The Challenges of Nurses Who Care for COVID-19 Patients

A Qualitative Study

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This study, which had a qualitative research design, was conducted to identify the challenges experienced by nurses who care for patients diagnosed with COVID-19. The nurses providing one-to-one care to patients diagnosed with COVID-19 in various hospitals in Turkey constituted the population of this study. The maximum variation sampling method was used to determine the sample in the research. In the sample selection, the provinces and hospitals were selected by drawing lots. The sample of the study consisted of 15 nurses who worked in different hospitals in different regions of Turkey, performed one-to-one care of patients diagnosed with COVID-19 between March and April 2020, volunteered to participate in the study, and agreed to be interviewed by the researcher. SRQR guidelines were followed in reporting the study. As a result of the study, 7 difficulties, or 7 themes, were identified. These themes include anxiety and fear of being infected, change in the family order, performing patient care with fear, perception of stigma in society, questioning the nurse's place within the health system, difficulty working with personal protective equipment, and physical damage caused by equipment.
KEY WORDS: *challenges of nurses*, *COVID-19*, *nursing care*, *qualitative study* *Holist Nurs Pract* 2021;35(6):315–320

Coronaviruses (CoV) constitute a large virus family that can cause a variety of diseases ranging from simple flu and the common cold to more serious diseases such as severe respiratory failure, MERS (Middle East respiratory syndrome), SARS (severe acute respiratory syndrome), etc. Several subtypes of coronaviruses have caused diseases in humans until today. In 2019, a new type of coronavirus was found to cause disease in humans in Wuhan City in Hubei Province of China, and it was named coronavirus disease 2019 and abbreviated as COVID-19.[1-5] The first COVID-19 case was detected on December 29, 2019, and it was reported to the World Health Organization on December 31, 2019. Upon detection of the coronavirus outbreak in many countries and continents, the World Health Organization announced the COVID-19 outbreak as a pandemic on March 11, 2020.[6,7] In the face of the rapidly spreading virus, the existing medical equipment and health care personnel of even countries with developed medical infrastructure were insufficient against the severity and urgency of the pandemic.[8] According to official counts, a total of 6 287 771 cases and 379 941 deaths were reported in 216 countries due to COVID-19 on June 3, 2020. As a result of this pandemic, the World Health Organization has published guidance for all countries on topics such as following up patients, taking samples, treating patients, infection control, using the right sources, and communicating with the public.[9]

Health professionals usually face various psychological problems during risky pandemic situations.[10] Nurses, particularly, who work closely with patients during caregiving, play a key role in fighting the pandemic. Therefore, nursing interventions, particularly from a physical, social, and psychological perspective are of great importance in the control of the pandemic.[11,12] According to the COVID-19 analysis report of the Turkish Nurses Association, nurses may face some obstacles in providing quality care without compromising patient

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The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

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DOI: 10.1097/HNP.0000000000000480

safety. Some of these obstacles can be listed as inadequate and poor-quality personal protective equipment, increased patient care load, relaxed measures in the normalization period that increases the risk of COVID-19 transmission, not applying rotation for nurses working at pandemic clinics, and asking nurses to work overtime.[13] Hospitals should establish special protocols for preserving the health of nurses interacting with patients with COVID-19.[14,15] Therefore, identifying difficulties experienced by the nurses fighting this pandemic in Turkey is very important to establish these protocols. From this point of view, this research was conducted to determine the challenges experienced by the nurses during the COVID-19 pandemic.

METHOD

This study, which had a qualitative research design, was conducted to identify the challenges experienced by nurses who care for patients diagnosed with COVID-19. The nurses providing one-to-one care to patients diagnosed with COVID-19 in various hospitals in Turkey constituted the population of this study. The maximum variation sampling method was used to determine the sample in the research. In the sample selection, the provinces and hospitals were selected by drawing lots. The sample of the study consisted of 15 nurses who worked in different hospitals in different regions of Turkey, performed one-to-one care of patients diagnosed with COVID-19 between March and April 2020, volunteered to participate in the study, and agreed to be interviewed by the researcher.

Nurses working in a single hospital were not included in the study; nurses working in different hospitals and different provinces in Turkey were included. Thus, it was thought that the challenges experienced by nurses who provided one-to-one care to patients with COVID-19, which was the basis of the study, could be revealed with their psychosocial and cultural contexts, and the interviews would enrich the results of the research.

This study is reported according to the Standards for Reporting Qualitative Research (SRQR) guidelines.

In-depth interviews are one of the most frequently used data collection methods in qualitative research.[16] In this study, the data were collected through video calls over WhatsApp Messenger using a semistructured in-depth interview form prepared by the researcher in line with the purposes of the study. The questions covered the nurses' experiences in the period beginning with working with a patient diagnosed with COVID-19 until the time of the interview, in addition to their sociodemographic characteristics. Nondiverting, unbiased, general, and predominantly open-ended questions examining the nurses' experiences and changes in their lives during this period and the effects of this period on their psychological and physical aspects were explored.

Interviews were conducted with the nurses whose informed consent was obtained to participate in the study. At the beginning of the interview, the purpose, scope, ethical sensitivities, and possible benefits of the study were explained. Nurses were informed that the interviews would be recorded. The researcher conducted in-depth interviews with the nurses, through one-on-one videos lasting approximately 15 minutes.

Statistical analysis

After the interviews were completed, the data recorded by the voice recorder were transcribed and documented in Microsoft Word format. During data transcription, participants were given a number and their identities were kept secret. In this study, which was a qualitative approach, a descriptive analysis was performed using the outcomes obtained from the interviews. After documenting the recorded data, the codes that could be extracted from each sentence were determined. After determining the codes, the study proceeded with the thematic coding. Then, the codes were classified by the researchers and appropriate themes were extracted.

Ethical considerations

The current study was conducted with the approval of the Ethical Committee. For data collection, written permission from the management of the hospital was obtained. Voluntary participation was ensured. Furthermore, after the participants were informed about the purpose of the study, and how the results would be used, their written consent (informed consent form) was obtained. The participants were informed that their information would be kept confidential, and the principle of confidentiality was followed.

RESULTS

The mean age of 15 nurses participating in the study was 26.53 ± 3.52 years, and their mean work experience was 4.53 ± 2.82 years. Also, 66.7% of the nurses were found to be single (Table).

According to the results of the study, the following 7 challenges, that is, 7 themes, affecting the nurses both physically and psychologically were identified:

- Concern and fear of being infected;
- Change in the family order;
- Performing patient care with fear;
- Social stigma;
- Questioning the nurse's role within the health system;
- Difficulty working with personal protective equipment; and
- Physical injury caused by equipment.

Concern and fear of being infected

Nearly all of the nurses who participated in the study stated that they experienced fear, concern, and sadness when they first learned that they would be working with patients diagnosed with COVID-19. In addition, it was found that they had more concerns at the beginning of the process due to the high number of uncertainties.

> . . . There were fear and panic. There was a fear of being infected and transmitting . . . . I thought about what I was doing there . . . . (Code 10)

TABLE. Descriptive Characteristics of Nurses

Descriptive Features	Mean ± SD	
Average age, y	26.53 ± 3.52	
Average working year	4.53 ± 2.82	
	n	**%**
Education status		
High school	2	13.3
License	11	73.3
Graduate	1	6.7
Doctorate	1	6.7
Marital status		
Married	5	33.3
Single	10	66.7
Number of children		
None	13	86.7
1-2	2	13.3
Total	15	100

> There was confusion, uncertainty, and fear in the first case. We used 5 packages of masks in 10 seconds, we didn't know what to do . . . . (Code 3)

> I received the first patient, my colleagues with children didn't want to do it. It was awful. We were aware of the seriousness of the situation from the very beginning . . . . (Code 9)

Most of the nurses stated that "their fears increased as the time spent with the patient increased" and that they frequently experienced the fear of "getting infected too." It was also found that the nurses' colleagues who tested positive for COVID-19 increased these fears.

> Even though we are protected, that possibility still crosses my mind. I think about it more often as my contact with the patient increases. (Code 10)

> . . . My 4-5 colleagues tested positive for COVID-19. I immediately looked at the shift list and checked if I had worked with them. (Code 2)

> . . . I thought we'd all be infected, there was no escaping it. (Code 5)

Change in the family order

Since nurses cared for patients diagnosed with COVID-19, it was found that it changed the family order of almost all of them. Some changed their house, some sent the household to another location, while others spent more time in their room inside the house and did not interact with the household.

> I haven't met my family since March 20th. I haven't met them even though we live in the same city. (Code 4)

> . . . I spend all my time in my room. I used to wear a mask at home, now, I don't leave my room since my headaches increased. (Code 8)

> I couldn't meet my family since I started working; I had to keep my distance from them. (Code 11)

Performing patient care with fear

More than half of the nurses stated that they performed patient care with fear, and the care practice that they performed with the most fear was the "aspiration" procedure.

> They cough while connecting the valve during the aspiration procedure. Therefore, we perform this procedure with fear. (Code 4)

> Aspiration of an intubated patient increases my fears . . . . (Code 12)

Perception of social stigma

Nearly half of the nurses expressed that they felt social stigma and that people felt sorry for them.

> The hospital staff was keeping away from us when we went to the dining hall. I felt fear that it would always be like that . . . . (Code 6)

> People approach us with a sense of pity, thinking that we are COVID-19 positive, and they are hesitant to talk to us . . . . (Code 12)

Questioning the nurse's role within the health system

Almost all of the nurses stated that the nurses were newly noticed in the system, and their importance was recently appreciated. However, they stated that they did not receive any material or moral benefit in return. They also stated that arrangements should be made in nursing services, especially regarding employment. In addition to these, nurses stated that they questioned "why nurses took so much risk" when they saw careless people around them.

> Although we were active in the field, this attracted attention only in the verbal expressions; we did not receive any material and moral reward. I feel like a sacrificed soldier fighting at the forefront . . . . (Code 14)

> We cannot get material and moral satisfaction. We're being sacrificed in the forefront. We are the ones who take all the risks but nobody notices us . . . . (Code 12)

> . . . The workload has increased a lot. I used to provide care to 2 patients in the intensive care unit, now I care for 5-6 patients because once we get in, we can get out after caring for all the patients . . . . During this period, our financial expenses have also increased very much . . . . (Code 8)

> . . . Branching out is required in the profession; the conditions of intensive care must be improved. There should be no more than 2 patients per nurse, and nurses should be given emotional support . . . . (Code 2)

> We do our part as nurses, but when I see careless people, I sometimes think that I'm putting myself at risk for these people . . . . (Code 7)

Difficulty working with personal protective equipment

Almost all of the nurses stated that they had difficulty working with personal protective equipment. The majority of the nurses stated that working with personal protective equipment such as masks, coveralls, and safety glasses, and especially spending long working hours in this equipment, negatively affected their breathing and made them sweat and that the masks left marks under their eyes and on their faces.

> . . . It's very hard to work in coveralls. I don't even drink water to avoid going to the bathroom. (Code 1)

> . . . The coveralls make us sweat a lot, the uniform gets drenched, and I had cryptic tonsillitis because the ICU was cold. (Code 3)

> . . . The masks lowered our oxygen saturation. (Code 5)

> . . . The face shield makes us uncomfortable, the masks leave us breathless, and the coveralls make us drenched. (Code 8)

> . . . Because the safety goggles and the face shield are misting up, I find it very difficult to see during procedures such as starting an IV. (Code 1)

Physical injury caused by equipment

The majority of nurses stated that they suffered temporary injuries due to using the equipment and that the mask caused the most injury.

> . . . I had a temporary collapse in my nose due to the N95 mask. (Code 2)

> The equipment left marks, but not permanently, the form of my nose has changed. (Code 9)

DISCUSSION

There are more than 20 million nurses around the world, and each one has a different story. They are aware of hope, courage, joy, despair, pain and suffering, life, and death. Nurses hear the first cries of newborns and witness the last breaths of the deceased and witness some of the most precious and most tragic moments of life. These days, as we celebrate the 200th birth anniversary of Florence Nightingale, the services of nurses fighting the pandemic come to the forefront, and we see that nursing services draw more attention than ever before.[17] However, what are the challenges experienced by the nurses at the forefront in the fight against the pandemic? In the qualitative study conducted to answer this question, 7 themes were identified.

Nearly all of the nurses who participated in the study stated that they felt fear, concern, and sadness when they first learned that they would work with patients diagnosed with COVID-19. Throughout the nurses' professional lives, there was always the transmission risk when dealing with infectious diseases. However, since the units with COVID-19 patients are the most intense and stressful parts of the hospitals in terms of transmission, the individual stress and emotional problems related to transmission have increased in the nurses serving in this unit. The fact that COVID-19 is a rapidly spreading disease is also thought to increase this stress. Other facts are the ever-increasing number of confirmed and suspected cases, overwhelming workload, widespread media coverage, lack of specific medication(s), and insufficient support can increase the fear, concern, and sadness of health professionals.[11]

This study revealed that almost all of the nurses had a change in their family order. While nurses are involved in this fight against COVID-19 as professionals, many nurses, like everyone else, can experience transmission-related fear and concern for their loved ones, their families, and friends. Furthermore, because nurses work closely with patients diagnosed with COVID-19, they experience a higher concern than most people do. As a parent, sibling, and friend, they are also worried about infecting their loved ones and their family due to their working conditions.[18]

It was determined that the nurses performed the procedures requiring close contact with fear, and "aspiration" was the care procedure that was performed with the most fear. Nurses are the health care professionals who work in close proximity to and spend a lot of time with patients during care practices. Since nursing care requires close physical and psychological relationships, nurses are expected to provide care with concern.

Nearly half of the nurses expressed that they felt the perception of social stigma and that people felt sorry for them. One of the most important consequences of the perception of social stigma is that the individuals do not think that they take their rightful place in the society and that it causes them to feel that they do not belong to the community.[19] Because nurses care for patients diagnosed with COVID-19 and work in close contact, the people keep their distance from nurses whom they believe are more likely to be infected and/or infectious.

Almost all of the nurses stated that nurses were newly noticed in the system, and their significance was recently appreciated, but they could not receive any material or moral reward. According to the World Health Organization, "Nursing should be regarded as a health investment in a country, not as a cost" and "Nurses are the backbone of the health system and are at the forefront of the fight against COVID-19."[9] Therefore, it is considered an expected finding that the importance of nurses in the health team is understood and that nurses request the necessary arrangements to be made. Nurses constitute a group at risk for infectious diseases within the health team. Although the public realizes the risks that nurses take, this study reveals how close nurses are to the risk of this unique pandemic and how important they are to the health care team.

Almost all of the nurses stated that they had difficulty working with personal protective equipment. The difficulty of working with personal protective equipment can even cause itching due to the use of this equipment. The fact that equipment use affects the work of the nurses negatively may cause nurses to become infected with COVID-19, increase the likelihood of medical errors, and put the patients they care for at risk. Therefore, it is believed that the difficulties related to the use of the equipment are one of the important problems that should be addressed for both the patient and the nurse. The majority of nurses stated that they suffered temporary injuries due to the use of the equipment and that the mask caused the most injury. In fact, most of these are temporary marks. However, it is an unavoidable fact that these marks and especially marks resulting from wearing masks remain on the nurses' face for a while, which can negatively affect the nurses emotionally.

CONCLUSION

Nearly all of the nurses involved in the study stated that they felt fear, anxiety, and sadness when they first learned that they would be working with patients diagnosed with COVID-19. It was determined that nurses performed the procedures requiring close patient contact with fear, and the most fear-causing care procedure was "aspiration.". Nearly half of the nurses expressed that they felt a perception of stigma within the community and that people felt sorry for them. Almost all of the nurses stated that the nurses

were newly noticed in the system and their importance was newly appreciated, but they could not receive any material or moral benefit in return and they had a hard time working with personal protective equipment.

RELEVANCE TO CLINICAL PRACTICE

Nurses, among all health care professionals, are professionals who spend their most time with patients and work at close range. Therefore, intervention of nurses in this process by evaluating them physically, socially, and psychologically is of great importance in epidemic management. It is necessary to know the difficulties nurses face during the care associated with the COVID-19 outbreak. Knowing these challenges will enable nurses to work effectively and safely, and care quality will increase. The most common difficulties faced by nurses include anxiety and fear of being infected, change in the family order, performing patient care with fear, perception of stigma in society, questioning the nurse's place within the health system, difficulty working with personal protective equipment, and physical damage caused by equipment.

The following should be done regarding the physical, psychological, and social difficulties faced by nurses:

- Providing psychological assistance services through telephone, Internet, and application-based counseling or intervention;
- Increasing corporate communication for nurses;
- Increasing motivational studies for nurses at the institutional and national levels; and
- Searching for remedial innovative solutions for the use of personal protective equipment.

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