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Challenges faced by nurses while caring for COVID-19 patients: A qualitative study

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Abstract:

INTRODUCTION: In the COVID-19 crisis, nurses are directly involved in patient care, so they face many challenges. This study was performed to determine the challenges faced by nurses while caring for COVID-19 patients in Iran in 2020.

MATERIALS AND METHODS: This qualitative, content analysis was conducted in Iran on ten nurses directly involved in the fight against the corona epidemic, selected through a purposeful sampling strategy. Data were collected through deep interviews consisting of open questions. All the interviews were recorded, and immediately after each interview, it was transcribed into written form. The data were analyzed using MAXQDA software.

RESULTS: All the challenges could be classified into three main categories and 17 subcategories. The main categories were miss-management in controlling corona conditions, mental and physical complications and challenges in corona work conditions, and lack of sufficient workforce.

CONCLUSION: Hospital managers and authorities play a significant role in meeting the financial needs and requirements of nurses, and can minimize the job discrimination prevalent at medical centers through providing financial and nonfinancial incentives for nurses. Moreover, the findings of the present study can help hospital managers and authorities to gain a better understanding of the experiences of nurses, and to take the necessary measures to obviate the challenges faced by nurses in public health emergencies.

Keywords:

COVID-19, nurses, qualitative research

Introduction

Currently, all health and medical systems call over the world are responding to the spread of COVID-19.^[1] The first country in the Middle East to experience the spread of COVID-19 was Iran.^[2] It is estimated that hospital-acquired COVID-19 happens in 40% of cases. The diagnosis of physicians and nurses with COVID-19 has caused grave (particular) concerns among physicians and personnel active

at health-care centers.^[3,4] The personnel working in health-care systems who are at the forefront of the fight against COVID-19 are in danger of infection in that they are those who are directly involved in the diagnosis, and treatment of COVID-19 patients. Several factors such as workload pressure, lack of enough personal protective equipment, lack of effective medications, and lack of adequate support increase stress among health-care personnel.^[5]

The results of the studies done in 2003 on the spread of SARS revealed that the

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health-care staff felt uncertain and afraid that they might pass on the infection to their family members, friends, and colleagues.^[6,7] Moreover, there are some reports that health-care staff were unwilling to go to work, or were considering resignation.^[6] There are similar concerns for the health staff who take care of COVID-19 patients. Researchers in South Africa listed that the challenges faced by the nurses who were taking care of patients infected with AIDS were in the following areas: Organizational and managerial challenges, personal and organizational support, financial and human resources, and psychological and physical influences.^[8,9] In their study on the experiences of nurses involved in the treatment of SARS patients, Bergeron *et al.* found out that operational, organizational, and personal problems were among the most important challenges faced by the health-care staff in Canada.^[10]

The organization is a process that is in direct interaction with all other management processes and procedures.^[11] When a system is well-organized, it is likely to work more effectively and efficiently, with the staff feeling higher levels of satisfaction (with the job satisfaction of the staff increasing) in that organization provides a structure in which roles, responsibilities, decision-making centers, and methods for the creation of a communication network are specified. Every individual in such a system knows his or her responsibilities in such a way that the work stress of the staff is lowered while their efficiency and work skills improve.^[11] Hence, the present study was designed to explore the challenges faced by nurses while caring for COVID-19 patients in Iran.

Materials and Methods

Study design

In the present qualitative study, conventional content analysis method was used for data analysis.

Participant selection and data collection

The purposive sampling procedure was implemented to select ten nurses randomly from among the nurses working at the COVID-19 centers in hospitals in Iran. The nurses were introduced for participation in the present study by three separate researchers. The following inclusion criteria were considered in the selection of participants: having a clinical work experience of at least 5 years, and being present at the corona center for at least 1 month.

The necessary data were collected using semi-structured interviews with the nurses over the telephone. The interviews conducted by the same individual lasted for a period of 40–60 min. The questions asked in the interview were developed in such a way that the necessary data related to the attitudes of the nurses toward the issues

and topics focused on in the present study could be gained. For example, what problems are you facing in caring for patients? First, four interviews were conducted in an unstructured fashion so that the researchers could gain a better understanding of the possible problems. This allowed the researcher to specify the areas that should be focused on during the final semi-structured interviews so that an appropriate set of questions could be developed for the final interviews.

The present study was confirmed by the Ethical committee of Mashhad Medical University. In the data collection process, first, the researcher contacts the nurses through telephone and informed them of the objectives and the research processes to assure them of the safety of the collected data. The participants were informed that they could have access to the written text of the interviews in case they wish to. Moreover, all the participants showed their oral consent to take part in the present study.

Data analysis

Data analysis was done by the use of conventional content analysis method. After the interviews were typed, all materials were placed in MAXQDA software version 10 to better organize data. For immersing in the data, the interviews were read several times.

Rigor

To ensure the rigor of findings, Lincoln and Guba's 4 criteria were used.^[12] For the credibility of findings, long-term engagement, integration in research, and member checked were used. In terms of dependability of the findings, the steps and process of the research were recorded and reported as accurately and step by step as possible. For confirmability, the researcher tried the results of the data from the interviews and quotes of the participants and set aside his assumptions about the phenomenon and the results. In this study, in order to increase transferability, it was tried that the participants in the study have maximum variation in terms of individual–social characteristics so that the findings can be transferred to a larger population.

Results

In the present study, randomly selected ten nurses working at the corona centers (ward) in coronal referral hospitals participated. The findings of the present showed that the majority of participants were female nurses [Table 1].

After the contents of all interviews were read several times, some initial 276 codes, some 17 subcategories, and three main (primary) categories were extracted from the content of the interviews. The extracted

primary categories were mismanagement in controlling the COVID-19 situation, psychological (mental) and physical problems experienced by nurses in dealing with corona, and lack of sufficient human resources and lack of equipment needed for the corona crisis [Table 2].

Mismanagement in controlling corona situation

The findings obtained in the present study revealed that one of the major challenges nurses are faced with is the mismanagement in controlling the corona situation (crisis). The lack of public awareness, lack of following preventive measures against the corona epidemics, and the lack of sufficient prevention warning notices were the most important factors responsible for the initial spread of COVID-19 all over the country. The mass media fall short in informing the public about the corona epidemic, and in educating them about the corona epidemic dangers. In this regard, one of the participants indicated that:

“Surprisingly, the authorities seemed very relaxed concerning corona in that they allowed the public to use Metro..... Instead of emphasizing the importance of people’s keeping the minimum social distance of one and a half meters while using the public transportation systems such as buses and the metro, they allowed the taxi to move around passengers who had to sit close to one another. I told the city hall about the risks involved, but nobody heeds the warnings.

Table 1: Characteristics of participants in the study

Participant number	Job experience	Age	Sex
P1	11	37	Female
P2	16	41	Female
P3	8	32	Female
P4	11	35	Female
P5	14	38	Female
P6	21	41	Female
P7	10	40	Female
P8	6	31	Man
P9	12	33	Female
P10	14	40	Man

Moreover, the lack of public awareness and their misconceptions about the spread of the disease are important factors responsible for the public’s ignoring the preventive measures against the spread of the disease. Even if the preventive measures are taken by the public, they are not done in the right way. One of the participants in this regard noted that:

“People are not showing enough care against corona. I was in the taxi the other day while I was wearing a mask and gloves. When I told the taxi driver my destination, he couldn’t get my destination in that he was listening to the radio. When he asked me to tell him my destination again angrily, I told him to turn the radio down. He angrily retorted, “it is because of your mask, what is the good of wearing masks?” People have wrong conceptions about infectious diseases. I saw a woman giving his kid a piece of biscuit while wearing protective gloves. What is the good of wearing protective gloves? I told her nicely that she should not give her kid something to eat with her hands in gloves. But she told me something unpleasant.” (p. 7).

Releasing misinformation and fake data

Another major challenge faced by the health-care staff is that the government does not release (report) the real number of COVID-19 cases and deaths to the public. The number of reported corona cases and deaths has been always lower than the real number of cases. According to the medical staff, if the COVID-19 cases and deaths are exactly recorded and reported regularly to the public, they will gain a better understanding of the speed and severity of the spread of the disease. In this way, they may take preventive protocols more seriously, implementing all measures carefully to control the spread of the disease. One of the participants said:

“It is a lie, I mean, what they are reporting does not match what I see with my eyes. Although there are few cases of COVID-19 at present in our hospital, I think the information they release concerning the number of corona cases and deaths does not

Table 2: Categories and subcategories of the challenges in nurses

Categories	Subcategories
Mismanagement in controlling the COVID-19 situation	Releasing misinformation and fake data
	Injustice and discrimination
	The lack of direct supervision over prevalent (present/existing) conditions by authorities’ and nurses’ dissatisfaction
	The lack of financial and emotional support for the nurses facing the tough corona working conditions
Psychological (mental) and physical problems experienced by nurses in dealing with corona	Not taking necessary measures to impose complete isolation of COVID-19 patients
	Forcing nurses to work in corona epidemic conditions
	Nurses’ fear and anxiety for working in corona conditions
	Difficulties of using personal protective clothing and equipment
Lack of sufficient workforce in the corona crisis	Not following the standard protocols in corona conditions
Lack of equipment needed in the corona crisis	

COVID-19=Coronavirus disease 2019

seem logically true (real). The authorities should give real data so that people can face the reality. In this way, they may take more care, I feel they report a lower percentage of corona cases and deaths so that they can manage the situation.” (p. 8).

Moreover, the medical staff reported that one of the reasons why the government does not report the real data concerning corona infection cases is that the government is not able to provide support packages for the families and individuals. If they report the real data, they have to impose a quarantine, shut down businesses, and provide support packages for the people, which require financial resources and budgets.

“Most of the corona testing kits they use are fake and are contaminated. When I wanted to get a corona test, they told me that the corona testing kits we have are likely to be contaminated. So, I took a computed tomography (CT)-scan test. They said my lung base is infected. The results of corona testing kits are not reliable.” (p. 1).

Injustice and discrimination

Considering the lack of sufficient equipment and facilities in the present corona situation, all nurses are required to be present in their workplace round the clock. Moreover, doctors try to decrease the time they are close to corona-infected patients by giving some of their responsibilities to nurses. This is discrimination. Although nurses undertake some of the responsibilities of the physicians including intubation of patients and the like, this is the physicians who receive the extra money and perks. One of the participants claimed:

“At present, no doctor comes to the bed of corona patients to visit them. When they saw we are complaining, they told us the supervisors should be present when you are doing intubation. It is not fair. We perform the intubation; the money goes to the doctors. What if the patients sue us if something goes wrong? You know, we are not legally allowed to do intubation, it is not our responsibility. Nobody listens to our complaints.” (p. 3).

Even this discrimination and injustice are observable in different ways, they treat doctors and nurses. When it comes to doctors, the authorities ignore the possibility of the transfer of infection to others. Infected doctors are allowed to use the same facilities used by healthy nurses. Another participant said:

“One of the doctors infected with corona was hospitalized, and he was allowed to use the bathroom for nurses, simply because he was a doctor. We expressed our complaints and asked them to make another bathroom for infected doctors. It is not important you are a physician; you are putting others at risk.” (p 5).

The lack of direct supervision (present) conditions by authorities and nurses’ dissatisfaction

Another major challenge faced by nurses is that hospital authorities do not reveal the truth about the real conditions covering the realities from the eyes of the supervisors coming from the Ministry of Health. When authorities try to show that the conditions are normal or even favorable, the supervisors (visitors) cannot gain appropriate feedback about the real state of affairs, and, in this way, any possible positive change is prevented. One of the participants noted in this regard:

“It is interesting to know that the hospital authorities and managers themselves don’t dare to come to the corona centers. Two days before they formally inform the public of the spread of the corona virus in the country. Then, they send us a formal letter telling us that the visit had been canceled because of the corona crisis, and we were required to get back to our business of caring for patients infected with COVID-19.” (p 6).

The lack of financial and emotional support for the nurses facing the tough corona working conditions

As the prevalent tough working conditions expose both nurses and their families to the risk of corona infection, they need high motivation, and emotional and financial support to continue work in the risking working conditions. Contrary to her (her) expectations, one of the participants in the present study noted that:

“I really like to help the patients infected with COVID-19. But the management does not give us enough motivation. Instead of giving us motivation, they create stress, telling us if you work in corona condition, we fire you, we are to reduce headcounts in the hospital. I have the motivation to care for patients. But when treat me like a simple construction worker, I lose my motivation.” (p 9).

Not taking necessary measures to impose complete isolation of COVID-19 patients

In the absence of effective management, and the lack of the necessary equipment and facilities, complete isolation of COVID-19 patients was not conducted from the very first day they came to hospitals until the day they left the hospitals during the spread of the corona virus epidemic. This provided favorable conditions for the infection of other patients not infected with COVID-19 and even the medical staff working at such centers. One of the participants said:

“In the early days, patients with suspected COVID-19 were required to have a chest CT scan in other hospitals. There was no wheelchair or bran card with protective covers for such patients. If these patients some of whom were confirmed to be infected with COVID-19 coughed along the way to the CT scan room, they put other uninfected patients hospitalized in these wards, and all the medical staff at risk of infection.” (p6).

Not allowing nurses to wear masks to prevent people from panic

Another serious management challenge was not allowing the medical staff and nurses to wear masks in the early days of the spread of corona virus so that they can show the situation is normal and to prevent the public from feeling panic. The implementation of such an unscientific illogical strategy could speed up the spread of COVID-19 dramatically. One of the participants noted:

"In the 1st days of the corona epidemic, they did not provide us with the necessary equipment, instead, they told us not to wear a mask because it is useless and it can cause panic in the public. Even when the medical personnel wanted to wear masks, they told them not to." (p 2).

Physical and mental (psychological) stresses of work in corona epidemic

Working in corona conditions was associated with so many mental, psychological, and physical stresses for the medical staff including: "fear of and worries about working in corona conditions," "difficulties and stresses associated with wearing personal protective equipment and clothing," and "forcing nurses to work in the hard corona conditions." One of the participants said:

"Psychologically speaking, my life is a mess. I cannot hug my little son. After two months, it was two days ago that I could kiss my son. There is always that your family will get infected because of you, and there is the afterward feeling of blame that they got corona from you, not from someone else." (p 4).

Forcing nurses to work in corona epidemic conditions

Before the spread of COVID-19, there was already a lack of enough workforce in hospitals. The need to employ more nurses was felt more serious after the corona epidemic in that the working personnel was more willing to give up work because of the risks involved. Therefore, hospitals tried to fight against this dropout of nurses through determining working conditions and imposing legal punishments for cases of work give-up. One of the participants indicated that:

"In the early days of corona spread, the hospital management told us we are at war, and if you do not come to work, we treat you like soldiers who escape from the war fronts." (p 2).

Nurses' fear and anxiety for working in corona conditions

Another important challenge nurses faced is that it was not possible to confirm corona infection fast through the available lab tests. It usually took a long time to determine that a given patient was COVID-19 positive in that there was a dearth of corona-testing kits and that there were a limited number of laboratories that performed such

tests. Moreover, this was a source of panic and worry for nurses. They were worried they may have been infected, and if so they may make others infected. One of the participants indicated in this regard that:

"We couldn't be sure about the infection of none of the patients. All of them were COVID-19 suspect cases. We had to keep them in the wards without following any standard protocols. It took at least two weeks for us to have the test results. In some cases, we received the test results after the patient had passed away. This caused a lot of stress for us." (p 1).

Due to the prolonged time of diagnosis test response of patient and uncertainty about suspicious cases when they are at home, nurses and other medical staff are worried about passing on the infection to family members, and being the source of infection. "When I want to touch something, I am worried that it may be contaminated. At home, when my daughter wants to come near me, I don't dare to touch her or kiss her. I don't want my family to be infected with the disease. I am worried about my being corona positive. At the hospital, I am always taking care not to get infected. At home, I am worried about making others infected." (p 7).

Difficulties of using personal protective clothing and equipment

One of the most important challenges nurses are faced with is the use of personal protective clothing and types of equipment. These protective clothing and equipment impose a lot of limitations on working with COVID-19 patients. Wearing protective masks, gloves, and gowns increases the difficulties associated with working with corona patients. One of the participants noted:

"Breathing while you are wearing a mask is a real pain. It is so difficult to breathe with a mask on when you are working all through your shift. This causes a headache. When it is warm, it is really unbearable." (p 5).

Not following the standard protocols in corona conditions

The standard protocols for dealing with COVID-19 patients could not be implemented due to the lack of sufficient equipment and facilities and also the lack of enough workforce.

Lack of sufficient equipment and facilities in corona crisis

One of the main challenges nurses and medical staff caring for COVID-19 patients were encountered was the lack of sufficient personal protective facilities and equipment in the hospitals in such a way that nurses had difficulty in performing invasive care such as suction because they did not have access to the necessary equipment.

"We don't know that a given patient has respiratory symptoms (problems) simply because they did not have enough facilities and types of equipment for such patients. We used only a shield. Why did not let us have access to all the necessary facilities and equipment? We are taking care of these patients, who after a few days are shown to be corona positive. This strategy caused a lot of anxiety and worry about the medical staff." (p 9).

Shortage of nurses

The shortage of nurses was felt more strongly during the corona epidemic in that the spread of COVID-19 made it necessary for a huge number of infected patients to be hospitalized, a situation for which there were not enough nurses. Worse than that, the lack of sufficient equipment and facilities needed for the control of the corona situation was another important challenge that the current nurses working in hospitals were faced with. In this regard, one of the participants in the present study indicated that:

"We were faced with a serious shortage of nurses. They start to employ temporary nurses through short term contract (below 89 days). You know, when you sign a contract below 89 days, your employer is not legally tied to provide you with insurance. This was not humane. Anyway, they tried to solve the problem of nurse shortage in this way." (p 3).

Discussion

The present study was aimed at investigating the challenges faced by nurses while caring for COVID-19 patients. The results obtained in the present study revealed that nurses have faced with a wide variety of challenges in the areas of the management in controlling corona situation, mental and physical well-being in working in hard corona conditions, shortage of nurses, and the lack of sufficient equipment and facilities nurses need in the fight against corona. Reports are indicating that in China, nurses faced several challenges during the corona epidemic including a shortage of workforce, lack of personal protective equipment, lack of experience, high work stress, fear, anxiety, unfamiliarity with the corona situation, and infection with corona.^[13]

Based on the findings of the present study, the nurses participating in the interviews showed their complaints about the prevalent challenges caused by mismanagement in the control of the corona epidemic and the prevalent injustice and discrimination that exist between nurses and doctors, concerning their presence next to the corona patients. It seems that interprofessional and interorganizational cooperation is a priority if the health-care system is to ensure the provision of a high-quality and more efficient health

care for the patients. Nurses play an important role in facilitating communication and cooperation between the health-care team members. Therefore, a sense of mutual trust in a respectful environment, maintaining efficient relations (connection), the transparency of responsibilities of individuals and teams, implementing standard protocols, and increasing the sense of belonging (team membership) are to be developed.^[14] Many managers and leaders can make use of a variety of strategies and interventions to provide due support for the nurses in their teams and organizations.^[15] Policymakers should do their best to fight against and minimize the structural injustice and inequality the nurses are faced within medical centers.^[16]

One of the serious challenges the majority of participants in this study referred to was the mental, psychological, and physical difficulties they experienced in corona working conditions. In such situations, the nurses are at serious risk of infection. Therefore, they suffer from poor mental health, experiencing different levels of mental (psychological distress). Based on the findings obtained from the interviews, the nurses did not receive the timely psychological intervention.^[13]

The subjects interviewed in the present study stated that while they are home they are constantly worried about passing on an infection to the family members. The results of the studies on the spread of COVID-19 and other respiratory infectious diseases showed that nurses are seriously concerned about their personal health and the health of their family members when they come in close contact with these potentially deadly viruses, and concerned about ways to find a fair balance between their professional moral commitments and their personal health worries.^[17-20]

The participants indicated that they lost their original motivation to care for patients due to the lack of financial and spiritual support from the hospital authorities. Insufficient support given to a medical staff working on different fronts in the health-care system puts their highly important and vital profession under question.^[16] Another serious reported by the participants in the present study was the lack of sufficient workforce and equipment necessary to deal with the COVID-19 condition. The dissatisfaction of the medical staff with the lack of sufficient workforce and the shortage of necessary equipment and facilities makes health-care staff more vulnerable.^[21] The participants noted that the shortage of protective personal clothing and equipment necessary for providing health care for corona patients was so acute that they did not have access to the necessary equipment to perform invasive care protocols (processes, practices) for the patients. During the COVID-19 epidemic, some of the nurses lost their lives because of the lack of

sufficiently high-quality personal protective equipment and clothing. The International Council of Nurses has demanded all countries to put the provision of these facilities and equipment as their top priorities so that the loss of lives of more nurses can be prevented.^[22] Nurses active in the intensive care unit in other countries experiencing the spread of COVID-19 were similarly faced with a lack of sufficient workforce and personal protective clothing and equipment.^[13,23-25]

The participants in the present study stated that wearing masks and protective gloves and gowns was a factor that increased the difficulty of their working conditions. They also indicated that the problems and limitations associated with wearing personal protective clothing were unbearable for them.^[15] After putting on the protective overalls, breathing was so difficult for the nurses. To save time, energy, and costs associated with wearing protective clothing, nurses avoid drinking water and going to the bathroom, and this increased the difficulties related to working while they are in protective gowns and overalls. In such situations, as time passes, nurses lose their mental and physical energy more and more and feel exhausted and distressed.^[26]

Another important challenge encountered during the corona epidemic was the shortage of nurses. Due to this shortage, the working nurses had long work shifts, which, in turn, increased the risk of infection for the working nurses.^[27]

Limitation and recommendation

Due to the critical nature of the questions, some of the nurses were unwilling to have their voices recorded, but when we assured them of the confidentiality of the data, and the use of data under unanimity, they showed their consent to cooperate with the researcher. At the end of the interviews, a small present was given to the interviewees in return for their favor. Another limitation of the present study was gathering part of the needed data over the telephone. This not only made the data collection process a bit harder but also made the interpretation of the collected data more time consuming in that there were no nonverbal clues to help the research have a deeper grasp of the content of the data.

Conclusion

COVID-19 is considered the greatest challenge in public health all over the world. As nurses are in the frontline of the fight against the coronavirus, they play a significant role in this concern. Hence, hospital managers and authorities should do their best to meet the financial needs of nurses, providing them with financial and nonfinancial incentives (motivations), and eliminating the prevalent discrimination observed at medical

centers. The findings obtained in the present study can help hospital authorities and managers to get a deeper understanding of nurses' experiences so that they can take effective measures to solve the serious challenges nurses are faced with in current and future public health emergencies.

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Conflicts of interest

There are no conflicts of interest.

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