





Exploring the experiences of frontline nurses caring for COVID-19 patients

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Abstract

Aim: This study seeks to gain a comprehensive understanding of the experiences of frontline nurses who provided direct care for COVID-19 patients.

Background: Due to the COVID-19 pandemic, the demands on healthcare systems have been higher than before. Although previous studies have explored the experiences of frontline nurses, these experiences could vary depending on each country's social, cultural, and historical contexts.

Introduction: In the midst of the global pandemic, sharing the experiences of COVID-19 frontline nurses could have implications for both nursing and nursing policies that could be applied to future pandemics.

Methods: This descriptive qualitative study comprised 14 South Korean nurses with a minimum of one month of experience working within a COVID-19 department. Individual interviews were conducted on a virtual platform, and a thematic analysis was employed. The consolidated criteria for reporting qualitative studies were used to ensure a detailed reporting of the study.

Results: Four themes and 12 subthemes were developed. The themes included: (1) feeling forced into a world of uncertainty; (2) providing unique care for COVID-19 patients; (3) perceiving barriers to providing quality care; and (4) seeking meaning in caring for COVID-19 patients.

Discussion: Nurses recognized their unique roles in caring for COVID-19 patients and sought new meanings within their profession. However, the poor work environment exacerbated the physical and emotional burden among the nurses and compromised the provision of quality care.

Conclusion: This study highlighted the nursing policy issues that need to be improved to ensure better quality care and a stronger healthcare system.

Implications for nursing policy: Governmental action is essential to ensure that nurses can maintain the quality of care they have provided during COVID-19 and any future pandemics.

KEYWORDS

communicable disease, COVID-19, healthcare system, nursing, pandemics, qualitative research, South Korea

INTRODUCTION

Since 2020, the COVID-19 pandemic has had an enormous influence on individuals' lives, as well as politics, economy, and healthcare systems of nations around the world (United Nations, 2020; World Bank, 2021; World Health Organization, 2021). Globally, healthcare providers (HCPs) have been under

physical and psychological strain due to the increased demand on healthcare services, which has been exacerbated by limited personnel and medical resources (Murat et al., 2021; Park et al., 2020).

The frontline nurses who provided direct care for COVID-19 patients were one of the most vulnerable groups during the COVID-19 pandemic due to the increased demand for

healthcare services. Studies reported that frontline nurses' levels of stress, burnout, and depression appear to have been substantially higher than other HCPs (Murat et al., 2021; Wang et al., 2020). This might be related to physical exhaustion due to long working hours in personal protective equipment (PPE) and psychological burdens of high exposure to the virus (Murat et al., 2021; Wang et al., 2020).

In the midst of the complex and chaotic situation caused by the pandemic, it is crucial to listen to the voices of frontline nurses, as suggested by an International Council of Nurses (ICN) report (Catton, 2021, 2022; ICN, 2021a). These voices can contribute to the improvement of the healthcare system. Exploring frontline nurses' experiences could help us understand the challenges they face and provide implications for nursing and nursing policies.

BACKGROUND

Several studies have been conducted to understand the experiences of HCPs caring for COVID-19 patients in various countries (Fernandez et al., 2020; Liang et al., 2021; Liu et al., 2020; Muz & Erdoğan Yüce, 2021). These experiences may vary depending on the country's social, cultural, and situational contexts (Korstjens & Moser, 2017) including health policies regarding COVID-19, social status of nurses, and social perception of nurses, as well as medical resources. For example, Taiwanese nurses reported that they were well-prepared for COVID-19 and well-equipped with PPE after learning from their experiences with the Severe Acute Respiratory Syndrome pandemic in 2003 (Liang et al., 2021). In Singapore, nurses were satisfied with support from the public and hospitals that ensured their safety while working in COVID-19 departments (Goh et al., 2021). On the contrary, nurses in Turkey faced increased challenges due to a lack of organizational and political support as nurses' social status is low in Turkey (Muz & Erdoğan Yüce, 2021), and they were treated as mere hospital personnel (Akkuş et al., 2021).

Similarly, frontline nurses in South Korea also faced challenging situations related to COVID-19. Internationally, the South Korean government has gained acclaim for its rapid response to COVID-19 (Martin & Yoon, 2020), even though South Korea was one of the first countries to report COVID-19 cases (Im, 2020). However, the poor working environment of nurses has been a serious sociopolitical issue in South Korea for years (Kim, 2022), and the situation was aggravated by the pandemic. This resulted in the announcement of a strike by the Korean Health and Medical Workers' Union (Choi, 2021), and a statement by the Korean Nurse Association (KNA) calling for strong governmental actions to improve nurses' working conditions (KNA 2021).

The ICN Congress "Nursing Around the World" was held in 2021, which emphasized the sharing of nurses' experiences during the global crisis to prepare for the future of healthcare (ICN, 2021b). Sharing these experiences could have meaningful implications for nursing and health policies applicable to other countries amidst the current pandemic. Hence, this

study aimed to explore the experiences of frontline nurses who provided care for COVID-19 patients in South Korea. The research question of this study was "What was your experience with caring for COVID-19 patients?"

METHODS

Research design

This study followed a descriptive qualitative design representing the participants' shared subjective experiences (Bradshaw et al., 2017; Sandelowski, 2010). Descriptive qualitative studies are drawn from a naturalistic perspective that differs from grounded theory, or phenomenology, all of which employ a philosophical perspective and structured methodology (Bradshaw et al., 2017; Doyle et al., 2019). The consolidated criteria for reporting qualitative research were used to ensure detailed reporting of the study (Tong et al., 2007).

Participants

The participants comprised 14 hospital nurses from nine hospitals in five South Korean provinces. These included tertiary and general hospitals with over 500 beds except for one secondary hospital. Purposive sampling was used to recruit heterogeneous nurses with diverse clinical backgrounds and geographic locations. The inclusion criterion was a minimum of one month of work experience in the COVID-19 department, and the exclusion criterion was less than one year of clinical experience. Participant recruitment flyers were posted online. Nurses who contacted the investigator received a further explanation of the study details, and those who were willing to participate were sent informed consent forms via email.

Data collection and ethical considerations

Data were collected between December 2020 and April 2021. The study received approval from the Institutional Review Board of Yonsei Health System (No. 2020-0160). The authors explained the study objective, interview method, procedure, recording, anonymity, confidentiality, right to withdraw, and the likelihood of a second interview through email, if necessary, to the participants. The interviews were conducted through a virtual meeting platform to maintain social distancing, and the participants could wear masks if they were uncomfortable being videotaped.

The interviews were conducted by the primary and assistant investigators who took field notes of the participants' reactions, and personal thoughts shared during the interview. The interview duration was 56–93 minutes (mean of 80).

The interview guide is summarized in Table 1. After each interview, investigators discussed the points to be considered in the following interview, namely, the rate of speech, tone of



TABLE 1 Interview guide

Question type	Sample question
Starting question	Could you please introduce yourself?
Introductory question	How did you happen to care for COVID-19 patients?
Key question	Could you tell us about your experience caring for COVID-19 patients?
Probing questions	<ul style="list-style-type: none"> • How was caring for COVID-19 patients different from other patients you normally take care of? • What were your biggest challenges in caring for COVID-19 patients? • How did you feel when facing those obstacles? • Have you noticed any changes in yourself after your experience of caring for COVID-19 patients?
Ending question	What does "experience caring for COVID-19 patients" mean to you?

voice, and habitual expressions. The investigators transcribed and reviewed the transcript with the field notes. For data saturation, a base size of 6 participants, a run length of 2 interviews, and a threshold of 0% for new information were set (Guest et al., 2020).

Data analysis

The thematic analysis proposed by Braun and Clark (2006) was employed to analyze the qualitative data generated by this study. Thematic analysis is characterized by the identification and interpretation of patterns within the data (Doyle et al., 2019). One primary investigator coded the data, and all investigators reviewed the codes after reading the transcripts several times. Meetings were held to confirm and finalize the codes, and the most appropriate themes were discussed. After repeating this cycle several times, the themes were clustered, sequenced, and named.

Rigor

To ensure rigor, this study followed the four criteria of trustworthiness proposed by Guba and Lincoln (1989). To establish credibility, the investigators verified their understanding with the participant at the end of each interview. Data triangulation was performed using the data source of one participant's diary, and photos were referenced to increase the validity of the findings. To achieve confirmability, the investigators examined their own perceptions or attitudes toward the topics to minimize bias before the data analysis, and reflective notes were kept during the study period. Transferability was achieved by using a detailed description to capture the contexts, and authenticity was established by providing adequate quotes that best described the subthemes.

RESULTS

Among 14 nurses, 10 (71.4%) were women with a mean age of 31.2 years with a standard deviation (SD) 3.8 (Table 2). The mean duration of work experience in the COVID-19 department was 4.6 months (SD 3.8).

Thematic analysis

Four themes and 12 subthemes emerged from 38 codes and 547 quotations (Figure 1).

Feeling forced into a world of uncertainty

Nurses felt they entered an unknown world because caring for COVID-19 patients was an unfamiliar experience for them. As they received abrupt dispatch notifications and were dispatched without sufficient training, they felt they were pushed into a new world of uncertainty.

1. Baffled by the abrupt dispatch notification

The infection ward was run by conventional nurses and dispatched nurses, who were repeatedly replaced by other dispatched nurses over a few months. Most were informed about the dispatch by their unit managers without any prior discussion, and this made nurses feel like their opinions had not been considered.

"One day, the manager just told me that I would be working in the COVID-19 department. We had never talked about it, so the news was shocking. Five nurses were dispatched, and four of them were notified suddenly." (N11)

"I got the dispatch notification, and I only had two days before I started working in the COVID-19 department. I was bewildered and worried." (N14)

"The unit manager told me that I was chosen to be dispatched because I live alone. I thought it was unfair and felt like I was forced." (N2)

2. Innate fear of infection before encountering the patients

Caring for COVID-19 patients was a foreign experience for the participants. Although they knew that the PPE protected them from exposure to the virus, they feared infection, particularly before they had met the COVID-19 patients. One participant felt guilty and ashamed for having negative feelings toward the patients as a nurse.

"I had no idea about caring for infected patients or putting on PPE. So I was apprehensive about the risk of infection at first." (N11)

"They are just patients with pulmonary diseases, but at first, I was afraid of approaching them. In disaster movies, you see that people avoid contact with the infected person, right? That is exactly how I felt before I met them. I knew PPE protected me from the virus, but honestly, I was afraid." (N12)



TABLE 2 Participant characteristics (N = 14)

Participant	Sex	Age (years)	Clinical experience (years)	Type of hospital	COVID-19 department	Months spent in the COVID-19 department	Remarks
1	F	38	15	Public	General ward	5	Transition to a designated COVID-19 hospital
2	F	28	4	Public	General ward	2.5	Transition to a designated COVID-19 hospital
3	M	32	8	Public	Infection ward	11	-
4	M	34	9	Public	Infection ward	10	-
5	F	30	7	Private	Infection ward	4	-
6	F	31	9	Private	Infection ward	4	Dispatched to the COVID-19 department
7	F	26	2	Public	Infection ward	4	Dispatched to the COVID-19 department
8	F	28	3	Private	ER	8	-
9	F	28	4	Private	ICU	4	-
10	M	28	4	Private	ICU	2	Volunteered through the Central Disaster Management Headquarters
11	M	31	7	Private	ICU	2	Dispatched to a COVID-19 department
12	F	40	15	Private	ICU	2	Dispatched to a COVID-19 department
13	F	31	7	Private	Infection ward	2	Dispatched to a COVID-19 department
14	F	33	9	Private	Infection ward (ward and ICU care)	3.5	Dispatched to a COVID-19 department

Abbreviations: ER, emergency room; F, female; ICU, intensive care unit; M, male; NICU, neonatal intensive care unit.

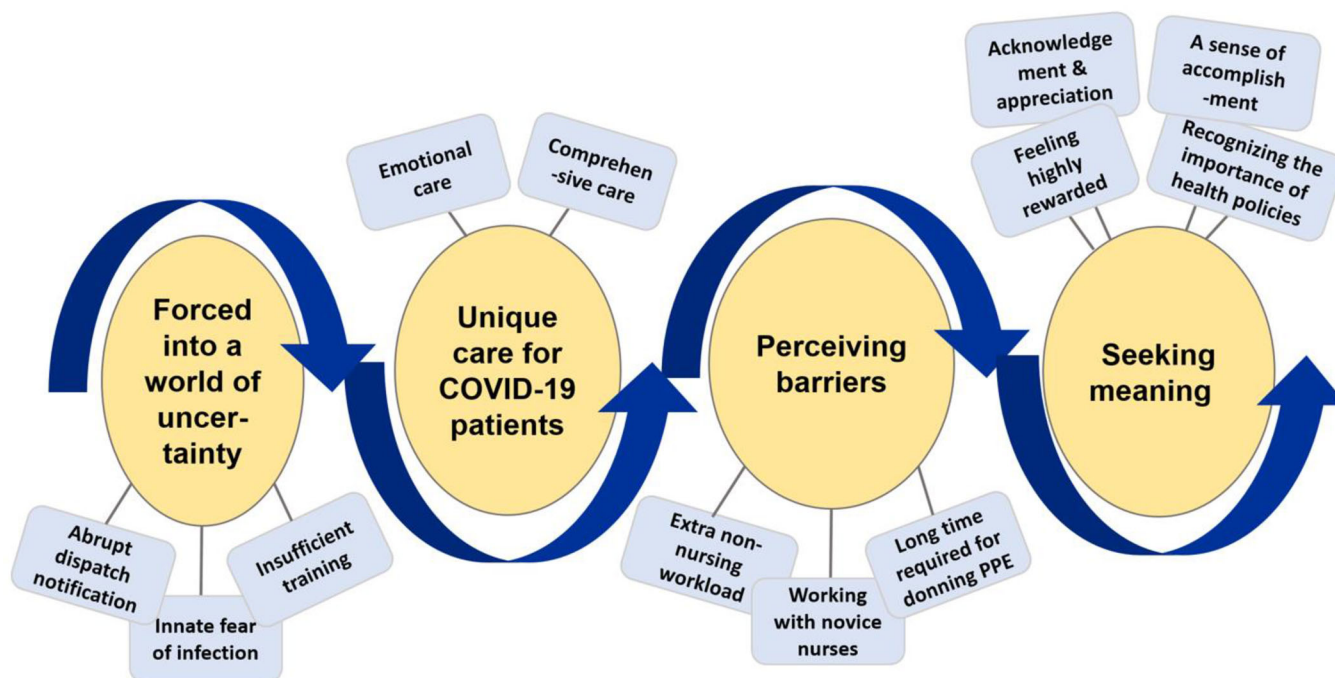


FIGURE 1 A diagram of nurses' experiences of caring for COVID-19 patients



3. Feeling frustrated due to insufficient training

The nurses were worried about their job performance in the COVID-19 department as they had not received sufficient training. The training was mostly related to the donning and doffing of PPE and took approximately 3 hours. In some cases, it was provided only a day or two before they were dispatched. Nurses who were dispatched to critical care wards from general wards had also received insufficient critical care training, which exacerbated their worries.

“I only received a few hours of training in donning and doffing Level D PPE on my first day in the COVID-19 department and started working in the field immediately. It would have been much better if I had received proper training.” (N14)

“The three hours of infection control training included the structure of the isolation ward, PPE, and waste disposal. The system was completely different from a general ward, with so much unfamiliar medical equipment. I was worried about causing any harm because of my ignorance” (N11)

Providing unique care for COVID-19 patients

As time progressed, the nurses recognized some distinct features of COVID-19 patient care, such as focusing on patients' psychological health, as well as being the one and only person with whom the patients could interact.

1. Prioritizing emotional care for patients' adjustment to unexpected changes

All the participants mentioned the significance of providing emotional support. The patients showed negative emotions, including anxiety, depression, fear due to stress from isolation, and guilt about spreading the virus. Nurses tried their best to help patients adapt to their new settings by providing emotional support.

“Patients are really distressed, and even if they don't say it, nurses have to catch the signs, such as not eating well, or refusing the treatment. I encourage them by telling them that their families are waiting for their recovery.” (N7)

“If I were a patient, I would be frightened to see fully 'armored' people around me and feel like I am the virus every time I see the nurses. I try to empathize with the emotions patients may have. We write our names on the Level D gowns, and engage in small talk to ease them.” (N14)

2. Providing comprehensive care as the only care provider

The nurses consistently stayed near the patients and provided comprehensive care, from providing hands-on assistance to caring for patients' trivial day-to-day needs. These tasks are typically provided by resident caregivers (generally family members) in South Korea, but during the pandemic, nurses had to provide all the care due to restricted access in the ward.

“I really cared for 'everything' about these patients, from head to toe. Nursing is providing what the patient needs the most. In this aspect, nurses are the only people they can rely on in the isolation ward and we had to take care of everything.” (N3)

“In here, nurses are the only ones who are always with the patients; not the family members or the doctors, but us. We do 'everything' for the patients.” (N2)

Perceiving barriers to providing quality care

The nurses faced various challenges in providing quality care. They experienced psychological burden as they took on tasks that had been performed by other hospital personnel before COVID-19, and worked with nurses who had little clinical experience. Furthermore, the time required for donning PPE made it difficult for the nurses to immediately respond to and meet patients' needs.

1. Being responsible for the extra non-nursing workload

To reduce the infection risk among staff members, the hospitals did not allow janitors or nursing aids to enter the COVID-19 departments. Instead, the nurses assumed responsibility for the extra non-nursing workload. This placed a substantial burden on the nurses because of countless additional tasks and hindered their provision of focused and quality care to patients.

“We joked, 'I came here to clean.' Janitors were not allowed to enter. Cleaning up in Level D PPE makes me feel like I might die. After work, my heart keeps pounding so hard that I can't sleep well.” (N13)

“With all those disinfection tasks, we do not have much time to care for patients emotionally, to be honest.” (N5)

[From a diary]: “Whenever the patient discharges, I am so busy. I discard everything in the room, including the patient's linen and blankets, disinfect the whole room, bed, and bathroom, and prepare for the next patient.”

2. Working with novice nurses as a team

Most senior nurses were worried about the quality of care in the COVID-19 department and burdened by a high level of responsibility, due to the many novice nurses with 1–2 years of experience on the teams. Even among the experienced nurses, some had no experience with caring for infected patients or those with pulmonary diseases.

“Some nurses were very young, with less than a year of clinical experience. So I thought, 'Can we really make it?' I don't think novice nurses should be in charge of caring for severely ill COVID-19 patients.” (N11)

“Half of the nurses on the team had no clinical experience working in critical care and working with these team members was a heavy burden, because I was one of the few nurses with clinical experience in critical care.” (N10)



3. Extended time required for donning PPE that could hinder timely care

Donning Level D PPE took approximately 15 minutes; hence, the nurses always worried about providing timely care in emergencies. Furthermore, it was difficult to meet patients' needs immediately due to the length of the donning time.

"What weighs me down the most is that I can't provide immediate care in emergency situations, like when the patient has fallen, or their oxygen saturation level drops. It takes AT LEAST 10 minutes to don PPE." (N7)

"During the night shift, I always check the small screen to see if the patient's chest inflates because you cannot simply go and check the patient anytime due to the time spent on PPE, so I feel pressured." (N3)

Seeking meaning in caring for COVID-19 patients

The nurses regarded working in the COVID-19 department as a valuable experience. They had a great sense of fulfillment when seeing the patients get discharged. Also, they became more competent after adapting to the new department and thought the COVID-19 pandemic had been a positive turning point in social perceptions of nurses. Furthermore, they gained a more macroscopic perspective as nurses, as they now realized the importance of organizational and nursing policy throughout this crisis, although they already had an innate understanding.

1. Feeling highly rewarded through patient recovery

Due to the greater responsibility nurses had toward COVID-19 patients, they felt a greater sense of reward from patient recovery and discharge compared with before the pandemic. This was expressed more frequently by nurses who had cared for severe COVID-19 cases, compared with their counterparts in other departments.

"When patients are discharged, I feel like I have done something for the people who needed my help the most. Now might be my most memorable moment as a nurse." (N14)

"Most of the patients improved and were discharged in a few weeks. I thought, 'Yes, this is what I do, what nurses do.'" (N5)

2. Being acknowledged and appreciated as a professional nurse

The nurses felt that the public perception of nurses had changed since the COVID-19 outbreak and people acknowledged their devotion in healthcare settings. This is uncommon in South Korea, where nurses' social status is not very high. The nurses stated that the "Thanks to" challenge, a campaign started by the Central Disaster and Safety Countermeasures Headquarters of the government, had also contributed to changing the public's attitude toward nurses.

"People seem to know about what we do, and they care about us. I am grateful for this. Patients write letters, send snacks, and some even come to see us after discharge." (N13)

"Media reports on nurses are positive, and with the 'Thanks to' challenge, I think people's perceptions have changed. My daughter proudly tells everybody that her mother is a COVID-19 department nurse, and she says people always give her a look of admiration." (N1)

3. Fulfilled with a sense of accomplishment as a competent nurse

The nurses expressed that working in the COVID-19 department was an opportunity to improve their nursing competencies. They felt a sense of accomplishment after finally adapting to the new environment and that their scope as a nurse had broadened.

"As time passed, caring for COVID-19 patients became less of a big deal for me. I believe that the breadth of my capabilities has improved." (N8)

"I feel like I had endured the difficult times well. At first, I 'hated' going to work, and now, I am okay working here. I feel a sense of accomplishment as a nurse." (N9)

4. Recognizing the importance of health policies for optimal work conditions

The nurses strongly addressed the need for better working conditions for COVID-19 nurses. They felt improvements are needed to address insufficient training for dispatched nurses, heavy workloads, lack of guidelines regarding the nurse-to-patient ratio, delayed payments, and unequal amounts of hazard compensation among the nurses.

"The average duration of a Korean nurse's clinical service is REALLY short. Hospitals should be places where experienced nurses are willing to stay to cope better in national emergency situations like this. The poor working environment of nurses is being broadcasted these days, and now, the system should be changed." (N10)

"Hazard pay was not given immediately, and the nurse-to-COVID-19 patient ratio is still dependent upon each hospital's policy. The government should take real action." (N3)

DISCUSSION

This study explored the experiences of nurses who cared for COVID-19 patients. Although the nurses experienced uncertainty due to their abrupt transition in their role as COVID-19 department nurses, they recognized the meaningful aspects of COVID-19 patient care, such as providing emotional and comprehensive care or having the opportunity for professional growth. Similar findings were reported in studies of other countries (Goh et al., 2021; Liang et al., 2021; Liu et al., 2020; Muz & Erdoğan Yüce, 2021). For example, in China, HCPs reported they had gained a person-centered view and integrated emotional support into their care for COVID-19



patients, while also becoming more confident about their competencies (Liu et al., 2020). In Singapore, nurses felt they had become more resilient after the pandemic (Goh et al., 2021).

Despite these valuable experiences, the nurses were frustrated due to the insufficient COVID-19 training and were burdened with heavy workloads. They realized the close relationship between their working conditions and hospital or healthcare policies, and the actions of the hospital or government that sought to improve the work environment, as essential to ensuring patient safety (Akkuş et al., 2021; Havaei et al., 2021). Among the various nursing policy issues addressed by the participants, three are discussed in the following section.

First, due to the staffing shortage, inexperienced nurses were required to care for critically ill COVID-19 patients. A study involving Australian nurses pointed out that many novice nurses were responsible for caring for COVID-19 patients (Fernandez et al., 2020). One systematic review also suggested that insufficient support from the hospital, particularly their inability to address a staffing shortage, was one of the barriers to providing quality care to COVID-19 patients (Joo & Liu, 2021).

According to the American Nurses Association's Principles for Nursing Staffing, nurses' level of experience should be considered in making staffing decisions. Recent statistics show that the average age of South Korean nurses working in hospitals is 28.7 (Jeon & Wi, 2019). This indicates a high proportion of novice nurses in South Korean hospitals, considering the average age of nurses in the United States was 52 according to the 2020 National Nursing Workforce Study (Smiley, 2021). The main reason reported for leaving the nursing profession was harsh working conditions such as a high nurse-to-patient ratio (i.e., 1:16.3 in general hospitals) and heavy workloads (Jeon & Wi, 2019). In order to address these problems, the South Korean government announced the "Nurse work environment improvement" plan in 2018, and the Korean Ministry of Health and Welfare established an independent Nursing Policy Department in 2021 (Lee, 2021). Despite these changes, participants still pointed out the poor work environment issues, which suggests that further visible and concrete actions of the government are needed.

Second, nurses were also responsible for non-nursing tasks such as cleaning. Frontline nurses in Turkey also reported that they were required to take on additional tasks because they were the only people who entered the patients' rooms (Akkuş et al., 2021). These additional tasks could hinder nurses in delivering quality care, pose an increased physical and emotional burden on the nurses, and even cause role conflicts. Role conflicts occur when a nurse has several opposing role requirements (Varpio et al., 2018). Role conflicts are known to exacerbate emotional burnout (Piko, 2006; Tunc & Kutanis, 2009) and comprise a significant factor influencing nursing turnover (Hoseini et al., 2021). Hospitals and organizations need to create a work environment where nurses can focus on caring for COVID-19 patients, and they need to clarify the scope of services provided by COVID-19 nurses.

Moreover, nurses should receive sufficient training before working in COVID-19 departments. A similar theme of insufficient training of nurses caring for COVID-19 was revealed in studies in China and Korea (Lee & Lee, 2020; Liu et al., 2020). Evidence suggests that a well-designed transition program for novice nurses improved their confidence and competence, in addition to reducing stress and anxiety (Edwards et al., 2015). Nurses dispatched to COVID-19 departments could also benefit from structured training programs on infection control and critical care. Hospitals and national nursing associations should provide adequate resources to help nurses care for COVID-19 patients competently.

Despite the study's strengths, there are a few limitations. First, since the nurses were recruited via online flyers, only those who have strong opinions on the research topic might have participated. Second, using a virtual platform for interviews might have limited investigators' ability to catch subtle nuances. Third, we could not capture the differences in nurses' experiences associated with different waves of the pandemic.

IMPLICATIONS FOR NURSING POLICY

We are still in the midst of the COVID-19 pandemic, and a similar crisis could occur in the near future. Frontline nurses' voices must be heard to ensure better management of catastrophic situations. Policymakers should take action to ensure better workplace safety and conditions; in particular, they must implement fundamental changes to address staffing issues. Moreover, dispatched nurses need sufficient training in advance. Adequate training can help nurses to be more confident and skillful, which can ensure the provision of quality care, as well as help nurses protect themselves. Lastly, to ensure that nurses can focus solely on patient care, they should not be required to carry out non-nursing tasks, such as cleaning the ward. In the context of the global pandemic, sharing these nursing experiences can provide insights and guidance to countries with contexts similar to South Korea and can improve preparedness for future infectious diseases.

CONCLUSION

Caring for COVID-19 patients was a meaningful experience for South Korean frontline nurses, but was also physically and mentally burdensome due to the harsh work environment in the COVID-19 department. Nurses' political advocacy related to the poor working conditions they experienced could lead to practical changes in healthcare settings, which could ultimately enable nurses to provide higher quality patient care.

AUTHOR CONTRIBUTIONS

Study design: EG, JY; data collection: EG, JY, SW, HN; data analysis: EG, JY, SW, HN; study supervision: EG; manuscript writing: JY, SW; critical revisions for important intellectual content: EG.



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CONFLICT OF INTEREST

No conflicts of interest have been declared by the authors.

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