for healthcare workers rejecting the COVID-19 vaccine include the lack of adequate safety and efficiency data, side effects, the belief that the vaccine will be ineffective and concerns regarding the safety of a hurriedly developed vaccine (Barry et al., 2020; Dror et al., 2020). During the last decade, especially, distrust, false information, and conspiracy theories about vaccines have been common in many countries. For this reason, it is important to address the newness, the rapid development, and the fear of negative effects from vaccines, all of which cause hesitancy among the healthcare workers who are seen as the priority group for vaccination (Barry et al., 2020).

Trust

Participants reported their expectations that the vaccine would provide a high protection rate, and that they would be prepared to trust the vaccine when the Ministry of Health offered different vaccine options, improved the appointment and notification system, presented evidence-based information about the vaccine and established a safe vaccination environment. Several studies have shown that provaccination workplace policies, adequacy of tests regarding vaccines effectiveness, and transparency by scientific vaccination organizations all motivate healthcare workers to be vaccinated (Larson, 2015; Prematunge et al., 2014; Yang et al., 2020). In Turkey, the vaccines administered to healthcare workers are mostly produced in China. The fact that the healthcare workers want different vaccine options may be due to their distrust in products made in China because of issues of transparency, widespread conspiracy theories and politicizing of the issue (Motta, 2021).

Strengths and limitations

In this study, the data collection tools and the interview process were first tested with a pilot study. The fact that healthcare workers from different institutions and professions were included in the same focus group allowed differing attitudes to be revealed. However, due to the pandemic, the meetings were held via an online system, and this may have inhibited some participants from fully expressing themselves. To minimize this situation, warm-up exercises were performed before each focus group interview. In addition, even though participants were assured of confidentiality, some participants may have been hesitant to express negative views on the vaccine due to government policies supporting vaccination. Due to the limitations of a qualitative design, further research would be helpful.

IMPLICATIONS FOR PRACTICE

Practices that address the psychological issues of healthcare workers in their fight against negative emotions and burnout will contribute positively to the vaccination program. In fighting vaccine hesitancy

among healthcare workers, future research should test strategies that ensure the careful execution of vaccination programs, the correct and effective use of social media, transparent and precise management of political processes, the provision of evidence-based information, and the provision of training activities related to vaccine myths and prejudices about the country where the vaccine was developed.

CONCLUSIONS

Healthcare workers' attitudes toward COVID-19 vaccines are affected by the negative emotions and burnout that they have experienced during the epidemic. In addition, the vaccination process is affected by the contraindications and uncertainties concerning the duration of the protection, the balance of benefits and harms from the vaccine, and also by vaccine myths and prejudices about the country where the vaccine was first developed. Healthcare professionals do have expectations that trust in the vaccine can be developed. They suggest that different vaccine options should be offered, that appointment and process notification systems for vaccination should be improved, that evidence-based information about vaccines should be provided, and that a safe environment should be created for the vaccination process.

AUTHOR CONTRIBUTIONS

Study Design: OK, EC, OSA, SK

Data Collection: OK, EC, OSA, SK

Data Analysis: OK, EC, OSA, SK

Manuscript Writing: OK, EC, OSA, SK

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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