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Lived experiences of Iranian nursing managers in organizing and confronting the COVID-19 pandemic

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Abstract:

BACKGROUND: The prevalence of the new infectious disease is a global health issue and a threat to nurses and other health care workers. In addition to nurses who have been directly involved in the care of patients with coronavirus disease 2019 (COVID-19), nursing managers have also played a key role in the management and control of this disease. The present study aimed to investigate the lived experiences of nursing managers in organizing and confronting COVID-19 in Iran.

MATERIALS AND METHODS: This study was a qualitative research design conducted by descriptive phenomenology based on Husserl philosophy. Participants consisted of 32 nursing managers working in general public hospitals in East Guilan, north of Iran, selected using purposive sampling. In-depth and semi-structured interviews were used to collect data. Colaizzi's strategy was used to analyze the data. Coding was done with MAXQDA 2007 software. Lincoln and Guba trustworthiness criteria were used to achieve accuracy and reliability of the data.

RESULTS: Data analysis led to the emergence of a main theme called "Management in the COVID-19 Crisis" and three sub-themes: "Dealing with the unknown", "Managing deficiencies and assets" and "Structural challenges".

CONCLUSION: In this study the nursing managers experienced how to deal with the COVID-19 crisis. By examining the experiences of managers involved in the COVID-19 pandemic, a rich set of managerial experiences can be gathered that prepare them for other infectious diseases in the future.

Keywords:

COVID-19, Iran, management, nursing, phenomenology, qualitative

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Introduction

An outbreak of novel coronavirus pneumonia is ongoing, called 2019-nCoV, was first identified in Wuhan, Hubei province, China at the end of 2019.^[1] The prevalence of the new infectious disease and its changing dangerous viruses is a global health issue and a threat to nurses and other health care workers.^[2] The World Health Organization (WHO) has declared COVID-19 a public health emergency of international concern.^[3] COVID-19, as an emerging disease, has many unknown clinical dimensions.^[4] This disease has

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placed significant strain on the United States' health care and health care providers^[5] and leads to some challenges for this vital part of the society. These problems include an increasing need for medical staff, increasing costs for personal protective equipment (PPE), diagnostic tests, beds and ventilators, as well as rising mortality.^[4] The result of this great epidemic was the filling of hospital beds, the extreme fatigue of medical teams, the severe shortage of protective equipment, the infection of hospital staff, the shortage of personnel, and the spread of disease and anxiety among the people.^[6]

With the increasing spread of this emerging disease, many health care providers who

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had inadequate clinical experience in providing intensive care to patients with COVID-19^[7] and nurses were affected by unpleasant experiences through patient care.^[8] Frequent exposure of nurses to painful and excruciating conditions of patients can lead to a decrease in their quality of professional life.^[9] Accordingly, creating a healthy work environment to maintain nursing staff and also to improve the quality and safety of patient care is a priority in the health system.^[10] Nursing managers are the key to creating a healthy and successful work environment^[11] and play an important role in creating a healthy work environment.^[10] The health care system always expects nursing managers to provide good conditions for nurses so that they can properly take care of the patient.^[12] Nursing managers should also consider leadership and managerial responsibilities,^[13] including staff responsibilities, goal setting, care standardization, budget management, and quality improvement activities, as well as staff recruitment and evaluation.^[14] They should play their role in monitoring and directing the activities of nurses in specific wards of hospitals or medical centers^[15] and managing human and funding resources.^[16]

Nursing managers are expected to strengthen the relationships between managers between teams in different disciplines throughout the hospital and to promote partnership between physicians and nurses.^[17,18]

They should also be in direct contact with a wide range of key staff in the health care process, such as nursing staff, support staff, middle managers, senior management, physicians, patients, and families. For this reason, nursing managers have been described as “the key link between patients, nursing staff, medical staff, other clinical and administrative staff of the hospital.”^[16]

Extensive responsibilities of nursing managers along with the scope of control increase job needs.^[17,18] This, along with the complexity of roles and high workload,^[13] causes nursing managers to have significant job stress.^[19-21] On the one hand some studies have also shown that they face different tensions and challenges.^[22]

On the other hand, the situation of supporting nursing managers in relation to the challenges they face is insufficient.^[12] They often do not have sufficient support to make independent decisions in the affairs of the constituency under their care.^[18] It is obvious that increasing workload and stress can lead to health problems and burnout in them.^[17,18,23] Some studies have shown that nursing managers are also vulnerable and at risk of various diseases and reduced mental well-being^[24,25] and if they do not have sufficient health, they cannot perform their duties properly.^[24]

In view of the above, in addition to nurses who have been directly involved in the care of patients with COVID-19, nursing managers have also played a key role in the management and control of this disease. Undoubtedly, as important as the study of corona treatment, it is also important to study and document the combat experience as well as the effects and consequences of this epidemic on various areas such as prevention and how to deal with it.^[26] Identifying the challenges of hospitals along with effective strategies and measures implemented in the face of biological crises, can be a road map for future crisis management planning.^[27] Therefore, considering the importance of the issue and the emergence of this pandemic, the present study was conducted to investigate the experiences of nursing managers in organizing and confronting the Covid-19 in Iran.

Material and Methods

Design of the study

The present study was a qualitative research design conducted by descriptive phenomenology method based on Husserl philosophy during the 6 months from June to November 2021. Husserl believed that knowledge is the result of human existence and experience in the world.^[28] Phenomenology as a research method is dedicated to describing the structures of experience as perceived by individuals without recourse to assumptions, judgments, or presuppositions.^[29]

Setting and participants

The participants of this study were 32 nursing managers working in general public hospitals in East Guilan who had some role in organizing and dealing with the Covid-19. To consider the maximum variation, various levels of nursing management (matron, supervisor, head nurse, infection control nurse, and health education nurse) were selected as the participants.

The inclusion criteria included having a bachelor’s degree in nursing or higher, having a nursing management position, working in public hospitals in East Guilan, having a role in organizing and dealing with the covid-19. The exclusion criteria were unwillingness to continue participating in the study.

In this research, the method of selecting participants was based on purposive sampling. The process of sampling and determining the number of samples continued until theoretical saturation, that is, when no data and new information was obtained. By conducting 24 interviews, the theoretical saturation of the data was observed, and subsequent interviews were conducted to ensure data saturation. The interviews were conducted by both researchers (AD and MR). One of the researchers

worked as an infection control nurse in one of the mentioned hospitals. She was able to gain their trust for the interview because of her experience of cooperation and acquaintance with the participants.

Data collection

Open interview was the main method of data collection using the general interview guide. In order to conduct the research, the researcher first explained the purpose of the research to the participants and, if they wished, after obtaining informed consent, conducted an interview with them.

The interview was conducted individually and face-to-face in a relatively quiet place using the interview guide. The time and place of the interview were determined with agreement of the participants.

The type of interview in this study was semi-structured and in-depth. Semi-structured interviews are often the sole data source for a qualitative research project and are usually scheduled in advance at a designated time and location outside of everyday events. They are generally organized around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee/s. The individual in-depth interview allows the interviewer to delve deeply into social and personal matters.^[30] In a qualitative interview, the researcher usually develops a guide in advance so that they can refer to during the interview or memorize the interview that takes place. An interview guide is a list of topics or questions that the interviewer hopes to cover during the course of an interview. Interview guides should outline issues that a researcher feels are likely to be important.^[31] In this study, the interviews were conducted with an open-ended question after obtaining demographic information (such as age, gender, work experience, position, and place of work). The open question was "Please explain to us how to organize resources (financial, human, equipment, etc.) in the Covid-19 pandemic." The researcher guided the interview process with progressive and clarifying questions such as "Can you explain more?" "Do you mean ...?" to cover its objectives. The interviews lasted between 40 and 60 min.

During the interview, after obtaining permission from the participants, the entire interview was recorded by a digital audio recorder (MP3 player).

Immediately after the interviews, the text of the interviews and even the participants' feelings such as laughter, silence and tone of voice were transcribed and coded. Vague items were noted to review with the participant in the next session.

Data analysis

In order to analyze the data in the present study, the Colaizzi's strategy (1978) was used in parallel with the interviews. This method is an organized and subjective method that is used to describe life experiences and understand their meanings.^[32]

Data analysis was performed on the seven-step Colaizzi's strategy according to the Abu Shosha (2012) study [Table 1].^[33]

Data analysis was done by both researchers (AD and MR). Coding was done with MAXQDA 2007 software.

Trustworthiness-rigour

Lincoln and Guba Trustworthiness criteria were used to achieve the accuracy and reliability of the data based on four criteria (credibility, dependability, confirmability, and transferability).^[34]

To meet these criteria, the researchers carefully selected the participants, had long-term contact with participants to gain their trust, allocated enough time to answer their questions, constantly reviewed and constantly compared data and categories in terms of similarities and differences, checked the findings with the participants and experts in qualitative research methods, presenting detailed data analysis and deep descriptions of the research for the readers.

Results

Nearly 32 nursing managers were as participants in this study. All of them were female and the majority were in the range of 41–50 years. In terms of education, majority of them were bachelors and had 21–25 years of work experience. The participants' characteristics are presented in Table 2.

Data analysis led to the emergence of 68 primary codes and a main theme titled "Management in the COVID-19 Crisis." The main theme consisted of three sub-themes

Table 1: Steps of data analysis according to Abu Shosha (2012)

Steps	Description
Step 1	Transcription of the interviews and reading them several times to empathize with the participants
Step 2	Extraction of the desired phenomenon related to the participants' experience from the phrases and sentences of the transcribed texts
Step 3	Formulation of the meanings and explanation of the meaning of important phrases
Step 4	Formulating meanings into categories and theme
Step 5	Merging all the extracted cluster themes together
Step 6	Reduction of the findings and removing redundant, inappropriate and exaggerated descriptions
Step 7	Validation of the findings by confirming the participants on the accuracy and consistency of the results with their experiences

titled “Dealing with the Unknown,” “Management of Deficiencies and Assets,” and “Structural Challenges,” as well as ten sub- sub-themes, which will be explained in more detail below. The main theme, sub-themes, and sub- sub-themes that were identified from the analysis are listed in Figure 1.

Dealing with the unknown

The experiences of nursing managers showed that they experienced how to deal with an unknown crisis

during corona. This sub-theme emerged from three sub-sub-themes (exposure to a big shock, unknown virus and a thousand faces, unknown treatment and care).

Facing a big shock

Participants described dealing with the corona as a tragic event or as a difficult situation, in their own words, “a big shock.” According to them, the crisis was not only specific to our country, but also pervasive and has affected the whole world. One of the participants stated in this regard:

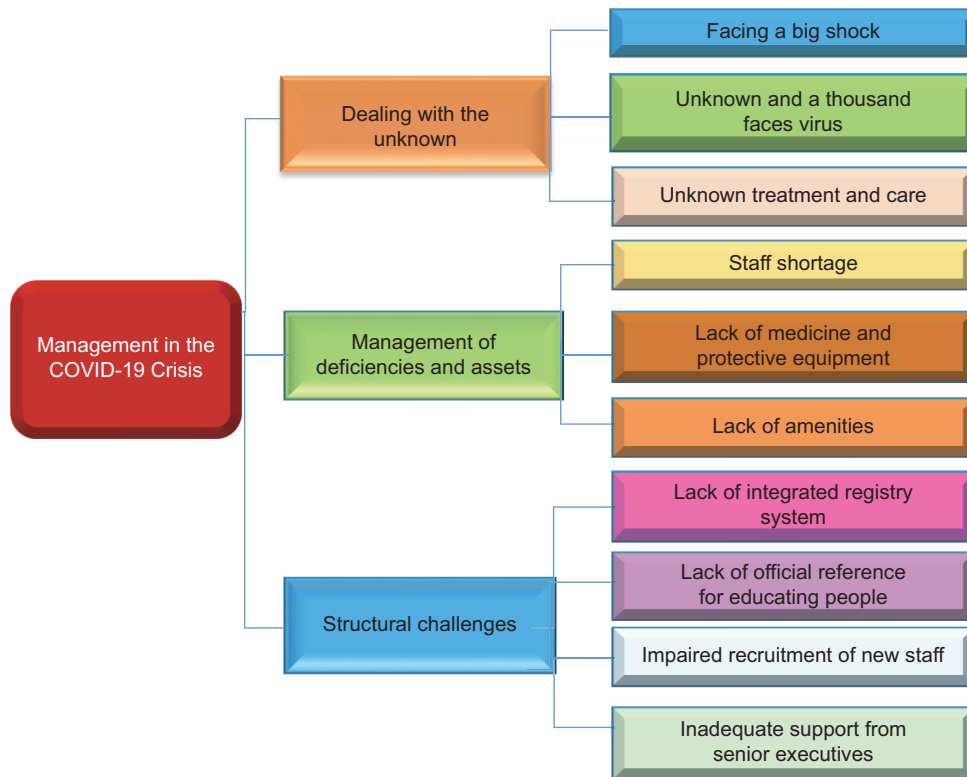


Figure 1: Main findings identified as theme (Mmanagement in the COVID-19 Crisis), sub- themes (Ddealing with the unknown, Mmanagement of deficiencies and assets, Sstructural challenges) and sub- sub- themes

Table 2: Participants characteristics (n=32)

Variable	n (%)				
	Matron	Supervisor	Head Nurse	Infection Control Nurse	Health Education Nurse
Age (years)					
30-40	0 (0)	3 (9.4)	2 (6.2)	0 (0)	0 (0)
41-50	3 (9.4)	7 (21.9)	8 (25)	3 (9.4)	3 (9.4)
≥51	0 (0)	2 (6.2)	1 (3.1)	0 (0)	0 (0)
Gender					
Female	3 (9.4)	12 (37.5)	11 (34.3)	3 (9.4)	3 (9.4)
Marital status					
Married	3 (9.4)	12 (37.5)	11 (34.3)	3 (9.4)	3 (9.4)
Work experience (years)					
5-10	0 (0)	0 (0)	0 (0)	2 (6.2)	3 (9.4)
11-20	1 (3.1)	3 (9.4)	3 (9.4)	1 (3.1)	0 (0)
21-25	2 (6.2)	9 (28.1)	8 (25)	0 (0)	0 (0)
Education status					
Bachelor	2 (6.2)	10 (31.3)	9 (28.1)	0 (0)	0 (0)
Master	1 (3.1)	2 (6.2)	2 (6.2)	3 (9.4)	3 (9.4)

"The nature of the disease and its critical onset was a big shock to me and took us all by surprise" (P11: Head nurse)

Another participant stated:

"Before Corona (COVID-19), everyone had their own plan in life and imagined a future. But suddenly, a small virus infected not only Iran, but the whole world. It was a shock to everyone and we had to deal with it." (P13: Supervisor)

Unknown and a thousand faces virus

According to the participants, the characteristics of COVID-19 are unknown and each time it causes new manifestations. They believed that new forms of the disease would continue until the disease was definitively cured. The following excerpt is part of the statement of one of the participants in this regard:

"This virus is unknown and is becoming a thousand faces. It can appear to everyone in a certain way and form. The symptoms that it had in the beginning are now different and we see new manifestations of it every day." (P21: Supervisor)

Another participant stated:

"The corona is not gone, and when there is no definitive cure and no vaccine, it may come back with a new genetic mutation, and the crisis may recur." (P6: Infection control nurse)

Unknown treatment and care

Participants stated that during the COVID-19 pandemic, there was no precise information on its care and treatment, which made it more difficult to deal with the crisis. The following statements are part of the participants' statements in this regard:

"Care and treatment of Corona (COVID-19) is unknown. Today we had medicine. Tomorrow they say it will be obsolete. After a while, they came to the conclusion that the whole treatment that was being done was not useful and that something else had to be replaced. It made care of patients with Corona a hundred times harder." (P4: Infection control nurse)

"We did not have the right information about caring for corona patients, and we did not know exactly what was being done for these patients, whether it was right or not, and whether it would lead to the right result, because it was unknown to us." (P12: Head nurse)

Management of deficiencies and assets

Commonly in the health system, there are some permanent problems and deficiencies that nursing managers plan to solve and are in the process of eliminating. In the Corona era, in addition to the common shortcomings, there were shortcomings that were specific to this era and had to be addressed. Deficiencies such as lack of personnel,

lack of medicines and protective equipment, and lack of amenities will be discussed below:

Lack of staff

One of the common problems during the COVID-19 pandemic was staff shortages. The result was an increase in the workload of nurses and the creation of problems due to the high workload. Participants' experiences indicated that staff shortages made COVID-19 crisis management more difficult. One of the participants stated in this regard:

"One of the important factors that could make it difficult to manage this crisis was the number of staff. Because sometimes the staff who worked in these departments got sick themselves and it was challenging for us to replace them." (P8: Matron)

Another participant stated:

"In such situations, I tried to plan the staff work schedule so that there would be days of rest and recovery for staff; however, most of the time, this was not possible due to staff illness." (P16: Head nurse)

Lack of medicine and protective equipment

Another challenge for nursing managers during the COVID-19 pandemic was the lack of medicine and equipment. One of the participants stated:

"Regarding the medicine, some medicines were scarce and all of them were stressed. The lack of medicine caused further fear and anxiety among the staff. This concern was also seen among ordinary people. People lined up in front of pharmacies and Red Crescent centers across the city to get medicine because their dearest person was hospitalized and they could not find medicine." (P24: Supervisor)

Lack of amenities

The difficulty of nursing work, along with the lack of sufficient facilities, provided difficult conditions for nursing staff. One of the challenges for nursing managers during the COVID-19 pandemic was the lack of facilities such as suitable resting places for staff who tended to stay in the hospital to prevent the disease from spreading to their families. However, these conditions were not available. One of the participants stated in this regard:

"The most important issue that bothered us at that time was that we did not have a space for those who preferred to be away from family and stay here (the hospital) to avoid the risk of the virus spreading to family members. Because both the family and the staff had the stress of transmitting the disease, but unfortunately there was no place to stay." (P25: Supervisor)

Structural challenges

Some problems that managers faced during the COVID-19 pandemic were related to the higher

authorities of the health system, and they did not play a major role in solving and managing them. The sub-theme addressed the four issues of (i) lack of an integrated registry system, (ii) lack of a formal reference for educating the public, (iii) disruption of recruitment, and (iv) insufficient support from senior executives.

Lack of an integrated registry system

One of the structural challenges of nursing managers during the COVID-19 pandemic was the lack of a unified system for obtaining COVID-19-related statistics. The following statements are part of the participants' statements in this regard:

"None of the data centers were linked. That means we had to provide these statistics to different parts of the university. While the content of all the statistics was almost the same, a single registry system could collect these statistics. But there was no system to which all the information was linked, and given the volume of work in those days and the small number of staff, it was just a waste of time and personnel." (P23: Supervisor)

Lack of official reference for educating people

Another structural challenge for nursing managers during the COVID-19 pandemic was the lack of an official reference for educating the public. Participants stated that the lack of an official authority to educate the people had led to the spread of misconceptions among the people and, of course, financial abuses. One of the participants stated in this regard:

"Unfortunately, 80% of the information that people received about this disease, such as treatment, prevention and care, etc., was from cyberspace and did not have any scientific documents. For example, today they said eating lemon juice is good and tomorrow they say it is bad. When they said food was good for the disease, if you went to the market that day, the price would have multiplied and some people would have made a profit from it. It should have been stopped and people did not get involved in such issues, because it had a bad psychological effect on people." (P7: Health education nurse)

Problems in recruitment new staff

Another structural challenge for nursing managers during the COVID-19 pandemic was the disruption of recruitment. It seems that the bureaucratic structure of the organization in the country has made it impossible to do so even in these circumstances when there was an urgent need to recruit new nursing staff. One of the participants stated in this regard:

"I wanted the authorities to live up to the promises made to nursing colleagues working in private hospitals to recruit them in those critical times when there was a great need for staff. Those colleagues left private hospitals and because of that the University called for them to be recruited as corporate staff,

but since the beginning of the crisis in March 2020, until several months have passed, they have not been paid yet." (P21: Supervisor)

Insufficient support of senior managers

For organizational growth, the support of senior managers is a fundamental principle. Participants' statements indicated that the support of senior executives was insufficient. The following statements are part of the participants' statements in this regard:

"The role of senior managers was very small. They did not even come to visit us. Maybe they thought they should not go to the cities during the red time. Provincial visits were low, we did not have visits from health network officials in the city." (P17: Supervisor)

"Senior authorities sent us a series of corona packages in various headings from environmental health to infection control and training in different versions, and their support was just that." (P9: Infection control nurse)

Discussion

This study was conducted to explain the lived experiences of nursing managers in organizing and confronting the covid-19 pandemic. Data analysis led to the emergence of the main theme of "Management in the COVID-19 Crisis." This theme consisted of three sub-themes: "Dealing with the unknown," "Managing deficiencies and assets," and "Structural challenges." In the first sub-theme (dealing with the unknown), the participants in the present study stated that dealing with the corona was an unfortunate event or a difficult situation, in their own words, "a big shock." In the study of Labaf *et al.*^[27] (2021), the challenge of surprise and unpreparedness to face the pandemic was mentioned as the first and biggest management challenge in the COVID-19 crisis. In a study by Shih *et al.*^[35] (2009) that aimed to explain the experiences of Taiwanese nursing managers with the problems associated with combating a severe epidemic of acute respiratory syndrome, participants noted that they experienced shock and chaos during an epidemic crisis.

The COVID-19 crisis has taken the world by surprise with its widespread and unknown prevalence.^[26] Although managers and health policymakers in Iran have experienced crises such as war, floods, and earthquakes, so far they have not experienced an epidemic of an infectious disease and during the COVID-19 pandemic in a different environment to control and manage the situation.^[27] For this reason, it is not unreasonable to expect that the experience of COVID-19 management will be a crisis for them.

In the second sub-theme (Managing deficiencies and assets), participants in the present study also stated that

in the corona era, in addition to common deficiencies, they faced deficiencies such as staff shortages, shortages of medicine and protective equipment, lack of amenities, and structural challenges. In the study of Poortaghi *et al.*^[36] (2021), the shortage of nursing staff was reported in parallel with the increase in the number of patients with COVID-19. In one study, Indonesian nurses reported a shortage of N95 masks during corona outbreaks, forcing them to wear a mask for several days.^[37] In the study by Labaf *et al.*^[27] (2021), one of the most serious challenges facing hospitals was the challenge of lack of equipment, protective equipment and medicine in the early days of the crisis, management challenges to provide the required equipment and personnel were also reported.^[38] According to the results of this study, lack of access to adequate equipment had created a feeling of insecurity among staff.

Coping with these challenges is one of the main responsibilities of health care managers.^[38] Employees of all organizations, both private and public, expect their employers to keep them safe at work.^[39] Providing personal safety kits is vital for health care providers and will alleviate their psychological distress.^[40] All organizations must respond to crises beyond their control.^[39] Managers play an important role in the workplace because of their ability to make an impact on the environment by providing the resources needed to overcome job demands or reduce potential waste of resources.^[41] It is important to have an effective leader, especially in cases of widespread resource loss and rising demand, such as the COVID-19 crisis. Due to the unexpected and chaotic nature of crises, having flexibility and readiness to change as a manager is very important.^[42]

In the third sub-theme (Structural challenges), participants mentioned the lack of an integrated registration system for covid-19 and the lack of an official reference for public education. Developing transparent systems for collecting, analyzing, and disseminating data is vital. The use of open data should be complemented by strong, transparent governance frameworks concerning how information will be stored, shared, and used with safeguards to protect privacy and prevent abuse. One such way could be the establishment of multi-stakeholder data advisory committees. Relevant information should be widely communicated. All resulting data should be available in an easily accessible format to further support and enable accountability.^[43]

Also participants' statements indicated that the support of senior executives was insufficient. They emphasized the need to support staff and the presence of managers in the field in times of crisis and problems, and considered it to increase staff satisfaction. Nurses in the study of

Gunawan *et al.*^[37] (2021) were also dissatisfied with being ignored by superiors and felt that instead of being seen as a hero, they are in the role of soldier or infantry in the game of chess in terms of size and value. In the Poortaghi study, an important motivating factor is the presence of managers in departments and their close relationship with employees.^[36]

Relationship is a turning point in a crisis. Without effective relationships, we cannot keep our colleagues informed of what is going on.^[44] With the presence of managers in the workplace and by establishing proper relationships with staff and empathy with them, psychological support can control of the situation can be taken.^[27] Although nursing managers working in hospitals often face the added pressure of constant and rapid changes in health care settings,^[38] extensive and ongoing support is needed to prepare and empower nurses to care for patients in times of crisis.^[45] Emphasizing values and protecting the morale of all employees are the responsibility of leaders, and employees should be supported in their daily hard work.^[44]

This study, like other studies, had limitations. First, as with any qualitative study, the generalizability of the findings is limited. We tried to increase generalizability by selecting maximum variation participants. Second, this study was conducted in Iran. Therefore, it may not be generalizable to other contexts and cultures. It is suggested that similar studies are performed in different sociocultural situations. Third, the interviewees may not have provided accurate and complete information due to the managerial job position and the feeling of being endangered. To control this limitation, one of the researchers, who was an infection control nurse in one of the hospitals in the sampling setting, conducted the interviews. She was able to gain their trust for the interview because of her experience of cooperation and acquaintance with the participants. However, the analysis of the interviews shows that the interviewees were explicit in their response and did not seem to have any hesitation in criticizing organizational and managerial issues.

Conclusion

The experiences of nursing managers, as an important part of the country's health care system at the forefront of dealing with COVID-19, showed that they faced an unknown crisis. During this crisis, they faced deficiencies that they had to manage. Some of the problems could be managed by them, but some of them were structural challenges and required planning by high-level managers.

The crisis caused by the COVID-19 pandemic opened different dimensions of management to our country's

health system. Based on the experiences of the participants in the current research to deal with the crisis of Covid-19 and other biological crises; diagnostic and therapeutic equipment, medicine, and PPE must be provided. Solutions to the shortage of specialized personnel must be considered. To facilitate data collection, an integrated electronic registry system should be set up and an official source of education should be provided. All these measures are needed in the light of the extensive and continuous support of senior managers to prepare and empower nurses in patient care in times of crisis.

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Conflicts of interest

There are no conflicts of interest.

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