Original Article

Nursing Care Challenges for Patients Suffering from COVID-19 from Nurses' Perspective in Iran: A Descriptive Qualitative Study

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Abstract

Background: Encountering the coronavirus disease 2019 (COVID-19) pandemic, nurses face many challenges due to various strategies and resources that can compromise the quality of care. This study aimed to identify nursing care challenges for patients with COVID-19 from nurses' viewpoint in Iran. **Materials and Methods:** This descriptive qualitative study was conducted in one of the main admission centers in Isfahan to treat patients with COVID-19. Data were collected through semi-structured in-depth interviews with 19 nurses from April 2020 to June 2020. The recorded interviews were transcribed and then analyzed through inductive content analysis. **Results:** The challenges of nursing care for patients infected with COVID-19 from the nurses' viewpoint were categorized into 11 subcategories and four main categories: work overload in disaster (lack of nurses with adequate clinical qualification and restrictions on the compliance of the infection control protocols), immersion in an ocean of psychological and social tensions (personal and family tensions, work environment tensions, perception of organizational injustice, and social stigma), quality of care in fragile condition (self-preservation rather than patient care and contradictory patient care standards), and disaster preparedness, response, and management (passive resource management, information system challenges, and lack of guideline-supported protocols). **Conclusions:** The findings of this study suggest that policymakers should actively participate in supporting nurses in the form of reducing physical and mental stress in pandemics such as COVID-19. Having the right perception of the challenges nurses face in such crises can contribute to providing patient safety, improving the quality of care, maintaining organizational resources, and properly managing the disaster.

Keywords: *COVID-19, nurses, patient care, qualitative research*

Introduction

The pandemic disease, coronavirus disease 2019 (COVID-19), is expanding all over the world and has so far infected 199 countries including Iran. Hospitals and healthcare centers were directly affected by the COVID.19 pandemic due to the nature of their work. These facilities provided specialized care by skilled staff which was one of the important components of response to this crisis; a response that would determine the life and death of patients and their families.[1] The role of nurses in health service providers in such situations is so high that one of the most important factors of success can be attributed to their nurses' effectiveness in dealing with the COVID-19 pandemic.[2] Encountering the COVID-19 pandemic, nurses have a continuous presence and key role. Using their skill and speed, they provide required care for the affected people and prevent the aggravation of the problem and cause complications.[3,4]

Despite the critical role of nurses in control and management of COVID-19, studies revealed that nurses face challenges such as environmental stress, high work volume, staff shortages, and patient care conditions that affect their care quality and can compromise the quality of care provided.[5] For example, in a study by Kim (2018), nurses who care for patients with respiratory infections such as severe acute respiratory syndrome did not have accurate information about disease, instruction for patient care, and personal protective equipment.[6] The results of the Lancet (2020) study showed that while nurses were familiar with how to use the clothes and equipment for isolation, wearing these clothes for a long time increased fatigue and sweating, which reduced the quality of care.[7] Also, the results of different studies showed

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that the high and severe stress resulting from the COVID-19 pandemic is another challenge that affects nursing care.[5,8] The results of Chen *et al*.[9] (2020) revealed the perception of fear by nurses during the COVID-19 pandemic due to the risk of their security and delivering services in a crowded environment of hospital chaos. They were expected to take care of patients with severe and unpredictable physical symptoms. Karimi *et al*.[10] showed that these nurses were experiencing mental and emotional distress and were working in inadequate professional conditions. These activities during the COVID-19 pandemic have increased nursing workload, causing fear of being infected and ultimately reducing the quality of nursing care.[5]

The challenges of effective nursing care for patients with COVID-19 in Iran have not been clear, and the studies conducted in this area have been very limited. The feature of quantitative research is that it often consists of limited variables and cannot explain the perspectives, thoughts, and perceptions of individuals and demonstrate the main factors in the implementation of action. However, qualitative studies can overcome this defect and allow the perception and understanding of participants to any phenomenon. It also makes us understand the nature and meaning of human experience.[11] As the experience of this disaster in each country is different due to healthcare resources and cultural domains, this study aimed to identify nursing care challenges and obstacles for hospitalized patients with COVID-19 from nurses' viewpoint in Iran to provide useful information to policymakers and top executive managers in nursing to overcome obstacles in this area.

Materials and Methods

This was a descriptive qualitative study, which describes the depth and complexity of a phenomenon, problem, or issue. It can also provide answer to specific questions related to clinical staff and policymakers, such as people's concerns about an event, their experiences, knowledge, attitudes, feelings, and visions to an event and facilitators and inhibitors of it.[12] So, this qualitative study was conducted from April 2020 to June 2020 in one of the educational hospitals in the Isfahan University of Medical Sciences, which was the first main admission center to treat patients with COVID-19. The hospital is located in the center of the city and consists of 267 active beds, including general and intensive care units (ICUs). The total number of nursing staff before the COVID-19 pandemic was 571, and nurse-to-bed ratio in general departments and ICUs was 1:6 and 1:2, respectively. During the COVID-19 pandemic, the number of nurses decreased to 507. The cause of this reduction was job quit (17 individuals), having the chronic disease (37 individuals), and being pregnant (10 individuals). The participants included 19 nurses who were purposefully chosen with maximum diversity in terms of employment records, position, age, gender, and education. In this sampling, researchers deliberately chose their participants using two criteria: first, the fit between experience and research questions, and second, the existence of the characteristics of a good "expert." So, the researchers conducted the interviews with nurses, supervisors, and patient safety nurse working in ICUs, general, emergency departments, and other healthcare support services. All of them were full-time registered nurses working during the pandemic who have had experiences of taking care of confirmed or suspected patients with COVID-19.

Data were collected through semi-structured in-depth interviews. To conduct interviews, first, a list of the guide questions was prepared according to the research question and review of relevant literature. First, the interview started with the general question "What experiences did you have at the time of caring for patients with COVID-19?" The interviews were conducted in Persian language, in the participants' office. Participants were encouraged to share their experiences concerning the obstacles to effective nursing care in the COVID-19 pandemic. For example, they were asked: What are the factors affecting the implementation of nursing care in the COVID-19 pandemic? What challenges and obstacles in nursing care have contributed to the COVID-19 from your perspective? The follow-up questions would continue based on the experiences presented by the participants. All interviews were conducted by the first researcher. The duration of the interviews in terms of the participants' conditions and their willingness was between 30 and 90 minutes. To obtain deeper information and clarify the concept, participants are asked to tell the concrete instances in examples. The interviews were recorded and transcribed immediately word by word. Sampling was continued until data saturation has been achieved.

In this study, the analysis of inductive content was used in the Graneheim and Lundman method for data analysis. In the analysis approach of inductive content, classes are extracted from the data and the researcher moves from specific cases to the general statement.[13] Data analysis was performed at the same time as data collection and all recorded interviews were implemented up to 24 h after recording word by word, by the first writer. Both the first and second authors listened to the first two interviews to reach an immersion in the data and to obtain a general sense of data. The researchers selected the semantic units summarized in the first two interviews and then discussed them. Then, the first writer repeatedly listened and read the audio files that had been transcribed word by word. In the next step, the whole text is divided into smaller parts so that each small part is called a semantic unit. The general concept of each of the semantic units is summarized in the extracted codes. Then, the codes were grouped based on similarities and differences. In the end, these groups were placed in the larger classes as far as possible aiming at achieving new knowledge and enhancing understanding

and describing obstacles to provide effective nursing care. The more compatible classes were integrated with each other, and then, new classes were emerged, which ended in new themes.

In this qualitative research, the concept of trustworthiness is used, which consists of four indices: conformability, credibility, transferability, and dependability.[14] To ensure conformability, the researchers tried not to interfere with their assumptions in the data collection process and to provide the participant's statements related to the identified concepts. For data credibility, sampling with maximum diversity, the long. standing presence of the researchers in the research environment, the use of peer.to.peer colleagues, as well as exploring the finding of research by participants were done. To ensure the transferability of the findings, the research process and all its steps were described in detail to allow other researchers to understand how the findings were obtained. The dependability of the findings was determined by the review of the observers (external check). It means that the related codes and classes introduced by two familiar observers were investigated and confirmed. Also, the researchers verified their consistency with the participants' statements as well as to ensure the quality of the classifications.

Ethical considerations

After obtaining permission from the Ethics Committee of the Isfahan University of Medical Sciences (IR.MUI.RESEARCH.REC. 1399.300), the goals were explained to the participants. Before signing the consent form, the research team makes sure that participants have understood all the information about the study and all of their questions have been answered, although they could leave the study at any time without penalty or loss of benefits.

Results

The purpose of this study was to identify the challenges of nursing care for patients infected with COVID-19 from the nurses' viewpoint. For demographic information, refer to Table 1, which was obtained at the first of the interview. These challenges were categorized into 11 subcategories and four main categories: work overload in disaster (lack of nurses with adequate clinical qualification and restrictions on the compliance of the infection control protocols), immersion in an ocean of psychological and social tensions (personal and family tensions, work environment tensions, perception of organizational injustice, and social stigma), quality of care in fragile condition (self-preservation rather than patient care and contradictory patient care standards), and disaster preparedness, response, and management (passive resource management, information system challenges, and lack of guideline-supported protocols) [Table 2].

Table 1: Characteristics of the study participants

Variable	Category	Number
Age	20-30	7
	31-40	11
	41-50	1
Gender	Male	4
	Female	15
Educational level	BSC*	14
	MSN**	5
Marital status	Single	6
	Married	13
Work background	1-5	5
	5-10	10
	10<	4
Nurses' work sector	Specialist services	8
	Internal services	5
	Emergency	3
Professional position	Nurse	14
	Head nurse	2
	Supervisor Infection control	1
	Clinical	1
	Safety expert nurse	1

*Bachelor of Science **Master of Science

Table 2: Challenges of nursing care for patients with COVID-19 from nurses' perspectives

Subcategory	Category
Lack of nurses with adequate clinical qualification	Work overload in disaster
Restrictions on the compliance of the infection control protocols	
Personal and family tensions	Immersion in an ocean of psychological and social tensions
Work environment tensions	
Perception of organizational injustice	
Social stigma	
Self-preservation rather than patient care	Quality of care in fragile condition
Contradictory patient care standards	
Passive resource management	Disaster preparedness, response, and management
Information system challenges	
Lack of guideline-supported protocols	

Work overload in disaster

The nurses experienced a lot of pressure during the care of patients with COVID-19. According to the findings of the study, work overload and physical exhaustion of nurses presented with the sense of frustration with the inability to complete tasks in the time given. This theme was categorized into two subcategories: lack of nurses with adequate clinical qualification and restrictions on the compliance of the infection control protocols.

Lack of nurses with adequate clinical qualification

The participants believed the outbreak of COVID-19 has fortified the preexisting problem of nurses' shortage. On the one hand, with the outbreak of the disease, the number

of recourse to the hospital and the patients' hospitalization increased more than ever, and on the other hand, there were nurses who were scared by the unfamiliarity of disease and ways of transmitting it. Among the nurses were also ones who were included in the high-risk groups (pregnant women and people with immune system problems) according to the guidelines of the Ministry of Health and Medical Education of Iran and could not work in their previous nursing departments. They either quitted or requested leave, or transferred to low-risk departments. Thus, with the increase in the number of shifts for the remaining nurses, the high load of nursing care required would result in the nurse's tiredness. However, as the disaster continued, the hospital had taken actions to solve the problem of nursing shortages, such as the recruitment of volunteer forces, but these actions were not effective. *"During the shift, we were almost totally busy. Sometimes at the night shift, there was a nurse with six patients. Of course in some cases in order to solve this problem, however, the hospital used volunteer nurses in the wards which has little performance because of lack of expertise to take special care and the unfamiliarity with rules*" (P 6).

Restrictions on the compliance of the infection control protocols

Observing the principles of infection prevention and control in this disaster became more and more important, including the use of personal protective equipment and compliance with hand hygiene. Compliance with these principles was accompanied by limitations and difficulties for nurses at the time of the outbreak. One nurse emphasized:

"The frequent use of masks and other personal protective equipment had problems with the usual routine of eating and having rest and we had a lot of difficulty following the bad ventilation and humidity in the workplace" (P 9). Another nurse expressed her situation in this way: *" We should use personal protective equipment for a long time. I hate them because they are too heavy and uncomfortable. I can't move easily between patients"* (P 8).

Immersion in an ocean of psychological and social tensions

The experiences of all nurses showed that they were mostly affected by psychological and social tensions. This category was defined by personal and family tensions, work environment tensions, perception of organizational injustice, and social stigma.

Personal and family tensions

One of the subjects that were extracted was the personal and family tensions of nurses, and most of the participants referred to the tension due to illness and constant mental preoccupation with COVID-19 disease and family-related problems during the outbreak. One participant expressed his personal stress in this way, *"Somehow I had obsessive thought about COVID-19; I experienced the physical signs such as cold sweat and chest pain, and I even have tested it to make sure that I didn't get affected" (*P 4).

Some nurses pointed to the emergence or escalation of family conflicts affected by heavy and diverse work shifts. *"We have not seen each other for a week due to the heavy shifts, and when we are at home we are both extremely tired. We have a lot of fights, so we tend not to talk with each other"* (P 16).

Work environment tensions

The source of tensions in the workplace, from the one hand, was observing the specific situation of the patients and their families, and on the other hand, it was attributed to inadequate support of the managers. The nurses expected a reduction in the working hours set by the Ministry of Health and Medical Education of Iran to have more time to renew energy, but lack of nurses and being infected with COVID-19 prevented the full enforcement of the law. Many of the nurses also pointed out that most of the dead people were elderly and had chronic diseases, but at the peak of the outbreak, they witnessed the deaths of young patients and sudden deaths among the patients, which resulted in hopelessness. One of the nurses said: *"Especially in the early days, we were so harassed to see so many deaths. Even the image of our own mind was that all the people in this department were doomed to death, and the COVID-19 means the death*"(P 8).

Perception of organizational injustice

This subcategory showed itself in different forms and has also been reported by nurses working in different hospitals, nurses from different departments, and other healthcare support services, and even between employees working in the same department. Nurses can only provide quality services if their work environment provides adequate conditions to support them, but during COVID-19, they experienced more inequality in employment, working conditions, and payment. "*One of my colleagues who works in another hospital said they have been received non - financial or financial support, which were apparently due to the fact that they have managers pursue these issues, but we did not receive any special welfare services"* (P 7).

A clinical supervisor stated that: *"Even before the COVID-19 pandemic, our hospital face nursing shortage. Besides the government didn't try to treat nurses in a way that they feel worthy"* (P 4).[4]

Social stigma

Social stigma was another challenge that nurses and sometimes their family faced. In the community and family, they encountered social rejection because of fear of infection, and even in their hospital, other healthcare support services shunned to contact with nurses from the COVID departments. There was, in fact, a kind of social

isolation for the nurses and their family. *"I have put my son in the kindergarten, when they realized I'm working in the COVID department, they refused to accept him and said it is because of other children protection; Even the cabs didn't pick me up when they realized I am a nurse"* (P 11).

Quality of care in fragile condition

Quality is always affected in disaster, and nursing care is not an exception. Although nurses were empathetic toward patients and their family, they stated that they had to limit care due to tough situation imposed and this led to the inefficiency of care.

Self-preservation rather than patient care

Some of the nurses pointed out that because of the unknown nature of COVID-19 and uncertainty in way of transmission, in some cases, they tended to take care of themselves rather than patient care, which affected the quality of care. *"Sometimes we would have refused to do invasive care, such as suctioning or getting culture, because we had to get very close to patients, and I was afraid to put my family and I in danger*" (P 17).

Another nurse declared that: *"I had to limit my contact with the patient in isolation room just like doctors. If I became infected nobody help me. I'm alone"* (P 5).

Contradictory patient care standards

Nurses pointed out that, at the time of the outbreak due to the shortage of medical equipment, staff fatigue, fear of disease transmission, and lack of time to provide care, they did not follow some of the care standards such as control of high-risk drugs and administering certain time-sensitive medications at their right time. It has also been caused by inadequate experiences of new staff and volunteers with drugs and how to provide intensive care, such as airway management. Therefore, little attention to care standards would lead to an increase in the incidence of errors. One of the nurses stated:

*"Despite knowing the rules, I had no time to control a high - alert medication before administration. It seems in this complicated situation; patient safety wasn't our priority" (*P 16*).*

Disaster preparedness, response, and management

Another challenge that nurses faced was inadequate preparation for disaster management, which was seen as passive resource management, vague, and incomplete flow of information and lack of protocols.

Passive resource management

Although COVID-19 had been known for a while ago, and the top executive managers were aware of the possibility of the shortage of healthcare provider and personal protective equipment, there was not an action plan that addresses these problems. *"Most of the times the number of volunteer nurses who came to help us were not clear, so our plan to handle the patients changed more and more*" (P 5).

A head nurse pointed out: "*Every day I should ask for more medical equipment such as infusion pomp and ventilators. Sometimes we borrowed from other departments with many problems for a short time*" (P 6).

Information system challenges

Participants emphasized that there were many challenges in transparency and giving information about new policies, changes made in the previous processes, and the channels of communication in their organization. *"Some policies were changed without notice, for example, I should prepare an important drug after getting confirmation of supervisor and I don't know that"* (P1).

One nurse declared his worry in this way*: "Executive managers of our hospital talk about many problems in their mitting's. But none of their decisions informed to us. We heard about this changes suddenly*" (P 6).

Lack of guideline-supported protocols

The majority of the participants highlighted the need for timely standard protocols to diagnose, provide care, and treat the disease. These policy concerns included preplanning before opening units, nursing recruitment, resource allocation, disease management, and policies related to infection control. *"In the first wave of the outbreak, there wasn't any specific protocol for hospitalization, and this led to confusion of health care worker. So we encountered with overcrowding outside the emergency department"* (P 12).

One of the nurses emphasized that: "*Any doctor has his/her protocol to manage COVID-19. We are confused with a lot of orders that change every day. It's ridiculous that all of them reject the other's treatment"* (P 9).

Discussion

This study was conducted with the aim of exploring the challenges of nursing care for patients with COVID-19 from the nurses' point of view. Participants emphasized on four main challenges including work overload, facing psychological and social tensions, lack of quality of nursing care, and inappropriate disaster management.

In this study, participants experienced workload due to lack of healthcare workers and restrictions of using personal protective equipment. The lack of nurses with adequate clinical competency was one of the work overload reasons. For some researchers, nurses failed to have sufficient skill and competence to undertake an active role in the disaster and cannot provide adequate health care for the troubled people.[15] They need to gain professional and practical skills required, such as using medical equipment, performing triage, and providing physical and

psychological care.[16] Latif *et al*.[17] (2019) also show that the nurses' competence is not ideal to provide care in the disaster at a desirable level. Therefore, it is important to examine the competence of the nurses and identify the gap in knowledge and competence before the disaster occurs. In 2018, Ong and Tan also suggested skill classification that nurses should acquire before the disaster. They reported that effective disaster management requires nurses to demonstrate proper nontechnical skills including task and resource management, situational awareness, teamwork, communication, control of emotions, and leadership.[18]

The outbreak of the COVID-19 changed the current law in the hospital, and the nurses had to pay attention to procedures both for caring of patients and protecting themselves besides preventing the spread of disease. For example, nurses need to spend time on wearing and removing individual protective equipment. These factors caused nurses in the clinical settings to face a greater workload at the time of care for the patients. The study by Liu *et al*.[19] (2020) also showed doctors and nurses were dissatisfied with the high workload during the COVID-19 pandemic. The issue was due to the lack of human resources, the unknown nature of the disease, and the fear of providing care and a shortage of care facilities. Similar to this study, Chen W (2020) also identified that the lack of human resources, especially in ICUs, would exacerbated with the severity of the disease and increase in the number of patients.[20] Nevertheless, in some studies, the nurses tried to contribute to maintaining teamwork, helping each other, and making critical decisions to reduce the effects of human resource shortage.[21]

Participants in this study further experienced personal and family tensions, workplace conflicts, discrimination, and social stigma. In the study of Liu *et al*.[19] (2020), physicians and nurses experienced challenges such as entering a new work environment, fear of contamination or carrying the infection to loved ones, detecting patients in acute deterioration, and tensions caused by communication with patients and other healthcare providers. From Gavin *et al*.'s[22] (2020) point of view, healthcare providers faced with unprecedented problems such as seeing a large number of mortality, the need to make moral decisions, lower quality service provision, apprehension relating to risk of infection, and concerns for family well-being. The study conducted by Shen *et al*.[23] (2020) also showed that ICU nurses in the COVID-19 pandemic experienced problems such as anxiety related to unfamiliar surroundings and processes, lack of experience in managing infectious patients, long-term fatigue, depression according to dealing with patients in critical conditions, and anxiety about families. In approving the results of this study, Sun *et al*.[24] (2020) showed that nurses experienced negative feelings such as fatigue, discomfort, and helplessness following heavy work, fear, and anxiety for patients and family members. The systematic review by Fernandez *et al*.[25] (2020) also emphasized that nurses are likely to experience substantial psychological issues such as fear, vulnerability, and other psychological issues in the face of disaster. Buheji and Buhaid[21] (2020) suggested that nurses being humans need to improve their capacity vs demand, to reduce errors, through raising their "working memory" during the COVID-19 pandemic. For this reason, Maben *et al*. (2020) recommend employees to use guidance to support nurses' psychological well-being.[26]

Moreover, this study reports worries and feeling of guilt related to care provision among nurses and the quality of care affected by the disaster. From nurses' point of view, this outbreak led them to provide limited care compared to usual care. Unknown nature of the disease, lack of trust in personal protective equipment, fatigue and reducing contact, and keeping distance and confusion in the treatment of the disease affected nursing care. In contrast to this study, Liu *et al*.[19] (2020) reported that nurses were fully responsible for patient's well-being, but in both studies, some volunteer nurses experienced challenges such as working in new environment, fatigue resulting from heavy work, and the use of personal protective equipment, fear of contamination, or inability to manage patients. Results from the study of Fernandez *et al*.[25] (2020) demonstrated that nurses in the crises had a sense of duty and self-sacrifice to provide care to the patient by accepting their occupational hazards. Consistent with the findings of this study, nurses have also bad feeling of inefficiency in the study of Galehdar *et al*.[27]

In low- and middle-income countries, general beds were rapidly converted to ICU beds and general hospitals were converted to critical care hospitals, so it is necessary to update the knowledge and skills of the healthcare workers to address efficient care by particular training program.[28] Participants highlighted this issue simultaneously. In line with our study, Rashidi *et al*.[29] (2015) expressed that training programs should be constantly held to provide clinicians the opportunity to enhance their disaster preparedness and help them overcome the relevant barriers. Hick *et al*.[30] (2020) also reported that healthcare systems and providers must be prepared to obtain the most benefit from limited resources while mitigating harm to individuals, the healthcare system, and society. Finally, Staines *et al*.[31] (2020) suggest a five-step strategy and actions to improve patient safety and quality improvement during a pandemic that strengthen the capacities of the learning system by coaching clinicians or providing bedside learning coordinators are highly emphasized.

Another main challenge faced by the nurses in this study was inadequate preparation for disaster management, which was seen as passive resource management, information system challenges, and lack of guideline-supported protocols. The study by Fernandez

et al.[25] (2020) showed that nurses were stressed due to rapid change in recommendations and knowledge about the disease and called for increasing information to improve the quality of care. They also complained of not providing adequate training in the care of patients. Besides these issues, professional and organizational readiness vis-a-vis the pandemic affected the performance of frontline nurses. The nursing shortage, huge turnover of patients, limitation in isolation rooms, and lack of planning are the most important challenges for nurses. Liu *et al*. (2020) suggested when different specialties and hospitals work together, there are differences between cultures. Therefore, establishing professional and interpersonal coordination should be a priority to ensure effective and high-quality care delivery.[19] Participants in the study of Karimi *et al*.[10] had experienced turmoil. They described the uncertain treatment and care policies in place for patients within the designated care centers. It is obvious that patients with COVID-19 need comprehensive and specialized care but most of the healthcare providers, who came from other departments or hospitals, had insufficient clinical experiences. When health systems are not prepared to manage such crises, it is necessary to provide training, provide learning opportunities, and promote communication.[32] Fernandez *et al*.[25] argue that organizational reaction is very significant. Participants must expect their organization to provide knowledge about the pandemic diseases, but they did not want mixed information. The study encountered limitations that included problems in doing interviews while maintaining physical distance and avoiding some of the participants' actual expression of experiences due to concerns about the impact on their job status.

Conclusion

The findings of this study suggest the government, policymakers, and top executive managers of nursing to actively participate in supporting nurses in the form of reducing physical, psychological, and mental stress in pandemic disease such as COVID-19. Having the right perception of the challenges nurses face in such crises can contribute to providing safe service to patients, improving the quality of care, maintaining human resources, and properly managing the disaster. Being prepared to face a disaster in terms of structural and human resources can also be effective in reducing tension of nurses who play a significant role in the health system. Accordingly, more quantitative and qualitative research in the field of care for patients with COVID-19 can prepare nursing profession for a novel emergent pandemic.

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Conflicts of interest

Nothing to declare.

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