

Experiences of nurses caring for perinatal women and newborns during the COVID-19 pandemic: A descriptive qualitative study

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Funding information

The authors received no specific funding for this work.

Abstract

Aim: Nurses are pivotal in caring for patients infected with COVID-19. Little is known about experiences of nurses in maternity care during the pandemic. Therefore, this study aimed to describe nurses' experiences of caring for perinatal women and newborns during the pandemic.

Design: A descriptive qualitative study was conducted.

Methods: Data were collected from August–November 2020 using focus group and in-depth interviews. A total of 24 nurses working in maternity and newborn care units participated in the study. Content analysis method was used for data analysis.

Results: The participants' clinical experience ranged from 6 months–26 years. Three major themes emerged as follows: “making every effort to prevent COVID-19 infection,” “caring for perinatal women and newborns with COVID-19 infection or suspected infection” and “job stress and professional growth during the pandemic.” Participants reported that they needed more support in terms of staffing and mental health.

KEYWORDS

experience, maternity care, pandemic, qualitative study, registered nurse

1 | INTRODUCTION

The novel coronavirus disease 2019 (COVID-19) outbreak originated in Wuhan, China, at the end of 2019 was declared as a global pandemic by the World Health Organization on 11 March 2020. Globally, more than 100 million people have been infected with COVID-19, but there is substantial variation within and between countries (Patel et al., 2020; World Health Organization, 2021). In the early stage of pandemic, there was a severe shortage of healthcare workers, personal protective equipment (PPE) and ventilators worldwide (Cohen & Rodgers, 2020). The outbreak exposed deficiencies in public health emergency preparedness, although there had been a good response to several other

outbreaks, such as Ebola, influenza A (H1N1), severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome since the early 2000s. COVID-19 has affected everyone, especially healthcare workers, both physically and emotionally (Arnetz et al., 2020; Catania et al., 2020; Galehdar et al., 2020; Jo et al., 2020; Si et al., 2020). This indicates that more attention should be paid to healthcare workers' pandemic-related experiences.

In Korea, the first case of COVID-19 was reported on 20 January 2020 and it was the second most infected country after China by early March 2020. To prevent its spread, the government introduced various strategies at both individual and governmental levels, such as social distancing, frequent handwashing, wearing masks in public and testing

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and contact tracing. These led to the successful management of the pandemic compared with other countries (Patel et al., 2020), but small group infections have continued to spread across the country, which require continuous vigilant monitoring and compliance with guidelines.

2 | BACKGROUND

Nurses are the main healthcare professionals on the COVID-19 front-line. A study in Turkey (Aksoy & Koçak, 2020) reported that nurses and midwives showed intense psychological responses including anxiety, uneasiness and fear and difficulty in dealing due to COVID-19. Nurses working in units of maternity and newborn care could feel more stressful since they care for both mothers and their babies. Pregnant women are vulnerable to viral respiratory infections and at increased risk for adverse pregnancy outcomes, including preterm births, low birth-weight and neonatal intensive care unit (NICU) admission due to these infectious diseases (Delahoy et al., 2020; Smith et al., 2020). COVID-19 has caused higher rates of perinatal anxiety, depression and distress in pregnant women (Brooks et al., 2020; Vazquez-Vazquez et al., 2021). Similarly, a systematic review found that the pandemic has significantly increased the risk of anxiety during pregnancy and the perinatal period (Hessami et al., 2020). Furthermore, it has presented numerous challenges to prenatal care, childbirth and neonatal care (Mizrak Sahin & Kabakci, 2020; Spatz & Froh, 2020). For instance, PPE and a negative pressure isolation room with an anteroom required for quarantined patients with COVID-19 may be required to care for the mother or baby.

Pregnancy and childbirth are significant life events. Before the pandemic, family-centred care for childbirth was emphasised. A systematic review found that the partners' involvement positively influenced postpartum depression (Yargawa & Leonardi-Bee, 2015). However, healthcare facilities started restricting visitors to limit the spread of COVID-19 (Greene et al., 2020; Saiman et al., 2020). One study reported that pregnant women were concerned about their partners' presence during childbirth, the risk of catching COVID-19 and breastfeeding support (Karavadra et al., 2020). Providing safe maternity health services during the pandemic is essential to both healthcare professionals and mothers. However, maternal and neonatal care health professionals have received little attention, and studies have mainly focused on COVID-19's impact on nurses, especially in acute care settings (Schroeder et al., 2020; Sun et al., 2020). A deeper understanding of the changes and challenges that maternity care nurses face is vital for guiding future efforts to optimize nursing care and facilitating high-quality nursing services during the pandemic. Therefore, we conducted the qualitative study on the experiences of maternity care nurses during the COVID-19 pandemic.

2.1 | Study aim

This study aimed to describe experiences of nurses caring for perinatal women and newborns during the COVID-19 pandemic.

3 | METHODS

3.1 | Study design and participants

A qualitative descriptive design was used. Twenty-four participants were recruited from 10 hospitals in five South Korean cities, nine of which were tertiary or university hospitals. Among those, three were national university hospitals, and the rest were private hospitals. All hospitals have separate outpatient care areas both for respiratory and non-respiratory patients. They also have neonatal care unit and/or NICU. The sample was recruited using purposive sampling based on the experience of working with COVID-19. We included Registered Nurses working in hospitals that had confirmed or suspected COVID-19 cases. No one dropped out after agreeing to participate.

3.2 | Data collection

Data were collected using eight focus group interviews and four individual in-depth interviews between August–November 2020. Data were collected until it was saturated, indicating that no new relevant information was found. Focus group interviews were used because focus groups provide an interactive environment and help understanding the perspectives and experiences of the participants (Krueger & Casey, 2014). Each focus group comprised two to four participants. For those who were unable to join the focus group interviews due to time conflicts, we conducted individual interviews. Among the 12 interviews, five were undertaken in person, and seven were using Zoom due to long-distance and COVID-19. The in-person interviews were held in a quiet meeting room outside of hospitals that were sanitized for COVID-19 prevention without the presence of non-participants. All researchers were Ph.D. prepared female professors and had experience in conducting qualitative research. No relationship with the participants was established prior to study commencement.

Before the interview, participants were informed about the reasons for conducting the research and its goals. The first author, who has qualitative research experience, conducted all interviews (individual and focus group interviews). They were audio- or video-recorded after obtaining the participants' permission. The interviews lasted approximately 60 to 120 minutes. The researchers made field notes during and immediately after the interviews.

To ensure that the questions were equivalent for all participants, we used a semi-structured interview guide. Following an opening question, the participants were asked four key questions: (1) "What have you experienced during the COVID-19 pandemic?"; (2) "What has changed since the pandemic began (the changes that COVID-19 has brought to your work)?"; (3) "What challenges (difficulties) have you faced in your work due to COVID-19?"; and (4) "What needs to be changed?". They were also asked to respond to probing questions such as "Would you elaborate a little more?", "Would you clarify that?", "How do you feel about it?" and "What

thoughts come to mind first when you think about COVID-19 pandemic?". At the end of the interview, the participants were asked, "Is there anything you would like to add?". The researchers transcribed the interviews verbatim shortly afterwards and checked their content for accuracy.

3.3 | Trustworthiness

We used Lincoln and Guba's (1985) criteria to ensure the study's rigour and trustworthiness. The research findings' credibility was established using member checking and peer debriefing. The transferability was achieved by providing a detailed description of the research process. Regarding dependability and confirmability, we developed an audit trail of both interview data and research process and checked the findings' consistency.

3.4 | Data analysis

Data analysis has been conducted concurrently with data collection to confirm the data saturation. The data were analysed using a three-phase inductive content analysis process (Elo et al., 2008): preparation, organization and reporting. Two researchers read each transcript several times to obtain an overall understanding of the content and a sense of the whole interview. The meaning units (words, sentences and paragraphs) related to the nurses' experiences were identified. The researchers used open coding. The codes were grouped by comparing their similarities and differences, and subthemes and overarching themes were then derived from the data through a process of abstraction. Two researchers (Y. Son and H. S. Kang) independently coded each transcript. These were confirmed by the other authors. The research team discussed the preliminary results until achieving consensus.

3.5 | Ethical Approval

The institutional review board (1041078–202002-HRSB-034–01) of the first author's university approved the study. It was conducted in accordance with the principles of the Declaration of Helsinki. All participants voluntarily agreed to participate and provided informed written consent. We obtained their permission to record the interviews. All participants were assured about the anonymity and confidentiality of the discussions and that they could withdraw at any time without penalty. To ensure anonymity and confidentiality, all data were stored on the hard drive of a password-protected computer accessible only to the authors (Y. Son and H. S. Kang).

4 | RESULTS

The 24 nurses participated, and their mean age was 31.2 years (range: 23–47 years). Their clinical experience ranged from

6 months–26 years. All the participants were female. Their work units were maternity ($n = 7$), labour and delivery ($n = 9$), and NICU and/or neonatal care unit ($n = 8$). Regarding their religion, about two-thirds (62.5%) reported no religious affiliations, while 25.0% followed Christianity, 4.2% followed Buddhism, and 8.3% followed other religions. Most of the participants held a baccalaureate (66.7%) or a higher (20.8%) degree, and 12.5% had an associate degree. More than half of the participants (66.7%) were married.

Three major themes emerged as follows: "making every effort to prevent COVID-19 infection," "caring for perinatal women and newborns with COVID-19 infection or suspected infection" and "job stress and professional growth during the COVID-19 pandemic." Table 1 shows three themes and 11 subthemes that emerged from the data. Discussions about these three themes are presented below.

4.1 | Making every effort to prevent COVID-19 infection

4.1.1 | Limiting peoples' access to hospitals and restricting visitors

Participants reported that everyone accessing to hospital had to be checked for fever and completed a paper form regarding infection history or used a self-check-in kiosk or QR code. Additionally, nurses had to check all patients for fever and respiratory symptoms, the recent history of travelling to risky countries and contact with infected persons, as well as information about visitors. Some facilities allowed no visitors or only one visitor during the visitation hour or 24 hours for the main support person.

TABLE 1 Themes and Subthemes

Themes	Subthemes
Making every effort to prevent COVID-19 infection	Limiting peoples' access to hospitals and restricting visitors
	Pre-admission testing for COVID-19
	Monitoring nurses for COVID-19
	Limiting breastfeeding and antenatal education
Caring for perinatal women and newborns with COVID-19 infection or suspected infection	Supporting parents of newborns
	Developing a maternal care protocol during the COVID-19 pandemic
	Building competency in caring for perinatal women with COVID-19 infection or suspected infection
Job stress and professional growth during the COVID-19 pandemic'	Sharing COVID-19-related information and notices
	COVID-19-related stress
	Professional growth
	Additional support needs for safe care

"The NICU visit was permitted for 30 minutes daily for parents before the COVID-19 outbreak, but visitors were not permitted at all when the COVID-19 situation was serious, then it eased to once a week."

"It (restricting visitors) was hard on pregnant women because their partner or supporter had to leave foods or supplies without being able to see them."

4.1.2 | Pre-admission testing for COVID-19

Most participants reported that recently all patients had to be tested before admission. When pregnant women were brought to the emergency room in high-risk conditions, they had to be tested and wait for the results. Participants were concerned about admitting patients to a shared room before knowing the result, even when the patients' risk was considered low. They expressed worry about "the following storm" (i.e. problems that might occur later) if the test results were positive.

"It is very stressful whenever I am in a position that a situation could turn out differently depending on how I deal with patients suspected to have COVID-19."

4.1.3 | Monitoring nurses for COVID-19

Participants reported that nurses were checked for fever and other COVID-19-related symptoms once or twice per day before starting work and/or leaving. It was initially recorded manually, but this changed to utilizing a self-check app/pop-up screen when logging the electronic medical record (EMR).

"Whether or not having COVID-19 symptoms and a history of recently visiting high-risk areas where there has been an infected person, all had to be checked for myself as well as my family members."

4.1.4 | Limiting breastfeeding and antenatal education

Participants stated that breastfeeding for babies in a lactation room was allowed within certain limits during the COVID-19 pandemic. New mothers used to freely visit the room for breastfeeding before the pandemic; however, now they were only able to enter the room when they were called for breastfeeding. Hospitals also limited the number of mothers using a lactation room at one time to maintain the social distancing. Moreover, breastfeeding in the NICU was limited or not permitted at all. Participants reported that "mothers were just ringing the bell and leaving breast milk in the ice box in front of the NICU to avoid face-to-face contact."

One participant reported "mothers could bottle-feed or breast-feed several days before discharge wearing gloves and gowns." Participants said that some mothers were not sufficiently trained for bottle-feeding or breastfeeding upon the baby's discharge and that prenatal classes have been suspended.

"In the NICU, discharge education for preterm babies was not being offered at all (during the pandemic)."

"There was an antenatal education programme once a month, but this was stopped after the COVID-19 outbreak."

4.1.5 | Supporting parents of newborns

Participants stated they received many telephone calls from parents of the newborns when visiting the NICU was completely stopped initially. Some facilities provided phone counselling (by physicians) and sent photographs of babies when visiting the NICU was limited. NICU visitation policies varied from permitting one parent at a time or both parents together once per week, to allowing photographs and recordings of their baby to be taken when visiting, to not allowing a phone to be taken into the NICU. One participant said that the nurses' written diaries for extreme preterm babies (gestational age ≤ 33 weeks) greatly satisfied the parents.

"From a mother's viewpoint, I think they will be more satisfied with a video of their babies rather than a photo and phoning them once a day would stop a lot of calls from anxious parents."

4.2 | Caring for perinatal women and newborns with COVID-19 infection or suspected infection

4.2.1 | Developing a maternal care protocol during the COVID-19 pandemic

Participants reported that maternal care protocols (for perinatal women and neonates) were developed in collaboration with clinicians in the obstetric and paediatric unit and infection control department. One participant said, "At first, there was no clear protocol, there was a state of disorder, and we did not know which way to turn when preparing care, but it became very helpful to have a clearly written protocol, so that we can work without being bewildered."

"At first, it (developing a protocol) was somewhat difficult (e.g. the process of disposing a placenta) and we were at a loss what to do. However, we made it work by considering one-by-one."

4.2.2 | Building competency in caring for perinatal women with COVID-19 infection or suspected infection

Participants who had cared for infected perinatal women or neonates said that “the first time was overwhelming.” In contrast, others responded that “there were not enough opportunities to care for infected patients and we were not confident dealing with it.” Thus, they hoped to have more chances to practise with simulation because it would help reduce their fear of caring for COVID-19 patients. Participants who could not participate in the simulation learning because of work schedule conflict responded that they would know what needed to be considered by watching a simulation video as an alternative. They said that it would be helpful if other clinicians who had cared for infected patients could share their experiences with them.

“I wish I had more educational opportunities.”

“In reality, wards were closed, and areas were blocked by a police line (e.g. a ‘do not enter’ sign) when the patient was positive (after delivering a baby). My mind went blank.”

4.2.3 | Sharing COVID-19-related information and notices

Participants received information or notices through the facilities’ websites or EMR pop-up screen. At the unit level, nurses shared notices in every shift during shift changes and utilized a bulletin board and a scrapbook that collected all COVID-19-related information. Additionally, participants used social media services, such as KakaoTalk (a free mobile instant messaging app). Participants responded that the information was too much to handle in the initial outbreak.

“Because nurses work in different shifts, information can be given somewhat differently by nurses.”

“It (using mobile app) has an advantage of sharing information rapidly even when not on shift and (we) are able to reply.”

4.3 | Job stress but professional growth during the pandemic

4.3.1 | COVID-19-related stress

Participants reported becoming exhausted physically and mentally. In particular, they were very afraid of being infected and being in a chain of infection. Participants said that big changes had occurred in their lives, such as “stopping meetings with family or friends,” “attending a church virtually” and “being very careful in all aspects of

daily life.” Participants expressed that they were gradually becoming depressed and very sensitive emotionally, and having a difficult time mentally, but there was no time to refresh themselves.

“If I become infected, it will impact on babies and mothers-to-be. I think about this all the time and it haunts me every time, so this situation itself is very stressful for me.”

4.3.2 | Professional growth

Participants responded that they had matured one step further while going through the pandemic. They reported gaining confidence in caring patient during the pandemic, appreciating the meaning of life more, becoming grateful for their job and thinking more about duty and responsibilities, and gaining confidence in reassuring anxious patients and communicating with other clinicians during emergency situations. Additionally, they reported that other frontline nurses became their role models and positively influenced their growth during the pandemic.

“I learned ways of communicating clearly (without confusion) by watching how other senior nurses do it in an emergency situation.”

“I could think critically by participating in the protocol development process and being aware of gaps that occur when applying it to clinical settings.”

4.3.3 | Additional support needs for safe care

Participants wanted additional support of having enough nurses. They expressed difficulty of working because of the increased workload due to COVID-19 and feeling unsafe when being assigned to unfamiliar units. Participants responded that caring for pregnant women and delivering babies would be more stable if negative pressure isolation rooms to reduce the risk of infection were available on maternity floors and in delivery rooms or if a delivery setting was established in the isolation units. In addition, participants addressed the need for psychological counselling for nurses’ mental health. Participants suggested providing counselling for at-risk nurses after screening all clinicians, checking regularly whether nurses had any difficulties of dealing with COVID-19 care and providing healing programmes would be good.

“If there is a healing programme in which difficult internal feelings can be expressed, nurses will recover better.”

“Even sharing each person’s difficult story would be helpful. Also, easily accessible healing programmes including drawings would be helpful.”

5 | DISCUSSION

Our findings demonstrated that nurses faced changes and difficulties caring for perinatal women and newborns during this pandemic. The results revealed that a large change for nurses was vigilantly monitoring for fever and other COVID-19-related symptoms and restricting visitation. To limit COVID-19's spread, many hospitals implemented enhanced visitor restriction policies (Greene et al., 2020; Liu et al., 2020; Weiner et al., 2020). Some hospitals did not allow one visitor, even partners, for labour and delivery services (Hermann et al., 2020; Weiner et al., 2020), or allowed only one support person in the delivery room easing no visitor restrictions during the COVID-19 surge (Greene et al., 2020). It suggests that healthcare providers must be sensitive to COVID-19's negative impact on family-centred care, which leads to families having no opportunities to share the joy of the birth.

In our study, visitor restrictions and limited breastfeeding were most prominent in NICUs. Similarly, a global study of 277 facilities reported that 24/7 parental presence and breastfeeding rates in the NICU decreased (Darcy-Mahoney et al., 2020). These restrictions could be difficult for patients and families. This result indicates that parents should be supported when they are not allowed to visit their babies freely due to COVID-19. Our study showed that family-centred care during the pandemic needs to be provided by rearranging time for breastfeeding or visiting to avoid or decrease contacts with other parents or offering photos or video clips of their babies to the parents to relieve their anxiety.

This study identified the need for strengthening education about COVID-19-related nursing care. Knowing how to confidently perform care would prevent cross-infection, provide quality of care and decrease anxiety and stress during maternity care. As Tan et al. (2020) proposed, nurses' training should be enhanced in terms of dealing with emergencies and protecting against infectious diseases. A study on nurses' experience of caring for COVID-19 patients reported the need for clear and consistent communication in a dynamic pandemic context (Schroeder et al., 2020). Similarly, this study showed that disseminating information, both at the organizational level and unit level, is essential to accommodate the rapid flow of information during the pandemic.

Participants experienced stress during the COVID-19 pandemic, which is consistent with other studies that reported post-traumatic stress symptoms and burnout during outbreaks (Algunmeeyn et al., 2020; Preti et al., 2020; Si et al., 2020). Our participants were afraid of being infected and transmitting it to pregnant women, newborns, and their family members. Other studies also reported that a main stressor for nurses was the fear of being infected and consequently infecting family members (Algunmeeyn et al., 2020; Liu et al., 2020; Wang et al., 2020). In addition, COVID-19 pandemic is resulting in many negative emotions, such as fear, anxiety, helplessness and burnout (Kackin et al., 2020; Sun et al., 2020). A study on 325 Philippine nurses demonstrated that resilient nurses and those who perceived higher organizational and social support were more likely to report lower COVID-19-related anxiety (Labrague & De Los Santos, 2020). In our study, the participants suggested providing

counselling and healing programmes to nurses. These indicate that nurses working during the pandemic should be supported with early psychological interventions (Kackin et al., 2020; Kalateh Sadati et al., 2020; Kang et al., 2018; Sun et al., 2020). Therefore, maternity and newborn care nurses also should be provided with early psychological interventions to get healed from the negative emotions during the pandemic.

Regardless of feeling stress during the pandemic, the participants experienced professional growth. Other studies also identified nurses' positive experiences after the pandemic (Sun et al., 2020; Tan et al., 2020). In our study, the nurses grew in their nursing profession when they developed new protocols for COVID-19 practice and were involved in infected patient care. Therefore, it could be helpful for nurses to support their reflection on the positive side of their experiences and professional growth while working during the pandemic. This study revealed that more support is needed in terms of assigning enough nurses and providing psychological support. When infectious disease outbreaks occur, nurses' workload and psychological burden can increase and impact their care quality (Musau et al., 2015). Thus, nurse managers should try to prevent stressful job conditions by arranging proper staffing. Furthermore, our study showed that at the organizational level, maternity care-friendly environments should be supported to provide quality care.

5.1 | Limitations

This study has some limitations. Most participants were staff nurses working in urban tertiary healthcare facilities. The experiences of nurses in rural areas need to be further explored. In addition, some interviews were conducted online via Zoom due to the COVID-19 outbreak and distance. However, Zoom is considered an alternative tool for collecting qualitative data (Archibald et al., 2019) and it has the advantage of doing so without face-to-face contact.

6 | CONCLUSION

This study shows that nurses work under stress. Considering that stress may threaten psychological well-being, it is essential to help nurses prevent and manage their stress while working during the pandemic to improve their well-being. This study indicates that restricting contact with perinatal women and newborns might cause difficulties for patients and families, although it ensures the health of patients and visitors. It can also disrupt breastfeeding and early mother-infant bonding, implying the need to provide alternative support methods. Sharing good alternative strategies that could be applied in other settings or facilities is recommended. Furthermore, nurse managers should strive to create an atmosphere that supports nurses' professional growth.

CONFLICTS OF INTEREST

There are no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

Research data are not shared.

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How to cite this article: Kang HS, Son Y, Kim MJ, Chae S-M. Experiences of nurses caring for perinatal women and newborns during the COVID-19 pandemic: A descriptive qualitative study. *Nurs Open*. 2021;8:3358–3365. <https://doi.org/10.1002/nop2.881>