RESEARCH ARTICLE

Working experiences of nurses during the novel coronavirus outbreak: A qualitative study explaining challenges of clinical nursing practice

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Abstract

Aim: To explore the clinical working experiences of Saudi nurses during the novel Coronavirus outbreak, identify the challenges and determine how these challenges affect their nursing practice.

Background: From the current experience of working during the novel Coronavirus outbreak, it is statistically significant to identify the challenges that nurses in Saudi Arabia face in their clinical practice and determine how these challenges affected their practice.

Designs: A qualitative descriptive study.

Methods: An in-depth interview with eight Registered Nurses in Saudi Arabia who worked in areas where the novel Coronavirus patients are treated were conducted between 10 and 23 April.

Results: The following eight major themes were identified from this study: physical exhaustion, fear of infection, providing care with uncertainty, uncomfortable use of personal protective equipment, missed nursing care, prolonged procedures, lack of guidance during the outbreak and lack of managerial support.

Conclusion: The results suggest that nurses' leaders should take active roles in empowering nursing staff. The absence of direct monitoring for nursing performance during their practice compromises patient safety and jeopardises the quality of care through missed nursing care. This study also revealed that nurses who worked during the outbreak need psychological support that can enhance their emotional resilience.

KEYWORDS
nursing practice, outbreak, patient safety, the novel coronavirus

1 | INTRODUCTION

The outbreak of the coronavirus disease (COVID-19) was declared as a public health emergency of international concern at the end of January 2020. The reported cases of pneumonia of unknown cause in Wuhan City, China in December 2019 became a worldwide concern owing to the rapid spread of the disease (Cai et al., 2020). COVID-19 is an infectious respiratory disease that causes flu-like

symptoms and is spread by droplets from the coughs or sneezes of infected persons. The incubation period is generally 14 days, after which COVID-19 symptoms, including fever, cough, fatigue, anorexia, shortness of breath and myalgias appear (Cai et al., 2020; Peeri et al., 2020). The disease affects all age groups, but adults and persons with medical comorbidities are more affected.

In Saudi Arabia, when the first case of COVID-19 was reported on the 2nd of March 2020, the government of Saudi Arabia, under the order of the Royal King Salman, has implemented strong public health preventive measures to prevent the widespread of the disease. Eventually, cities were put on lockdown, universities and schools and government and private working sites were closed, and pilgrims were restricted from travelling to two holy mosques in Saudi Arabia. The World Health Organization (WHO) praised the tremendous effort devoted by the Saudi Arabia government in formulating a preventive public health plan for the COVID-19 pandemic. In an outbreak or in the event of an infectious disease, nurses are the first line of care. The novelty of the severe acute respiratory syndrome coronavirus 2 has presented many challenges to nurses, thereby affecting their practice.

Previous studies showed that nurses face various psychological challenges, such stress (Chong et al., 2004), negative emotions (Chan & Chan, 2004) and high level of concern about transmitting the infection to their families (Cai et al., 2020).

In addition, occupational distress intensifies the experiences of nurses during outbreaks. The workloads of nurses increase owing to the complexity of care required for patients with COVID-19. Therefore, nurses can experience challenges in nursing practice that are related to procedures such as activities of daily living (ADLs), direct patient care, communication, emotional counselling, evidence-based decisions, setting priorities, mentoring and preceptorship and teaching patients and their families (Kang et al., 2018; Khalid et al., 2016; Lam et al., 2019).

The previous outbreak of Middle East respiratory syndrome (MERS) in Saudi Arabia highlighted the need for equipping nurses assigned in care in an outbreak with information about disease control during epidemics, clear emergency plans and protocols and programmes (Alsubaie et al., 2019; Bukhari et al., 2016; Khalid et al., 2016). Currently, no studies on nurses' experiences during the COVID-19 outbreak are available. In fact, it is unknown how the clinical practice for nurses in Saudi Arabia was affected during the outbreak of COVID-19. Therefore, by exploring the working experience of nurses in Saudi Arabia during COVID-19, this research aims to provide the foundation of safe nursing practice during disease outbreaks.

1.1 | Aim

The study aimed to explore the clinical working experiences of Saudi nurses during the COVID-19 outbreak and identify the challenges they face and determine how these challenges affect their nursing practice.

Summary Statement

1. What is already known about this topic?

- Working during infectious disease outbreak is a stressful experience for nurses.
- Nurses experience fear and uncertainty of practice during their work with novel infectious disease.
- The working experience of nurses during the novel Coronavirus outbreak is unknown.

2. What this paper adds?

- Nurses experience workload and distress when they work during infectious disease outbreak.
- The role of managerial support is statistically significant during infectious disease outbreak to guide and support nurses clinical practice.
- Working during infectious disease outbreak with uncertainty affect nurses and patient safety.

3. The implications of this paper:

- Nurses leaders should establish strategies to support nurses who are working during infectious disease outbreak to prevent the consequences of workload and distress.
- Clear guidelines and effective commination should be maintained among nurses to ensure safe nursing practice.
- Maintaining the quality of patient care during infectious disease outbreak is essential.

2 | MATERIAL AND METHODS

2.1 | Study design

A qualitative descriptive phenomenological design was used in exploring the lived experiences of nurses during the COVID-19 outbreak and finding answers to the following research questions, which guided the interviews in this study:

- What is clinical working experience with suspected or infected cases with COVID-19 like?
- What are the challenges that nurses face in their clinical practice during the COVID-19 outbreak?
- How do these difficulties affect the clinical practice of nurses?

This study employed descriptive phenomenology study approach to explore meanings behind the lived experiences of nurses in an outbreak and in investigating the phenomenon in a natural setting (Korstjens & Moser, 2018; Neubauer et al., 2019; Thyer et al., 2019). This approach enables the unknown phenomenon introduced by individuals to be explored and described. Given that the aim of the study is to describe nurses' experiences, a descriptive qualitative

approach was used. This approach enables the common attributes of nurses participating in the study to be determined rather than highlighting the individual characteristics of the nurses (Korstjens & Moser, 2018).

The clinical experience of nurses working during pandemic is novel and unknown. The existing literature have not yet informed about the clinical experience and challenges of nurses working during outbreak. The aim was to conceptualize the phenomenon that never been experienced by understanding the common features of the experience from the perception of individuals living it (Neubauer et al., 2019). Therefore, the descriptive phenomenological approach was suitable to bring the essential understanding of common aspects of the experience nurses perceived by arriving in the meaning of *What* and *How* the phenomenon been experienced from the perception of the nurses living it.

2.2 | Participant selection and research preparation

The participants in this study were nurses who worked in clinical areas and provided care to patients that were suspected to have COVID-19 or positively diagnosed with the disease. A purposive sampling strategy was used in recruiting nurses with different demographic profiles (i.e. age, gender, year of experience and area of practice). The participants were recruited from hospitals where COVID-19 cases were reported and treated, and experiences from different contextual backgrounds were explored. Nurses assigned to the care of patients with COVID-19 were recommended by their respective nursing administration departments, which also provided the names and contact numbers of the nurses. The participants were contacted and informed about their inclusion in this study. Twelve eligible participants showed their willingness to participate when they were contacted by the researcher. During the conduction of the study interviews, four of these participants were diagnosed positive with COVID-19 and dropped of the study before been interviewed.

The number of participants was not decided before the study because the goal was to obtain a substantial amount of saturated information about the experiences of the participants. When the provided information was repeated by participants, the data collection completed. Therefore, data saturation was achieved by interviewing eight Registered Nurses.

2.3 | Data collection

The study was conducted from 10th to 23rd of April in three tertiary hospitals in Eastern province in Saudi Arabia during the COVID-19 outbreak in Saudi Arabia. The time of data collection was set for 1 week for nurses to choose the suitable time to conduct their interviews according to their working schedule. At the beginning of the outbreak, nursing working schedules were unpredictable in Saudi Arabia, as their shifts were constantly changed due to shortage of staff nurses and deployment of other supporting nurses to

cover shifts in other hospitals. Given that public health measures were implemented in the country to prevent gatherings and cities were under lockdown, it was not possible to meet with the study participants in person to conduct face to face interviews because they were quarantined due to their work with COVID-19 patients. Therefore, interviews were conducted through Cisco Webex platform that allowed virtual face to face interview to be conducted through the videoconferencing and, with participants consent, the conversations were recorded.

Cisco Webex platform was practical means of interviewing that included all the features that facilitated the necessary qualitative data collection. Every scheduled virtual meeting was conducted confidentially as the platform is designed to send a unique link and password to the intended participant's email to access the videoconference meeting. Given the consented recordings were saved on the platform, it gave the interview further use in the analysis process. These recordings were secured in the researcher's account with password protections that cannot be easily accessible.

After a brief description of the study was provided and each participant verbally agreed to participate, a semi-structured interview was followed to guide the conversation to the response to the research questions. Recorded Cisco Webex conversations were conducted, and the interviews lasted for 60–120 min. There were no repeated interviews as the provided information were rich and showed sufficient response to the research questions. The goal was to uncover new concepts, perspectives and themes relevant to the lived experiences of nurses during the outbreak (Roberts et al., 2019), a question guide was formed in light of results of previously conducted studies that focussed on the experience of nurses during outbreak (Kang et al., 2018; Khalid et al., 2016; Lam et al., 2019). The following questions guided the interviews:

- What is clinical working experience with suspected or infected cases with COVID-19 like?
- What are the challenges that nurses face in their clinical practice during the COVID-19 outbreak?
- How do these difficulties affect the clinical practice of nurses?

2.4 | Data analysis

The recorded interviews for eight Registered Nurses were transcribed and analysed using a thematic analysis approach in the light of the interview question that targeted. The six-step thematic analysis procedure suggested by Braun and Clarke was used (Braun et al., 2017). The accuracy of the transcripts was ensured by comparing them with the recorded interviews. Data saturation was achieved by conducting data analysis concurrently with data collection until no new information was added. The data analysis process was recursive, and the researcher performed the process repeatedly to achieve the richness of data. Before establishing the data analysis process, all the online recorded interview in Cisco Webex platform were transcribed verbatim and then were validated by relistening to the online recording and re-read the transcribed data.

In the first step of the analysis process, the researcher familiarized themselves with the data by reading and re-reading the transcripts and creating initial codes (Castleberry & Nolen, 2018). This step involved highlighting the raw data that holds statistically significant meaning and create relevant response to the research questions. The second step involved the systematic generation of initial codes from the data set and collation of relevant data that were conducted by the principal researcher and one coder with experience in qualitative analysis. The third step involved the collation of the codes into themes and assembly of relevant data to each potential theme. The process of generating themes was repeatedly discussed with the research consultation team to ensure that the coding process was exhaustive and precise. In the fourth step, the theme was reviewed and a thematic map was created. Then, whether the themes were relevant to the extracted codes and the dataset were determined by the research consultation team who reviewed the generated themes along with the transcript and suggested if clarification or modifications by adding or removing some themes was required. The fifth step involved the definition and naming of the generated themes and the refinement of each theme for the generation of a final name for each theme. Finally, analytical conclusions were formulated based on the selected extracts and associated them to the research questions and purpose (Figure 1).

2.5 | Trustworthiness and rigour of the study

The trustworthiness of this study was maintained by following 'the Four-Dimensions Criteria' (FDC) that include credibility, dependability, confirmability and transferability (Guba & Lincoln, 1982). The
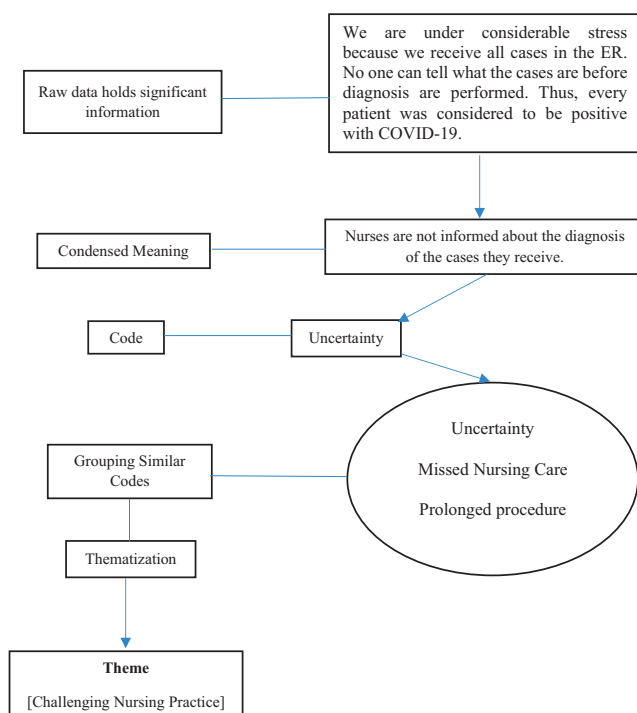

FIGURE 1 The thematic analysis process

elements of these criteria were adopted and applied to the processing of this study (Table 1).

3 | RESULTS

The study participants interviewed eight Registered Nurses. The mean age was 24–39 years and the years of experience ranges from 1 to 13 years (Table 2). Three major labels were identified from the study that included, psychological and physical distress, challenging nursing practice and management support issues. The following eight major themes were concluded in the analysis from this study: physical exhaustion, fear of infection, providing care with uncertainty, uncomfortable use of PPE, missed nursing care, prolonged procedures, lack of guidance during the outbreak and lack of managerial support (Table 3).

3.1 | Psychological and physical distress

3.1.1 | Physical exhaustion

Participants said that they experienced exhaustion after working during the Covid-19 outbreak because they had to follow extremely heavy schedules due to the shortage of nurses. Nurses who had been in contact with a positive case or those who showed symptoms were given sick leaves. This condition imposed burden to other nurses. There is also a reliance on senior nurses during the shift and in some hospitals these nurses been moved from critical areas to work with COVID-19 cases. The usual shift for nurses is usually 8 hr. The duration changed to 12 hr for 7 or 14 consecutive days in some hospitals. The participants reported that some nurses had to be deployed to 'hotels' with positive cases. The participants said that they suffered from physical exhaustion. One of the participants stated that 'I come home completely exhausted, and I am really worried that I cannot go to work the following day'.

3.1.2 | Fear of infection

Most of the study participants expressed their fear about getting the infection themselves. Those who live with their families expressed fear of transferring the infection to their family members and kids. Most of the participants reported that they started to live alone and isolate themselves from their families after they started caring for patients with Covid-19. The participants were also concerned about being asymptomatic, and thus they believe that they can easily transmit the infection even without showing symptoms. One participant said that 'Although we use PPE, I doubt that I am protected. I saw a case where a nurse in the United Kingdom passed on the infection to her father, who eventually passed away. She was asymptomatic, and she did not know.

TABLE 1 The Four-Dimensions Criteria (FDC) followed for assessing the trustworthiness and rigour of the study (Guba & Lincoln, 1982)

Rigour Criteria	Purpose	Original Strategies	Strategies applied to the current study to achieve rigour
Credibility	To ensure that the interview transcripts convey participants intention and that the results are believable, credible and true	• Interviewing process and technique	• Interview guide was tested using two pilot interviews from two nominated Registered Nurses selected from the graduate alumni unit of the faculty of nursing at Umm Al-Qura University (Registered Nurses) who we made sure that they were working with COVID-19 and has no relationship with the interviewer.
		• Establishing investigator's authority	• The researcher had the knowledge and skills to perform their roles that has been gained through previous engagement in qualitative research projects, teaching the nursing research subject for postgraduate nursing students and supervising qualitative nursing research projects.
Dependability	To ensure that the stability of the findings over time and that the findings are repeatable if the inquiry is performed in the same context and is performed on the same participants and by the same coders	• Detailed description of the study method	• Rich description of the study method maintained throughout the study for all the elements of the method section.
		• Stepwise replication of data	• Coding was assessed for accuracy. A sustained communication was maintained between the researcher and research consultation team at the research office at Umm Al-Qura University to ensure that the protocol was followed.
Confirmability	To ensure that the study can be confirmed by other external researcher and that the data are not from the researcher point of view and that the study is data-driven	• Audit trail	• Detailed track records of the data collection process were developed. The research consultation team systematically reviewed the transcripts interview against the audio recording for accuracy transcription and coding accuracy.
		• Triangulation	• Triangulation techniques applied to minimize researcher bias and ensure the objectivity of the data, also to reflect the accurate experience and perception of participants. Data source triangulation was obtained by recruiting Registered Nurses from different departments such as ER, CCU and ICU to gain a holistic understanding of clinical nurses' experience during the outbreak. Investigator triangulation was achieved through the several discussions with research consultation team who hold. difference perspectives. The methodological triangulation obtained by conducting a pilot interview and then the main study interview. The theoretical triangulation achieved by exploring relevant hypothesis from previously conducted studies that share similar perspectives (Kang et al., 2018; Khalid et al., 2016; Lam et al., 2019).
		• Member checking	• Upon the completion of the data analysis, a draft been sent to the participants to seek their feedback and to confirm the findings. Participants agreed on the findings and there was no disagreement been revealed.
Transferability	To ensure that the results can be transferred to other settings or contexts and can be generalized.	• Purposeful sampling	• Maximum variation to reflect a diverse sample.
		• Data saturation	• Concurrent analysis along with data collection. This process was assured by identifying the number of new generated codes that most of them were revealed from the first interview. In addition to continuing the interview process until no new codes were identified and information showed reputation.

3.2 | Challenging nursing practice

3.2.1 | Providing care with uncertainty

Participants reported that they were at risk when they were caring for infected patients because they encountered unassessed patients. The risk is high in emergency rooms. One participant stated that 'We are under considerable stress because we receive all cases in the ER. No one can tell what the cases are before diagnosis are performed. Thus, every patient was considered to be positive with COVID-19'. Another concern about COVID-19 among nurses is that some cases have no symptoms or symptoms are unclear because of

TABLE 2 Information for study participants

Participant Number	Gender	Age	Marital and family status	Number of COVID−19 patients cared for during the outbreak	Years of experience	Area of practice and city
1	Female	32	Married, 2 Kids	3	11	Cardiac Care Unit (CCU)
2	Female	24	Single	11	1	Emergency Room (ER)
3	Male	29	Single	5	4	ER
4	Female	34	Married, 2 Kids	16	8	ER
5	Male	39	Married, 4 Kids	8	13	Intensive Care Unit (ICU)
6	Male	36	Married, 3 Kids	5	10	ICU
7	Female	26	Single	3	2	ICU
8	Female	32	Single	7	6	ICU

complications. Moreover, laboratory results take time to process for these patients, and thus nurses are at risk of providing care to patients without considering the full precautions of PPE because they treat the case as a negative case.

3.2.2 | Uncomfortable use of PPE

Most participants reported discomfort when wearing PPE for long hours during their shifts. The discomfort use of PPE existed during performing nursing procedures and care for COVID-19 patients. Participants explained that performing any procedure while using PPE is difficult because masks restrict their breathing, double gowns restrict movement and the goggles tend to steam up because of breathing. These conditions increase stress among nurses, who explained that they needed focus and concentration in performing some procedures.

3.2.3 | Missed nursing care

Participants revealed that uncomplete or incompetent practice is demonstrated by nurses caring for patients with COVID-19. Most participants focussed on respiratory care procedures, such as suctioning and tracheal care. Cardiopulmonary resuscitation (CPR) is one of the procedures that are incompetently performed by nurses, as indicated by one participant, who state that 'I saw that the nurses assigned to CPR performed gentle CPR because they were afraid of being infected through droplet exposure'. Inconsistency in nursing practice was observed in some areas, as indicated by the different assessment tools and nursing interventions used.

3.2.4 | Prolonged procedure

The participants explained that nursing procedures are longer than expected. There are few reasons been explained by participants

such as being concentrated on the procedure 'The procedure that usually takes 10 min now takes 20 min because I work very carefully with patients'. This has contributed to missed nursing care as one of the participants indicated that not all of the tasks in a shift are completed and are usually carried over to the subsequent shift.

3.3 | Management support issues

3.3.1 | Lack of guidance during outbreak

Participants expressed their need for guidance during an outbreak. Most participants in different settings said that lack of education on the use of PPE or share of information about COVID-19 'We learned from the experiences of Chinese and UK nurses. One UK nurse posted a way of closing an ambo bag-valve with gloves. This information is what we need'. Although they have reported no issues with the availability of resources during this time, they reported that they lacked proper education that will assist them out the received equipment and stocks.

3.3.2 | Lack of managerial support

The participants expressed their disappointment on the lack of support from their managers during the COVID-19 outbreak. These concerns were shown in the provided support during their practice. One explained 'Our performance in doing our practice was not directly monitored by our supervisors. The members of my team support each other in this matter', while the other expressed they were not appreciated enough, stating that 'I really wished that my supervisor would 1 day bring chocolates and appreciate our work'. Although they received moral support during the outbreak from their hospitals, they still needed the direct support and appreciation of their supervisors.

TABLE 3 Code label, themes and quotations form the interviews

Themes	Codes	Interviews Quotation
Psychological and Physical Destress	Physical Exhaustion	• Registered Nurse 5: "The shift changed from 8 hr to 12 hr and the workdays were extended from 7 to 14 days because of the staff shortage." • Registered Nurse 3: "I know that I cannot keep working for that long. Previously, after I voluntarily worked for several consecutive days, I was physically drained at the end." • Registered Nurse 6: "I come home completely exhausted, and I am really worried that I cannot go to work the following day. Currently, staff leaves are approved only in case of sickness." • Registered Nurse 8: "Most of the COVID-19 patients I cared for were old patients who needed a substantial amount of care. These patients require frequent positioning and body hygiene care. Thus, I feel more exhausted at the end of the shift hat I do when caring for normal patients." • Registered Nurse 2: "We have an acute shortage of nurses, especially that some of us started getting sick. In our ER, only two of us are assigned to care for patients with COVID-19, and I tend to three patients in my shift. It is a huge burden for me."
	Fear of Infection	• Registered Nurse 4: "I have isolated myself, and I live alone now. I sent my kids to my mother's house because I am afraid that they will be infected." • Registered Nurse 6: "After I started my new assignment in the area, I started taking extra measures to protect my family, whom I live with. I have isolated myself in my room and I eat alone now. I even take extra precautions when cleaning my hospital uniform." • Registered Nurse 2: "Although we use PPE, I doubt that I am protected. I saw a case where a nurse in the UK passed on the infection to her father, who eventually passed away. She was asymptomatic, and she did not know."
Challenging nursing practice	Providing Care with Uncertainty	• Registered Nurse 1: "I was taking care of a myocardial case that was admitted in the CCU who was later discovered to be positive with COVID-19. No one had performed an assessment in the ER as everyone thought that the case was a cardiac case." • Registered Nurse 3: "We are under considerable stress because we receive all cases in the ER. No one can tell what the cases are before diagnosis are performed. Thus, every patient was considered to be positive with COVID-19." • Registered Nurse 8: "In one case, while waiting for laboratory test results, we treated the patient as a normal patient because the initial assessment did not found any COVID-19 symptom. After 3 days, the results came, and we were shocked because the patient was a positive case."
	Uncomfortable use of PPE	• Registered Nurse 6: "Caring for a patient with COVID-19 is difficult because wearing a full PPE is extremely uncomfortable. It is heavy and restrict me from moving around the patient." • Registered Nurse 7: "I hate that breathing is hard and the vouge that comes with the shield makes it difficult to concentrate." • Registered Nurse 1: "I have difficulty simultaneously caring for two patients with different diagnoses, and the process of donning and doffing PPE takes time, and wearing PPE for a long time is uncomfortable."
	Missed Nursing Care	• Registered Nurse 7: "I saw that the nurses assigned to CPR performed gentle CPR because they were afraid of being infected through droplet exposure." • Registered Nurse 8: "Patients require frequent suctioning. One of the things that I saw in our area is that nurses are doing ineffective suctioning because they are afraid of being infected through droplet exposure." • Registered Nurse 6: "The respiratory assessment scale changes every day. We used the kind that is the most appropriate. We received the last day on the unit group that the scoring system changed." • Registered Nurse 5: "We tried to determine whether performing prone positioning really helps patients. We performed it for some patients, and it helped them in their breathing."
	Prolonged Procedure	• Registered Nurse 5: "The procedure that usually takes 10 min now takes 20 min because I work very carefully with patients." • Registered Nurse 7: "One procedure requires a long time to complete, and thus I hand over some procedures that I fail to follow completely to another nurse after my shift." • Registered Nurse 8: "Procedures for patients with COVID-19 have no shortcuts. To a patient classified as critical, complete care should be provided. However, I have noticed that I am spending a considerable amount of time performing routine care and other interventions for such patient."

TABLE 3 (Continued)

Themes	Codes	Interviews Quotation
Management Support Issues	Lack of Guidance during the Outbreak	• Registered Nurse 5: "We learned from the experiences of Chinese and UK nurses. One UK nurse posted a way of closing an ambo bag valve with gloves. This information is what we need." • Registered Nurse 7: "In our unit, we receive many stocks and everything we need, but what is the point of these if we do not know how to use them. We go on the Internet and see how things work."
	Lack of Managerial Support	• Registered Nurse 2: "We receive many e-mails that tell us how our work is appreciated, but I want something for myself. I want to receive a certificate with my name on it that I can include in my CV later at least." • Registered Nurse 4: "I had expected that we would have a salary increase or 'infection allowance' but we did not." • Registered Nurse 8: "Our performance in doing our practice was not directly monitored by our supervisors. The members of my team support each other in this matter." • Registered Nurse 1: "I really wished that my supervisor would one day bring chocolates and appreciate our work."

4 | DISCUSSION

This study explores the clinical working experiences of Saudi nurses during the COVID-19 outbreak. The challenges they faced are identified and how these challenges affected their nursing practice is analysed using qualitative descriptive design. Thematic analysis of the nurses' statements reveal the following themes: psychological and physical distress, challenging nursing practice and issues with management support.

Physical exhaustion was one of the main issues experienced by nurses in this study. During the COVID-19 outbreak, many medical health workers, including nurses, were infected, leading to a shortage of staff and increased workload for those still on the call of duty (Demerouti et al., 2010). This context adds to the previously reported shortage of nurses around the world, including Saudi Arabia (Aboshaiqah, 2016). To address this shortage, the Saudi Arabia Ministry of Health ordered regional administrative departments to reschedule the working hours of nursing staff during the outbreak. The shifts were extended from 8 hr long daily to 12 hr, and the number of workdays were increased from 4 days per week to 7–14 days. Our findings are consistent with those of several studies that under outbreak stress, nurses are drained physically and emotionally (Liu et al., 2019). Despite the best intentions of the government shift and deployment of health workers work during outbreaks, the consequences affect the quality of the provided care and the psychological and psychological well-being of nurses.

Given the numerous reports of frontline nurses becoming infected with COVID-19, the nurses in our study revealed a common fear of the outbreak (Cawcutt et al., 2020). Nurses who work in direct contact with infected patients are at high risk of infection if they do not adhere to safety precautions, such as wearing full Personal Protective Equipment PPE (WHO, 2020). Thus, their work places them at great risk for self-contamination and disease acquisition (Cawcutt et al., 2020). Nurses' fear of becoming infected extended to their personal lives because they expressed fear of transmitting the disease to their families. This scenario was also reported in several studies on nurses working experience during outbreaks of infectious disease (Cawcutt et al., 2020; Deitrick et al., 2020; Peeri et al., 2020).

A valid reason for the psychological distress that nurses experience during outbreaks of novel infectious disease is the fact of working with uncertainty. The concerns of the participants are linked to the disease being asymptomatic or the opportunity of exposure to patients that were incorrectly diagnosed. This what was reported by nurses in our study as providing care with uncertainty (Peeri et al., 2020). Nurses encounter similar situations if they fail to adequately prepare before exposure to infected patients (Peeri et al., 2020). The participants reported that their practice was not monitored and they had insufficient knowledge about the safety precautions and equipment use. Regularly monitored training on the use of PPE increases the skills and confidence in self-protection among nurses (Lam et al., 2019; McMullan et al., 2016; Pincha Baduge et al., 2017).

Discomfort in using PPE presents considerable challenges for nursing practice during the outbreak. Nurses complain of discomfort in using PPE, such as experiencing difficulty in breathing and steamed up goggles. Previous studies suggested that PPE must be redesigned for the comfort of nurses and healthcare workers (Kang et al., 2018). In previous outbreaks, nurses reported similar issues of fatigue, heat stress and heat-related illness due to wearing PPE. The health and safety of nurses working in these conditions should be a priority concern. Occupational safety interventions should be enforced with appropriate measures to mitigate the risks of heat-related illnesses due to PPE use among nurses.

Missed nursing care, especially in providing respiratory care, to infected patients was reported by most of the nurses in this study. This shortcoming was found in two procedures, suctioning and Cardiopulmonary Resuscitation (CPR). Aerosol generating procedures place nurses at risk of aerosol spread infection (Deitrick et al., 2020). During the previous similar outbreak of MERS-CoV,

one statistically significant study conducted in Korea identified a case of a nurse who encountered infection post CPR procedure; the precise investigation concluded the following possible reasons: mucosal exposure to sweat contaminated with MERS-CoV, contamination through a gap between the face and mask and contamination during doffing of PPE. These situations are thus linked to missed nursing care (Kang et al., 2018). Nurses in our study reported no proper training and monitoring for their practice, which is a possible reason of performing missed care to their patients. Inadequate resource and training of the use of PPE cause great anxiety for nurses (Deitrick et al., 2020). Missed nursing care in respiratory care is a safety concern and increases the risks of complications and infections, possibly prolonging hospital stay (van Doremalen et al., 2013). Although the WHO provided clear information about the transmission of COVID-19 via droplets, the Centres for Disease Prevention and Control recommended that all precautions be observed in aerosol-generating procedures, such as airway suctioning, intubation, manual ventilation, tracheostomy and sputum induction (Tran et al., 2012). Adherence to intense safety protocols increases the confidence of nurses to perform competent practice.

Managerial support also enhances nurses' confidence to practice during an outbreak. The participants revealed several areas that lacked managerial support, such as in monitoring and education. The experience of working during an outbreak is overwhelming. Owing to the novelty of the virus, the managers can be expected to struggle with frequently changing guidelines and information. Nurses tend to receive more support from their peers at the same level than from their managers (Kang et al., 2018). Providing managerial support by sharing information, providing education and monitoring nursing practice improve staff adherence to safety protocols.

5 | CONCLUSION

This study explored the clinical working experiences of Saudi nurses during COVID-19 outbreak and highlighted the challenges that affected their practice. Their clinical experiences showed that nurses experienced numerous challenges, such as psychological and physical distress, challenging nursing practice and issues with management support. One nurse was drained physically and psychologically from covering the shortage of nurses and working for long hours. Nursing authorities need to consider workforce planning and support staff deployment protocols during outbreaks to improve resource utilization and assure quality of nursing care provided with appropriate staff-to-patient ratio. A reasonable nursing shift schedule aligned with support for nurses, proper training and monitoring for their practice is essential. Nurses during COVID-19 outbreak also encountered challenging situations of working with uncertainty, conducting prolonged procedures and contributing to missed nursing care to their patients.

Monitoring nursing practice during outbreaks provides statistically significant support not only for nurses themselves but for the performed practice that require guidance and alignment with tracking of the required care. Nurses in this study were lacked managerial support. In novel situations, nurses' managers are the first support for the entire nursing system. Effective management support needs to be enforced during outbreaks to elevate the functionality of nursing care. The results of this study pave the path for future research to investigate effective interventions to support nurses during outbreaks.

5.1 | Limitations

The study has some limitations. Given that a qualitative design was used, only a small group of participants was investigated, and thus the results may be limited. Further insights into the results may be obtained by including the managers of the nurses.

AUTHOR CONTRIBUTIONS
The main author for this study meets the authorship criteria and is responsible and the contents of the manuscript.

ETHICS APPROVAL AND PARTICIPANTS CONSENT
This study was approved by the Ethical Nursing Research Committee in the Faculty of Nursing at Umm Al-Qura University. There were no funds for this project. The participants were assured that their identities would not be disclosed and informed that their participation is voluntary, and they can stop at any point. At the start of each interview, a brief description of the study background, aim and purpose was provided to each participant, and the participants were allowed to inquire about the study.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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