

Original Article



Frontline Nurses' Experiences of Patient Care in the COVID-19 Pandemic: A Phenomenological Study

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Email: eimani@hums.ac.ir**Abstract**

Introduction: The COVID-19 pandemic is now a major public health crisis in the world. Nurses as key members of professional are exposed the most challenges caused by COVID19. Knowledgeable nurses' experiences can provide appropriate solutions to increase the quality of care and improve the health of the society. This study aimed to explore the lived experiences of nurses' caring for patients with COVID-19.

Methods: 12 nurses participated in this phenomenological study. We performed purposeful sampling and in-depth face-to-face and semi-structured individual interviews for collecting data. Qualitative data, was analyzed by the 6-step Van Manen hermeneutic phenomenology.

Results: After data analysis, the mean (SD) age of study participants was 32.25 (5.62) years and their mean work experience was 9.75 (5.39) years. From the analysis of data obtained from interviews with nurses working in COVID-19 wards, 1050 primary codes, 17 subthemes and 5 themes were extracted. Main themes include: sincere service, patient oppression, emotional instability, suspension and relaxation.

Conclusion: Analysis of data in this study suggested that the nurses who care patients in COVID-19 pandemic, faced many professional and psychological challenges. Healthcare managers should plan for psychological support services for the nurses.

Introduction

Following an outbreak of severe acute respiratory syndrome (SARS) in 2003 and Middle East respiratory syndrome (MERS) in 2012, a third type of the virus, COVID-19, was first identified in December 2019 in Wuhan, Hubei province, China.¹ It spread around the world within a month of identification, so that the World Health Organization (WHO) declares COVID-19 as a public emergency on February 1, 2020.² According to WHO on June 21, 2021, 178 202 610 cases of COVID-19 have been confirmed and 3 865 738 have died worldwide.³

The COVID-19 pandemic has become one of the main health hazards of a generation and has affected all continents, nations, races and socioeconomic groups with a mortality rate of 3-15%.^{4,5} WHO has issued guidelines on how countries should respond to COVID-19, including patient monitoring, diagnostic sampling, infection control at the health care facility, maintaining appropriate and essential resources, and maintaining contact with the public. Implementing these measures is largely the responsibility of health care workers, especially nurses.⁴

Nurses are the largest group of health professionals who are at the forefront of the fight against pandemics. Nurses are often directly exposed to viruses and the risk of

disease. During the outbreak of MERS and SARS, (18.6%) and (21%) of health care workers became infected, respectively.² More than 3000 medical personnel became infected in the early stages of the outbreak of the new virus in China, in Hubei Province.⁶

During pandemics, in addition to being infected, factors such as caring for critically ill patients, increased workload, isolation, staff shortages, and continuous shifts cause challenges for nurses. According to a study on 85 nurses in the intensive care unit, it was found that 59% of nurses suffered from loss of appetite or indigestion, fatigue (55%), difficulty sleeping (45%), nervousness (28%), frequent crying (26%) and even suicidal thoughts (2%).⁷ Another study showed that Chinese nurses caring for patients with COVID-19 had mental disorders, 36% with below-the-threshold mental health disorders, 34.4% with mild disorders, 22.4% with moderate and 6.2% with severe disorders.⁸ A systematic review of nurses' experiences in intensive care units during the COVID-19 respiratory pandemic reveals positive and negative experiences such as a sense of duty to the patient and self, sharing experiences with colleagues, concerns about personal and family safety and vulnerability, loneliness, frustration, burnout, depression, anxiety, lack of knowledge about

the disease and unpreparedness.⁹ Working in unfamiliar environments, lack of expertise and experience in caring for infectious patients, especially in critical situations, fear of the unknown, fatigue, difficulty caring in protective clothing, blurred vision due to foggy glasses, difficulty in eating and drinking due to the difficulty of changing protective equipment, mood swings with changing patients' condition, feeling of inadequacy, frequent witnessing of patients' deaths and fear of transmitting the infection to the relatives are other experiences reported by nurses during the COVID-19 pandemic.¹⁰

A study of factors related to mental health outcomes among nurses and physicians who participated in the care and treatment of patients with COVID-19 showed that 50.34% of them had symptoms of depression, anxiety (44.6%), insomnia (34%) and mental distress (71.5%).¹¹ The psychological conflict between the responsibility of medical staff to care for the patient and their right to protect themselves, lack of quick access to diagnostic tests, problems and ethical judgments are other nurses' experiences during an infectious disease pandemic.¹²

Health care providers are vital resources in every country. Their health and safety are important not only for continuous and safe care of the patient, but also for controlling the spread of any disease.¹⁰ Maintaining an adequate workforce in times of crisis is important not only in terms of numbers, but also in maximizing their capabilities.⁵ Maintaining the mental health of nursing staff is essential for controlling infectious diseases. If the mental and psychological challenges of nurses during the COVID-19 pandemic are not effectively solved, it will not only increase the incidence of infected nurses, but also affect the quality of health care.⁷

Given that the caring phenomenon is strange and new in our contemporary history, understanding the experiences of nurses can help identify stressors and appropriate coping strategies. Using appropriate solutions can increase nurses' mental and physical health, job satisfaction and quality of care and improve the health of the society. A hermeneutic phenomenological approach can be helpful for understanding caring phenomenon and knowing how nurses experience and view the caring of patients with COVID-19. This approach is in deep, exploring the living experiences of nurses. It is a good approach to be aware of the different and unknown dimensions of COVID-19 pandemic and caring patients. Therefore, this study was designed to explore the nurses' lived experiences of caring for patients with COVID-19. The results of this study can be used as a basic resource to help the health care systems to protect patients and health care providers and be used in similar situations in the future.

Materials and Methods

The present research is a qualitative study with hermeneutic phenomenological approach.¹³ Phenomenological approach tries to understand the more complete structure

and meaning of human experience.¹⁴ Phenomenology is used when the researcher intends to reveal a lesser known or unknown phenomenon by in-depth study of the living experiences of people involved in that phenomenon.^{13,15}

Participants were 12 nurses who cared for COVID-19 patients in a hospital affiliated to Hormozgan University of Medical Sciences. The COVID-19 ward was getting started in February 2020 in infectious ward which it had 15 nurses and 30 beds. Gradually, the number of nurses increased to 18. With increasing COVID-19 patients, the number of COVID-19 wards increased to 5 inpatients, 1 emergency and 2 ICU units. The ratio of nurse to patient in COVID-19 wards was approximately 1 to 1.6 and the nurses in COVID-19 wards worked 175 hours in a month.

Inclusion criteria were working in COVID-19 ward and willingness to participate in the study. After obtaining the required official licenses and ethical code, data were collected with face-to-face and semi-structured in-depth individual interviews. The interview guide was used and includes a set of several open-response questions based on the study purposes and revised with each interview as needed. The interview form consisted of two groups of questions. The first group consisted of the basic questions and the second group consisted of follow-up questions. Basic questions include: "How do you see caring for a patient with COVID-19?" "What experiences have you had in COVID-19 pandemic? Give an example of your best experiences of caring during pandemic?" "What were your most unpleasant experiences?"

Richness is intended to serve the aesthetic quality of the text that narrates the meanings as perceived by the participants.¹⁶ Interviews with individuals continued until the concepts were saturated and quality of text showed the concept of experiences. Participants were asked to choose the time, place and date of the interview as they wished. The place of interviews was restroom of nurses (7 participants), an educational class in infectious ward (2 participants) and a classroom in nursing department (3 participants). Before starting the interview, the purposes of the research, the reason for recording the interview, voluntary participation, security of data and the identity of the interviewees were explained. Participants were asked to sign consent informs. In any stage of the research, they could cancel their participation in the study and then all the tapes deleted or delivered to them. 12 participants were recruited by purposive sampling and 2 nurses refused to continue participating because of fatigue and personal issues and unwillingness to continue participating in the study.

At the beginning of each interview, questions about the participant's age, marital status, education and work experience were asked. Then basic questions were asked. Exploring nurses' experiences of caring in COVID-19 pandemic continued, until the interviewer made sure she understood the concepts correctly. The researcher tried to exactly reveal each question's answer using follow-up

questions such as “can you explain more” or “when you say... what do you mean? The duration of each interview was 50-75 minutes. To clear up the ambiguity, 3 interviews were repeated and finally 15 interviews were conducted. Tried to use a reflective method with bracketing, and preventing the researcher’ primary contact with the concreteness of lived reality.¹⁷ All interviews were conducted by the second author. Data were collected in spring and summer from April to July 2020.

Immediately after the interview, in order to receive the necessary feedback in the next interviews and the adequacy of the data, they were analyzed following the end of each interview, on the same day or the next after data was transcript word by word. The rewritten texts matched with the recorded data and extracted the codes. The demographic characteristics of the participants were analyzed using descriptive statistics. To analyze the qualitative data, 6-step Van Manen’s hermeneutic phenomenological approach was used. It includes: 1. Studying and approaching the nature of experience, 2. In-depth study of experience, 3. Reflecting on the inherent themes of the phenomenon, 4. Interpretative rewriting, 5. Maintaining a strong and directional relationship with the phenomenon, and 6. Conformity of the context of the study with the components and the whole.^{13,18}

Methodological rigor is an important issue in Van Manen’s phenomenological research method. Van Manen enlists orientation, strength, richness and depth as the major quality concerns. Orientation is the involvement of the researcher in the world of the research participants and their stories. Strength refers to the convincing capacity of the text to represent the core intention of the understanding of the inherent meanings as expressed by the research participants through their stories. Richness is intended to serve the aesthetic quality of the text that narrates the meanings as perceived by the participants. Depth is the ability of the research text to penetrate down and express the best of the intentions of the participants.¹⁶

In order to achieve orientation, the interviewer had 10 years’ experience in nursing and caring of patients. Persuasive account and participant feedback are the major components that determine the quality of a hermeneutic phenomenological research and guarantee the strength. Also, interviews conducted with different participants with maximum variety. Increasing the number of interviews and presenting the results to participants after conducting the interviews and asked them to express their views on the consistency of the findings with their experiences used to confirm richness of the study. In addition to the researchers, some colleagues specializing in qualitative research were asked to review the texts to review of the texts, common meanings and patterns of extraction to achieve depth findings.

Results

The mean (SD) age of study participants was 32.25

(5.62) years and their mean work experience was 9.75 (5.39) years. After data analysis, 1050 primary codes were extracted. Following integrating similar codes, 30 categories, 17 subthemes and 5 themes emerged (Table 1). Nurses’ lived experiences of caring for Patients with COVID-19 described as follows:

“Patient care in the COVID-19 pandemic is in the form of sincere care provided by nurses to patients with corona who are meekly suffering.” This is providing care in a situation where nurses feel suspended and emotionally unstable due to their ignorance of the current situation, and they are looking for ways to gain comfort in order to overcome these feelings and provide better nursing services.” In order to better understand the following themes, we provide some quotations from nurses participating in this research:

Sincere Service

The provision of nursing services, in spite of all the fears of Corona and the care of patients in a situation where there is still a lack of protective facilities for nurses, manifests the utmost devotion in the performance of nurses. Nurses work with love and passion alongside other different members of the health team. The three main categories in this regard included love of profession, sense of cooperation and altruism.

«I really always thought my family was in bed, and I was trying to do my best.» (Participant No. 11)

«At first I wished I could get leave in this situation... But when I saw that the hospital was short of staff, I felt dutifully compelled to work with Corona Center. I considered it a human and moral duty. Not only me, but also all the colleagues I worked with also had such a sense.» (Participant No. 8)

Table 1. Themes and subthemes of the nurse’s experiences of caring for patients with COVID-19

Theme	Subthemes
Sincere service	Love of profession
	Sense of cooperation
	Altruism
Patient oppression	Patient loneliness
	Despair
	Seeking support
Emotional instability	Affective death
	Fear
	Self-blame
Suspension	Feelings of pity
	Inexperience
	Confusion
Relaxation	Lack of resources
	Trust
	Mood
	Coping with stress
	Feeling happy

Patient Oppression

Caring for patients with COVID-19 poses special conditions for nurses. Patients whose condition is rapidly deteriorating. It is possible that patients who are conscious and go to the hospital on their own two feet and their disease progresses rapidly, as a result, fear and anxiety pervade their existence and seek psychological support. Many of them are in a state of diminished consciousness and after a short time, their life opportunity ends. The resulting classes in this theme include patient loneliness, despair, seeking support, and affective death.

«In corona conditions, we can no longer be with the patient. The diminished presence of patients' attendants in the hospital greatly causes the patient to be alone.» (Participant No. 12)

«Given the final isolation we apply, patients really need psychological support to be able to overcome this state of loneliness and anxiety.» (Participant No. 10)

«One of my patients was a pregnant mother who had her first pregnancy. She had a baby after 10 years of infertility. She loved the baby, but unfortunately died very meekly. All the colleagues in that shift were really affected.» (Participant No. 7)

Emotional Instability

Fear of corona affects everyone and even health care providers. Fear of transmitting the disease to others and worries about the family have devastating effects on the nurses' morale, and if any of a nurse's relatives is infected, he or she will certainly blame himself or herself for transmitting the virus to the family. Not only the family, but also the concern for the patients disturbs the mental peace of the nurses, especially in situations where the patient's life cannot be saved and the young patients without the underlying disease simply perish due to a small virus. The three main categories in this theme included fear, self-blame and feelings of pity.

«Caring for these patients is different from caring for others, and there is always a lot of stress and worry with us. On the one hand, as a nurse in charge of caring for a patient, we cannot neglect our duties, but we are really afraid of carrying the virus home.» (Participant No. 6)

«On the one hand, I am very scared, and I feel pity for the patients who have been caught in the trap of this disease. They are in a very difficult situation, and they are suffering a lot.» (Participant No. 7)

«The case of death of my friend's wife bothered me a lot. I was her nurse, but she passed away overnight. She was only 32 years old. I think maybe I could have done something else for her to survive, maybe I fell short. Anyway, I have a very bad memory.» (Participant No. 5)

Suspension

It is difficult for everyone to deal with the stressful unknowns. COVID-19 is also one of these unknowns. Although the medical staff in the world has had the

experience of dealing with similar cases such as SARS and MERS, but their mortality has not been so high. The sudden onset of this problem and the unpreparedness of health systems to deal with it and the existing shortcomings and lack of specific treatment, has caused more confusion. Three categories of inexperience, confusion and lack of resources are at the heart of this theme.

«This disease is really unknown. An interesting experience for me personally was that although we had a positive case in mid-March, and he was discharged in good condition, but at the end of April, after about a month, he tested again and his test was positive. It's a strange thing.» (Participant No. 12)

«Those first weeks when the laboratory was not in the center of the province, as well as the confusion of the treatment team to prescribe the drug and which drug could be more effective, made the treatment staff not comfortable with this disease and the quality of care was low.» (Participant No. 4)

«Lack of manpower, medicine, masks and equipment are important issues that greatly affect the way care is provided. When nurses are tired and there is no replacement force, how much power do they have to work? They become exhausted themselves.» (Participant No. 11)

Relaxation

It is the duty of a nurse to provide care to patients in all circumstances. Despite all the stress created by the COVID-19 crisis, nurses are looking for ways to gain inner peace and morale that can provide better quality care to clients. Categories such as trust, mood, coping with stress and feeling happy are included in this collection.

«Many co-workers talk to each other and express their feelings for peace of mind. Some also listen to music or read the Quran to reduce their anxiety.» (Participant No. 10)

«The help of philanthropists is a factor in maintaining morale. My experience was people's attention to the efforts of the nurses and medical staff and donated masks and gloves to the hospitals, which really boosted the morale of the staff.» (Participant No. 7)

«A lot of times I'm satisfied with my performance. I feel more and more useful. I'm satisfied with being able to do everything I can at some point in time.» (Participant No. 9)

«We have to rely on God to overcome this situation. The nurse should not give himself/herself up in the critical situation. I think the main key is to rely on God. We have to be patient.» (Participant No. 1)

Discussion

The experience of care in interviews with nurses was emerged in themes of sincere service, patient oppression, emotional instability, suspension and relaxation. There was serving all patients with full power and love to the

profession along with other members of the healthcare team and with a humanitarian outlook along with self-sacrifice in the performance of nurses in the corona wards was. Study of Sun et al who examined the psychological experiences of nurses caring for COVID-19 patients indicate the humanitarian activities of nurses. In performing these activities, nurses seek support from other team members and, by supporting each other, cope with the difficulties of working with patients with COVID-19.¹⁹ Heydarikhayat et al reported caring from self-sacrifice to avoidance in nurses that means the efforts of nurses for caring patients with COVID-19 across a continuum from humanitarian care and self-sacrifice in a severe crisis to avoiding care. Nurses felt a conflict between their professional duties as a nurse and their self-protection and the protection of their families from the disease.²⁰ In a qualitative study, Liu et al also expressed the view of nurses as a sense of full responsibility for patient recovery and as a duty; the health team strives to provide the best care for patients and return them to daily activities of life.¹⁰ Kim's study also showed that nurses who participated in the care of patients with MERS, had a stronger sense of responsibility and professional ethics and mainly did not raise physical and psychological injuries.²¹

The loneliness and isolation of patients with COVID-19 and the increasing severity of the disease exacerbate the oppression of patients with the disease, as this acute respiratory syndrome rapidly worsens the patient's condition and may be life-threatening for him. In the absence of resources, even the decision to allocate medical facilities to patients is difficult, and usually a team of several disciplines is responsible for such decisions. Truog et al referred to the allocation of ventilators in the triage of patients, frameworks and guidelines. They stated that the decision should be made by a multidisciplinary triage team including a head nurse, physician, etc.²² Leider et al points out that in the absence of a ventilator, nurses should frequently assess the benefits and necessity of the ventilator for patients when they need to reconnect and make a choice between patients, which poses a challenge.²³ Even if nurses are not directly involved in determining such guidelines, they will still be involved in the management of technologies that are responsible for maintaining the patient and at the time of separation of patients from the ventilator. Patients' oppression will affect psychologically nurses. Participating in such decisions and eliminating or continuing life-sustaining treatments is stressful.

Fear of COVID-19, and fear of transmitting the disease to others, affect everyone, including nurses. Such fears and concerns have been raised in the studies of other researchers.^{11,24} In some studies, it has been suggested as the fear of infecting others and the fear of reducing the power and ability to control the condition of patients.¹⁰ The necessity of physical distancing, limitation of social and familial relationships, reduction of nurses' presence

in family circles, and some individuals' distancing from nurses due to their fear over COVID-19 transmission have given nurses unpleasant feelings such as isolation and emotional deprivation and caused them limitations in their communications and daily activities.²⁵ These fears and worries were more common in nurses working in ICU, isolation, and emergency wards during the MERS pandemic than in other nurses.²⁶ Kang et al who examined the health status of the medical and nursing team during the COVID-19 pandemic in Wuhan, found that in the first weeks of the pandemic, 6.2% of people had severe mental health disorders. 36.3% had access to cognitive tools such as mental health booklets, 50.4% had access to media resources and online self-care contents, and 7.5% had access to psychotherapy counseling.⁸ Emotional support and psychological interventions for nurses in these pandemic conditions seems important and necessary to strengthen their motivation and increase their ability to care for the patient.

Another challenging experience in caring for COVID-19 patients is dealing with an unknown virus and the confusion being in the world and in nursing and medical teams. In the study of Shanafelt et al lack and difficulty in accessing personal protective equipment, lack of quick access to COVID-19 tests if they have symptoms, lack of access to up-to-date information and appropriate communication, the possibility of transmitting the infection to the family and supporting the needs of the family and their children were among the sources of anxiety in nurses during the COVID-19 pandemic.⁵ In a research, Shi et al found that 89.51% of the medical team in Chinese psychiatric hospitals have sufficient knowledge about COVID-19 and 64.63% of them have received relevant training in the hospital. Receiving advanced training and experience in caring for infectious patients were predictor factors for people's willingness to care for COVID-19 patients.²⁷

In a study of health team's knowledge and attitudes about COVID-19 in Pakistan, Saqlain et al found that 93.2% of the health team had good knowledge and 88.8% had good performance. Among the health team members, limited infection control equipment and poor knowledge about infection transmission are the main obstacles to controlling this pandemic.²⁸ In the study of Whear et al barriers to delivering fundamental care were wearing personal protective equipment, adequate staffing, infection control procedures and emotional challenges of care. These barriers were addressed by multiple adaptations to communication, organization of care, leadership and staff support.²⁹ Nurses are in front-line of defense against COVID-19. Adequate and appropriate personal protective equipment can meet nurses' health and safety needs in the bedside.^{19,24} Efendi et al in a review article showed that there is a need to promote patient-centered and family-centered care and discharge planning to help children and their families cope with

new situation.³⁰ It will also help to provide adequate human resources, support services for the elderly and children in the nurses' families, provide adequate training and encourage appropriate interpersonal interactions between nurses to facilitate their adaptation to pandemic conditions.

Despite all the hardships and stresses of working in the COVID-19 ward, front-line nurses maintain their morale and use stress management techniques to improve their strength. Sun et al described the experience of positive emotions in caring nurses in COVID-19 as feelings of confidence, calm, and happiness.¹⁹ This finding is similar to the results of this study. The results of relevant studies in other outbreaks are similarly³¹⁻³³ and opposite^{34,35} to these findings. A study conducted by Liu et al shows that the health team uses self-management strategies to cope with crisis challenges and stresses and uses social resources during the COVID-19 crisis.¹⁰ The use of humor, respiratory relaxation, music, meditation and mental imagery have been among the adaptive strategies used by nurses in various studies.^{19,36,37} Ahmadirrehsima et al showed that nurses who were caring patients with COVID-19 faced challenges including lack of protective equipment, excessive workload, psychological problems, isolation in personal and family life, fear, and lack of support in the hospital and to overcome these challenges, they used strategies such as solving the cause of stress, spiritual activities and doing religious.³⁸ Appropriate psychological adjustment and social support will play an important role in nurses' psychological stability in dealing with stress caused by pandemics.³⁹ Providing flexible psychological and professional interventions continually is essential for nurses, and will help to calm them emotionally and improve their mental health. Some strategies can provide better situations for nurses including financial and social support, providing a suitable work environment, management of work shifts, paying more attention to nurses' mental health, and educating appropriate mechanisms to nurses for communicate with patients, their families and the surrounding community.

This study was performed at the time of the COVID-19 pandemic. Adherence to health protocols, social distancing and the use of masks were factors that disrupted the close and intimate relationship between the interviewer and the interviewee. Despite the involvement of participants in day-to-day treatment activities, there were time limits for conducting interviews. We tried to coordinate with the nurses to determine the time of the interview sessions so as not to interfere with their duties.

Conclusion

The nurses who care from patients with COVID-19 face psychological and professional challenges. The themes emerged from data analysis in the present study were sincere service, patient oppression, emotional instability, suspension and relaxation. The results can be used as

Research Highlights

What is the current knowledge?

COVID-19 needs a universal plan to control the disease because of the complex spectrum of its clinical manifestation and outcome. During the COVID-19 pandemic, in addition to being infected, factors such as caring for critically ill patients, increased workload, and isolation and staff shortages put nurses at physical and psychological risks.

What is new here?

In this qualitative research, various aspects of the nurses' experiences of caring for patients with COVID-19 have been discussed. This study highlighted the nurses psychological and professional challenges in caring for the patients with COVID-19.

a basis for increasing the preparedness of health care systems in the face of similar pandemic crises. Using variable caring experiences of the nurses, health care managers can provide a safer health service, emotional and psychological support for the nurses who care for the patients with COVID-19. Despite the recurrence of pandemics in the last century.

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Authors' Contribution

Conceptualization: Zahra Khademi, Elham Imani.

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Writing – review & editing: Elham Imani.

Zahra Khademi and Elham Imani: read and approved the final manuscript

Competing Interests

The authors declare no conflict of interest in this study.

Data Accessibility

The datasets are available from the corresponding author on reasonable request.

Ethical Approval

The Ethics Committee of Hormozgan University of Medical Sciences authorized the permission to conduct this study (ethical code: IR.HUMS.REC.1399.180).

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