



Nurses on the Front Line: Experiences of Nurses Caring for Patients with COVID-19 in Field Hospitals

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ABSTRACT

Background: The Jordanian health system was overwhelmed in the early phases of coronavirus pandemic, primarily due to the lack of workers, and the breakdown of several medical centers. Healthcare workers suffered tremendous physical and mental pressure due to this unprecedented situation. **Purpose:** This research aims at investigating the experiences of nurses caring for patients with COVID-19 in field hospitals. **Methods:** A qualitative phenomenology research aimed to explore the experiences of nurses in field hospitals in Jordan caring for COVID-19 patients. Intentional and snowballing sampling methods were conducted on twenty nurses from May to June 2022. **Results:** The study generated four main themes and ten sub-themes, (1) Sense of obligation and pride, (2) Stress, (3) Personal development, (4) Feelings of helplessness and betrayal. Physical, emotional, and mental changes of nurses were observed after caring for patients with severe illness resulting from COVID-19. **Conclusion:** The findings of the study acknowledged the participants' willingness to enrich their knowledge and expand their work expertise by being part of this experience. The analysis of the themes and sub-themes has shown that nurses experienced stress, anxiety, depression, as well as other psychological and mental challenges. Therefore, healthcare leaders should consider meeting the nurses' needs and resolving challenges that faced them. **Implications for Nursing:** Healthcare policymakers and leaders in the health sector should consider implementing programs that support nurses' well-being and productivity under crises. Also, additional pay allowance should be considered to compensate for the dangerous time that nurses spend in special situations, such as the COVID-19 pandemic.

Keywords: Qualitative research, COVID-19, Nurses, Public health, Field hospitals.

What does this paper add?

1. Frontline nurses caring for coronavirus patients in field hospitals have been struggling both mentally and physically to keep up with the uncertainty of this situation.
2. The COVID-19 pandemic had a significant global impact on changing healthcare systems all over the world, including Jordan; it revealed several

problems in the health system which affected healthcare providers tremendously.

3. Exposure to the COVID-19 pandemic can provide guidelines and procedures to better prepare for other pandemic crises facing the health sector in the future.

Introduction

The World Health Organization (WHO) declared in

March 2020 COVID-19 as a pandemic, which has led to a worldwide crisis. A wide range of clinical signs, including mild or severe manifestations, characterizes the existence of coronavirus; still, asymptomatic infections are possible as well. All of the signs have led to high rates of morbidity and mortality (Grasselli et al., 2020). Coronavirus disease appeared as an acute febrile respiratory disorder, which affects many systems of organs (Chen et al., 2020). Furthermore, the COVID-19 pandemic is a serious threat to the sustainability of the healthcare system globally, affecting the capacity of hospitals in general, as well as the availability of Intensive Care Unit (ICU) seats and respirators (Pericas et al., 2021).

During the first wave of COVID-19, the rapid spread of the disease overwhelmed the Jordanian healthcare system. Nurses play a key role in healthcare systems with other frontline healthcare professionals. They struggled while providing patients with the best possible care (Abuhammad et al., 2020; Gracia-Martin et al., 2021). Taking care of patients with COVID-19 was draining at that time; in contrast, it supported the developing healthcare system toward the management of infectious disease outbreaks that could happen in the future (Chen et al., 2020). Moreover, very recent literature demonstrated the importance of improving healthcare providers' situations by supporting them mentally and emotionally while taking care of their patients (Galehdar et al., 2021; Roney et al., 2021).

The main reason for the dispute is whether nurses can effectively cope with COVID-19, and reveal their perceptions of their duties and responsibilities in the pandemic. However, nurses are considered a good example of providing patients with necessary medical care (Abuhammad et al., 2020). Due to the peak of hospitalization during the outbreak, frontline healthcare professionals concentrated more on patients with COVID-19, which led to the reconstruction of a large number of daily care units in ICUs. Thus, all of those reforms required the hiring of healthcare staff, particularly nurses (Casafont et al., 2021).

The severity of COVID-19 disease is defined according to the level of oxygen supplement needed (liter per minute). It is classified from level 1 (a least severe condition where a patient is hospitalized, but doesn't need supplement oxygen) to level 5 (where a patient needs invasive mechanical ventilation and might need admission to ICU) (Lin et al., 2020). The

participants in the study all worked with COVID-19 patients with severity levels 4, 5, and ICU admissions.

This study aimed to explore the experience of the frontline nurses working in field hospitals in Jordan who were encountered with COVID-19 patients. The research attempted to reveal the emotional condition of nurses, their levels of distress, anxiety, tiredness, or possible burnout, in addition to any positive experiences that they formed during their work. This study could help healthcare policymakers and health leaders in Jordan better understand the effect of the health crisis as a pandemic on nurses' physical and psychological health. Also, health policy issues needed to be improved to ensure a better care quality and a stronger healthcare system in Jordan.

Methods

Study Design

A qualitative phenomenology research approach has been conducted in the Ministry of Health (MoH) field hospitals in two major cities in Jordan, from May to June 2022. This approach was identified as the most appropriate way to understand the experience of people who live with chronic obstructive pulmonary disease patients (Barnett, 2005). Semi-structured interviews were conducted through telephone. The participants were asked a total of six main questions that investigated their experiences, feelings, and challenges that they encountered through their work with COVID-19 patients. A question script is illustrated in Appendix I.

Study Participants

The 20 participants included in the study were all registered nurses who had been assigned to work in COVID-19 units in MoH field hospitals. All of them have been working for more than a month with COVID-19 patients. They were cooperative with the researchers and answered all the questions as they consented to voluntarily participate in the study.

Data Collection

Intentional and snowball sampling methods were used to recruit participants. A semi-structured telephone interview which lasted between 30 and 60 minutes was the method used for data collection. The study team conducted the interviews in Arabic and asked about demographical data for gender, age, and marital status

of nurses, in addition to exploring work experience with COVID-19 cases. Finally, the interviews were transcribed and thematic categories were explored.

Data Analysis

The data was collected in Arabic and analyzed using the phonological data analysis method. The qualitative data analysis included reading the transcriptions several times to understand the meanings conveyed, identifying significant information, and reformulating them to validate the meanings agreed upon by the research team. Identifying themes organizing them into clusters and categories, and providing a full description of the main founded themes were also carried out. Finally, the findings were summarized, translated, and presented in English.

Ethical Approval

The study got the approval of the institution research board. Before conducting the interviews, the

participants were briefed on the purpose and methods of the research. They were informed of the anonymous nature of the study, that their participation was voluntary, and that they had the right to withdraw from the study at any time.

Results

Demographics

The participants' ages ranged from 23 to 29 years, 85% of the participants were females, 75% were single, and the rest were married. Regarding years of experience, 30% had no prior experience, 50% had an experience of up to 2 years, while the rest had an experience of up to 6 years. 50% of the participants had an experience of less than 6 months, and the rest had up to 12 months of experience working with COVID-19 patients. 30% were assigned to level-4 units, 35% were assigned to level-5 units, and the rest were assigned to ICU units.

Table 1. Demographics of the participants

Participant Number	Age (Years)	Gender	Marital Status	Working Experience	Assigned Unit	Months of Work with COVID-19
N1	25	F	Single	None	Level 5	12
N2	25	F	Single	None	Level 5	12
N3	26	F	Single	2 years	ICU	6
N4	26	F	Single	2 years	ICU	6
N5	29	F	Married	6 years	Level 4	12
N6	23	F	Single	None	Level 4	12
N7	25	F	Single	6 months	Level 5	12
N8	27	M	Single	2 years	Level 5	12
N9	25	F	Single	None	Level 4	12
N10	26	F	Single	12 months	ICU	6
N11	28	F	Married	4 Years	Level 5	12
N12	25	F	Single	None	Level 4	12
N13	26	M	Single	6 months	Level 4	6
N14	27	F	Married	6 years	Level 5	12
N15	29	F	Married	6 years	ICU	12
N16	26	F	Single	12 months	Level 5	6
N17	27	F	Married	2 years	ICU	12
N18	25	M	Single	12 months	ICU	12
N19	25	F	Single	None	Level 4	6
N20	27	F	Single	2 years	ICU	12

At the time when the interviews were conducted, all participants were in contact with COVID-19 patients for at least one month. The results of the analysis of the

study interviews revealed four primary themes and 10 sub-theme categories.

Table 2. The study themes and subthemes

Study Theme	Sub-themes
A feeling of a sense of obligation and pride as a nurse	<ul style="list-style-type: none"> • Increasing learning and gaining work experience • Fighting the COVID virus • Pride to work as a nurse in the field
Stress related to working with COVID-19 patients	<ul style="list-style-type: none"> • Fear of contracting an infection as a result of inadequate protection protocols • The fear of infecting one's family
Personal development as a nurse	<ul style="list-style-type: none"> • Personal fulfillment from working amid a worldwide pandemic • Being more independent as a healthcare worker • Putting oneself to the test and succeeding
A feeling of helplessness and betrayal	<ul style="list-style-type: none"> • The system had failed me (shifts and bonuses) • No clear guidelines and policies at the start of the pandemic

Theme 1: A Feeling of a Sense of Obligation and Pride As a Nurse

All twenty participants signed their contracts despite being aware of that they would work with COVID-19 patients. Moreover, all of the interviewed nurses began to work at the beginning of the pandemic when the virus was spreading quickly and there was still a lot of uncertainty.

- *Increasing Learning and Gaining Work Experience*
Participants desired to gain work experience and expand their knowledge, which could be done with the assistance of experienced experts. “Both at personal and professional levels, the experience has been extremely rewarding. "It was a very beneficial experience in terms of the help that I was able to provide and the knowledge that I got.” (N12). “It was fantastic as I earned the work experience that I could only get in such difficult circumstances.” (N7).
- *Fighting the COVID Virus*
Some volunteers found this voluntary experience beneficial due to the opportunity of being on the frontlines of the COVID-19 campaign”. I feel helpful and as if I'm contributing to the fight against COVID-19.” (N18).

- *Pride to Work As a Nurse in the Field*

Despite the threat of the virus, the participants considered working with COVID-19 patients as an essential chore, while some of them recognized it as an inevitable part of their future work as nurses and admitted it as their responsibility. “I am proud to work as a medical nurse.”(N6). "It was dreadful at first, but as the days passed, I noticed the improvement of the situation and I was able to contribute without becoming infected, which made me happy and satisfied.”(N9).

Theme 2: The Stress of Working with COVID-19 Patients

Stress, worry, and grief were common themes in participants' reactions, resulting from emotional fatigue while providing patients with good care. Minimizing problems with the respiratory channels, medicines, and patient postures, cautious work with Personal Protective Equipment (PPE), and providing high-quality treatment to prevent infection required a lot of effort. Due to the risk of working with the COVID-19 patients, nurses were terrified of becoming infected or infecting others. "We have encountered psychological stress as a result of working with COVID-19 patients and everything necessary to do.”(N3). “I believe that the most difficult aspect of this experience is the psychological exhaustion

and stress that we were facing. We are all in a once-in-a-lifetime circumstance.” (N5).

- *Fear of Being Infected Due to Inadequate Protection Protocols*

Due to the bad conditions, a lack of equipment, and the necessity to wear the same PPE many times, some volunteers expressed concern about becoming infected. They also complained of not being provided with any proper training before the work in the field. "Because of the circumstances, it was a really difficult situation for me." (N11). "I believe that it was a very positive experience, but one that took place in quite tough circumstances." (N7).

- *The Fear of Infecting One's Family*

Due to the unfamiliarity with the script and the infectiousness of the virus, the participants were horrified. Nurses had a will to work, but they had a fear of spreading the disease to their families. In order not to infect the family members, many of the study members refused to live in their usual homes. "Even though we live in the same house, it's devastating not to be able to sit with the family. To infect them is my greatest concern." (N15). "To keep our families safe, many of us, including me, had to live in different rooms, away from our children." (N20).

Theme 3: Personal Development As a Nurse

After the first stages of the pandemic passed, the nurses reported that they felt more comfortable in the situation and felt that they were contributing to society, as well as growing personally and professionally.

- *Personal Fulfillment from Working Amid a Worldwide Pandemic*

Participants felt the progress both emotionally and professionally, which made them describe it as an amazing experience. "To be honest, I thought that I'd be crying every day, but I've come out of it feeling inspired, since I know that my co-workers will be there for me in an emergency or if I have any questions. "The encouragement throughout the whole journey has astonished me and I am more satisfied as a person." (N7). "This experience has taught me a lot and assisted me in my professional training." (N8). "I'm overjoyed, since I've learned so much and do not worry about becoming infected." (N19).

- *Being More Independent As a Healthcare Worker*

Working during the epidemic, according to the participants, helped them develop all of their skills as future health professionals. "This experience has taught me a lot and assisted me in my professional preparation." (N8). "I'm overjoyed, since I've learned so much and haven't been worried about becoming infected." (N1). "It's been a once-in-a-lifetime experience for me, because I feel more prepared and trained than I did before". (N3).

- *Putting Oneself to the Test and Succeeding*

Some of the participants experienced personal improvement, both professionally and personally, as a result of their lived experience, leading them to be happy in their lives. "I am content. I was able to assist without putting myself in danger; the scenario forced me to grow as a person, and I was able to overcome my worries about working with pandemic situations." (N16). "Over the last months, I've learned a lot, and I'm grateful for the opportunity." (N10).

Theme 4: A Feeling of Helplessness and Betrayal

Many of the participants had been abandoned by the health system and misled about shifts, pay, contracts, and duties since the outbreak began.

- *The System Has Failed Me (Shifts, and Bonuses)*

Participants demonstrated dissatisfaction with the healthcare system. Some shifts have never been paid. "I'm disappointed with the salary that they promised to give us as bonuses, but we didn't get them". (N2). "We are operating in a hot atmosphere, where the air conditions are not working properly." (N1).

- *No Clear Guidelines and Policies at The Start of the Pandemic*

The nurses complained of not having any type of training during the pandemic circumstances, and no clear policies or guidelines were obvious at the beginning of the crisis. "I was pushed into the ICU unit, and they told me to take responsibility without acknowledgment of how to work (due to the absence of guidelines)." (N5)." I had to study by myself to know what to do in such situations." (N14).

Discussion

This study examines the first-time encounter of

nurses who worked in the Ministry of Health field hospitals in Jordan, a country that has been severely impacted by the pandemic; it includes the shared perspectives of 20 nurses who, despite residing in various cities, were providing direct treatment to COVID-19-infected patients. COVID-19 is a new, extremely contagious virus that has spread fast throughout the world, including Jordan.

The study demonstrated that caring for patients with COVID-19 was connected with many experiences for nurses in field hospitals. The results of the study revealed four main themes; namely, (1) Sense of obligation, (2) Stress, (3) Personal development, (4) Helplessness and betrayal.

The participants of the present study without hesitation were willing to support their fellow citizens, considering that a personal and professional challenge despite infection risk. Their desire to gain experience and knowledge gave them the necessary drive to withstand those situations. Being in the frontline fighting this threat gave nurses a sense of pride, although it's part of their responsibility as nurses.

Many nurses included in the current study expressed concerns about the unknown and what was awaiting them, their patients, their colleagues, their own families, and friends, similar to those expressed by the public. They related stress, worry, and fatigue to the risk of working with patients with COVID-19. They were intimidated and psychologically and mentally exhausted from all the stress that they were facing during those unusual situations. Almomani et al. (2022) pointed out that due to the tight guidelines that experts must follow to prevent becoming sick or infecting others, there is a contradiction between the duty to assist and the fear of infection among nurses working in disasters, such as a pandemic where the health of healthcare workers may be jeopardized. Other studies have shown that healthcare workers are under more stress when caring for infectious patients, and nurses suffer psychological stress, anxiety, and terror, which is consistent with the findings obtained from prior research involving infectious disorders (Huang et al., 2020).

Another problem highlighted by nurses in this study was their feeling of being abandoned by the health system, and its failure to appreciate all the hard work that they had done and the special conditions that they faced. Unpaid shifts, bad working atmosphere, lack of training, and absence of clear guidelines and policies

were reported.

Personal fulfillment and improvement at both professional and personal levels and gaining personal development as a nurse were the highlights of this experience. This might lead to the question of whether healthcare organizations would be able to adequately fulfill their duties. The psychosocial problems experienced by nurses, patients, and families during the pandemic highlighted areas of hardship in the treatment and care of patients with COVID-19 (Akkus et al., 2022; Savold et al., 2021). Literature review confirmed results, such as impairment, stigma, boredom, worry, frustration, phobia, and anger (Ahmadi & Ramezani, 2020; Brooks et al., 2020; Pfefferbaum & North 2020). The isolation measures and the social exclusion of nurses due to being perceived as an infection risk had led to feelings of loneliness and isolation (Merino-Godoy et al., 2023; Rasmussen et al., 2020). Most of the nurses felt uncomfortable due to this stigmatization. As well, some negative emotions were observed, like crying, intolerance, short-temperedness, and shouting (Ahmadidarrehsima et al., 2022; Restubog et al., 2020).

Implications for Nursing

The results of this research could be implied in other crises that could occur in the health sector in the future. This research revealed that nurses exposed to COVID-19 stress situations would experience several mental and physical issues, that could affect them deeply. Healthcare organizations and healthcare leaders should be aware of such effects and develop ways to avoid them. Future counseling programs should be founded that help in the support of those nurses who are exposed to such conditions to ensure and maintain the quality of care provided to patients during COVID-19 and other pandemics.

This study could help healthcare policymakers and health leaders understand the physical and mental issues that nurses face during their work in stressful pandemic situations, and find ways to support them. The results of the study will help in the adoption of international guidelines that will facilitate the confronting of such pandemics in the future.

Moreover, clear guidelines and instructions should be introduced by healthcare policymakers to decrease the risk of such health crises on nurses. Lastly, the results of the study could increase the awareness of the danger that nurses encounter during such situations and

help them get additional pay to compensate for the dangerous time that they spend in those special situations.

Strengths and Limitations

The use of snowball sampling has a significant drawback, as the results cannot be generalized; still, it helps understand the phenomenon. This study considered the prospects of nurses working on the frontlines in field hospitals and intensive care units with patients infected with COVID-19 in critical and semi-critical conditions. The main limitation of the study is that the sample of the study didn't cover all geographical parts of Jordan. Still, it allows for studying participants' experiences thoroughly and conducting in-depth analysis. The study could not be generalized because of its limitations.

Conclusion

As a result of the COVID-19 pandemic, healthcare organizations have increased the number of nurses and are hiring newly graduated nurses. Health professionals have become physically and mentally tired due to the rapid spread of the virus, lack of equipment, and unsatisfactory working conditions. In addition, it must be noted that the nursing staff is the future guarantor of

public health. Healthcare systems must provide the necessary support, such as sufficient personal protective equipment and documentary arrangements appropriately reflecting the rights and duties, in addition to providing sufficient compensation. Supervisors must communicate effectively in the working environment and provide good training in the management of infectious diseases, such as COVID-19.

Due to the global nature of this situation, although all countries are fighting COVID-19, some are fighting longer, and therefore there is an opportunity to learn from them. It is critically necessary to take into consideration the experience under the COVID-19 pandemic, when medical facilities around the world were not ready and many of them were not equipped to the required extent, and to begin to train the nursing staff according to world-changing conditions, and to provide medical centers with all necessary equipment and staff.

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Conflict of Interest

No conflict of interest is to be declared by the authors.

Appendix I

The Interview Questions

- Q1: Tell me about your caring experience with COVID-19 patients.
- Q2: What did you feel on the first day on which you worked with COVID-19 patients?
- Q3: Do you feel differently now, and how?
- Q4: What are the challenges that faced you during your work with COVID-19 patients?
- Q5: Were you able to resolve those challenges?
- Q6: Did you receive any help from your colleagues? Tell me more about this.

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