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# Ethical context and issues in taking care of COVID-19 patients in Iran: A content analysis based on nurses experiences

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**ABSTRACT**

Healthcare professionals are in the front line during COVID-19 pandemic and among them nurses are the most high-risk group to acquire this infection. The aim of this study was exploring the perspectives and experiences of nurses on care delivery in COVID-19 infected hospitalized patients. We conducted a qualitative conventional content analysis.The method of data collection was interviews and field note. This qualitative study was carried out from June to September 2020. A total of 15 Semi-structured interviews were held with nurses who were delivering care to COVID-19 infected patients. MAXQDA 10 software and Granheim Lundman's content analysis method was used for data analysis. One main themes that emerged from the data analysis was "try to appropriate taking care despite the challenges. In addition, four categories extracted consist of "challenging care context", "negative issues for nurses" "ethical reasons for providing care" and "multi-dimensional care", besides, 10 subcategories were generated. The nurses are at risk of physical and physiological consequences directly as the result of providing care to patients with COVID-19, and shortages that existed in Iranian care delivery system exacerbate the condition but despite these issues, nurses provide comprehensive care with an empathetic approach.

**Keywords**:
COVID-19, Nursing, Pandemic, Content analysis

## Introduction

Coronavirus disease 2019 (COVID-19) was first identified in Wuhan City in December 2019, after that, the disease spread all over Hubei Province and other parts of China (1, 2). After causing significant morbidity and mortality in China, by February 2020, COVID-19 had spread to other countries, including the Germany, USA, Spain, France, Italy, and Iran (3, 4). Since 31 December 2019 and as of 08 November 2020, nearly 50 million cases of COVID-19 (in accordance with the applied case definitions and testing strategies in the affected countries) have been reported, including more than 1.25 million death (5). Healthcare professionals are in the front line during COVID-19 pandemic and are at increased risk concerning their physical and mental health (2, 3). Among them nurses are the most high-risk group to acquire this infection [6]. China reported infection in 3387 health care providers (HCPs), while 22 of them (0.6%) died due to the illness (7, 8). Similarly, Italy (20%), Spain (14%), and France (over 50 deaths amongst HCPs) reported high rates of HCPS infection (8, 9). The aim of this study was exploring the

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perspectives and experiences of nurses on care delivery in COVID-19 infected hospitalized patients.

## Methods

### Design

A qualitative content analysis approach was used to conduct this study. Content analysis as a qualitative descriptive research method is used for the condensing and abstracting of textual data to gain new insights into the study phenomenon (10).

### Participants and setting

The purposive sampling methods were used to invite participants for interviews. 15 nurses who take care of COVID-infected patients were interviewed in this study. Inclusion criteria included nurses who cared for the patients with COVID-19 in Sabzevar Vasei educational center that allocated as Coronavirus Center, and willing to share their experiences. Selected participants were rich in information on the phenomenon. Sampling continued to data saturation.

### Data collection

Unstructured interviews were conducted initially with general questions followed by semi-structured interview questions. Interviews lasted 30 to 90 minutes with respect of participant's tolerance. First author held them from June to September 2020. The interviews were performed and face-to-face by first author out of the ward considering the preventive protocols. The interviews were audio recorded with the permission of participants. Data saturation was reached by the 15 participants.

### Data Analysis

Data analysis was conducted concurrently with data collection using Graneheim and Lundman approach (10). The interviews were transcribed verbatim and read several times to ensure a general sense of the participants' experiences. Next, meaning units were determined and related codes were assigned. Through a constant comparison of similarities and differences between codes, they were sorted and grouped to subcategories and categories. The main theme of the study as a topic to connect the subcategories and categories was developed (11). MAXQDA 10 software was used for data management.

### Rigor

For the fulfillment of trustworthiness, the four criteria of Lincoln and Guba's included transferability, dependability, credibility, and conformability were used. For the credibility of the study the member-checking and triangulation were used. Data coding and analysis were done individually as well as collectively. For the member checking, data were verified with the two participants. For the transferability, the participant's descriptions of their experiences were accounted. For fulfillment of dependability criteria, a researcher as an external audit who was not involved in the study process examined both the process and results of the research study. For the confirm ability second author was invited to validate the data analysis (12).

### Ethical consideration

The Research Deputy and Research Ethics Committee of Sabzevar University of Medical Sciences approved this study (Project number: 99072, Ethics Code: IR.MEDSAB.REC.1399.068). All ethical research codes such as the confidentiality of participant's identity, taking permission for audio record, and the right to withdraw from the

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study were considered. Oral and written informed consents were received from the patients after explaining the purpose and method of the study.

## Results

In the present study, 14 nurses and 1 head nurse participated in the interviews. According to the findings, most of the research units were female (%66.6) and single (%80). The oldest participants was 49 years old and the youngest was 23 years old. Maximum work experience was 25 years and minimum was one year (Table 1).

**Table 1: Demographic characteristics of participants**

| ID | Gender | Age(Y) | Job Position | Marital status | experience(Y) |
|---|---|---|---|---|---|
| P1 | F | 33 | Nurse | Married | 11 |
| P2 | M | 49 | Head Nurse | Married | 25 |
| P3 | M | 29 | Nurse | Married | 7 |
| P4 | F | 28 | Nurse | Married | 6 |
| P5 | F | 38 | Nurse | Married | 16 |
| P6 | F | 32 | Nurse | Married | 10 |
| P7 | M | 30 | Nurse | Married | 6 |
| P8 | F | 37 | Nurse | Married | 15 |
| P9 | F | 28 | Nurse | Married | 6 |
| P10 | F | 23 | Nurse | Single | 1 |
| P11 | F | 34 | Nurse | Married | 7 |
| P12 | M | 42 | Nurse | Married | 17 |
| P13 | F | 29 | Nurse | Single | 4 |
| P14 | M | 33 | Nurse | Married | 8 |
| P15 | F | 31 | Nurse | Single | 6 |

After deep reflection on the data transcripts (interviews, observation notes), 1154 initial codes were extracted; by the merging of similar codes, 382 primaries were extracted, these codes were categorized in 10 subcategories and consequently merged to the four categories according to their similarities and differences and one main theme. “Try to appropriate taking care despite the problems” is the main theme and “challenging care context”, “negative issues for nurses” “ethical reasons for providing care”, and “multi-dimensional care” are categories of our study (Table 2). The description of the findings using the participants’ direct quotations were provided as follows.

**Table 2: Extracted theme, categories and subcategories from the data**

| **Theme** | **Categories** | **Subcategories** |
|---|---|---|
| | Challenging care context | Difficulties related to protective equipment |
| | | Nursing shortage due to numerous reasons |

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| | | |
|---|---|---|
| **Try to appropriate taking care despite the problems** | Negative issues for nurses | Psychological consequences for nurses |
| | | Physical consequences for nurses |
| | Ethical reasons for providing care | Humanitarianism |
| | | Social accountability |
| | | Professional responsibility |
| | Multi-dimensional care | Physiological care |
| | | Psychological care |
| | | Spiritual care |

**1. Challenging care context**

Participants stated that their work environment has many challenges that can affect the process and quality of patient care. Most of these problems are due to improper function of the care management team or due to conditions created by COVID 19 pandemic. This category has two main subcategories including difficulties related to protective equipment and nursing shortage due to numerous reasons.

**1. a. Difficulties related to protective equipment**

The need for strict adherence to protective protocols to prevent the transmission of corona virus such as special gown, masks, eye shields, and their inadequacy and their inappropriately has led to challenges for participants. For example, one of the participants stated that: *"because of this gown, I feel very hot during the shift. It is too hot in this equipment. I sweat a lot and lose water, it is hard to tolerate. On the other hand, since drinking is difficult while wearing this equipment, I drink less water during the shift."(P6)*

**1. b. Nursing shortage due to numerous reasons**

Numbers of participants commented on the staff shortage and high workload exist in the healthcare system. For example, one of the participants stated that: *"Not only me, but also other colleagues are really under pressure. The nurses-patient proportion is limited in our country. Additionally, some of my colleagues are infected and quarantine at home. These subjects resulted in increase of our shifts."(P7)*

Despite adherence to preventive protocols, numbers of participants have infected with this virus and developed clinical symptoms. Increased number of shifts and high contact time with infected patients due to lack of staff, can be some reasons for their infection.

**2. Negative issues for nurses**

Participants experienced many negative consequences. They were included in two subcategories consisted of "psychological consequences " and "physical consequences". These factors affected the quality of care delivered by participants.

**2. a. Psychological issues for nurses**

Some psychological strains were discussed by participants such as "fear of transmission ", "fear of death", and "affliction".

Almost all participant had fear of virus contamination. They had concern of transmission this virus to them or their family members. For instance, participant number one said:*" since I pay caring for patients in this ward, I afraid and worried about transmitting this infection to my*

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*family members especially my children. My husband is young and strong enough to overcome the infection, but my children may be hurt."(P1)*

Some participant who had underlying disease such as hypertension or diabetic had more fear. In this case one of the participants stated that*:" I have nearly fifty years old, I'm Not young any more, additionally I suffered from hypertension, as you know, people like me are at the risk of mortality, as I see this subject in every shift." (P2)*

Another issue that cause psychological burden in participants is being away from the family and inability to establish a proper emotional relationship with children and spouse. For instance, participant number four who has 4-year-old daughter while crying and her tears running stated: *"When I return home from hospital, my daughter waits for me at the door. When she sees me expected me to hug her, but I cannot because fear of transmitting. At first, I have to take a shower and change my clothes, she cries a lot and I really suffer from this subject."(P6)*

Participants revealed that feelings of affliction were among the factors that affected them. They mentioned the cause of this affliction in high workload, multiple shifts, stress and anxiety during care, and difficulties in following preventive protocols during care delivery. For example, one of them said: *"About eight months have passed since the outbreak of this virus and it has put a heavy burden on health system specially nurses. The number of patients has increased and workload has increased proportionally. In these stressful conditions, my family and I have also been affected and I feel very tired. Not only physically but also mentally exhausted. (P11)*

**2. b. Physical issues for nurses**

Participants also talked about the physical burdens, which originated from COVID-19 outbreak. They also mentioned some physical issues that they involve during or after shift. For example, one of the participants said:*" It is hard to breathe in this mask. Sometimes I feel suffocated. I often suffer from headaches after shift, both sweating and breathing in these masks is hardly unbearable."(P8)* or another participant stated that:*" The gowns I wear is thick to prevent the transmission of the disease and it is hot during the shift, even drinking water is difficult. Even care delivery is hard. I hope a vaccine will be made for this disease as soon as possible."(P9)*

**3. Ethical reasons for providing care**

In the context of caring for patients with COVID-19, the following items have been mentioned as the fundamental reasons for providing care by the participants. The participants had job satisfaction even in this dangerous situation. They mentioned humanitarianism, social accountability, and professional responsibility as main factors encouraging them for care delivery.

**3. a. Humanitarianism**

One of the main reasons raised by the participants was a sense of humanity. Feeling need for help each other is one of the reasons for optimal care delivery in this circumstance. For example, participant number six said, *"We are all human and interdependent. We should help each other. I thank God that in this dangerous circumstance. I can play a small role on improving the situation of people, and I am proud of myself for this subject."(P14)*

**3. b. Social accountability**

Participants had a sense of responsibility towards the community and tries to reduce the burden of this outbreak on community. For example, participant number three stated, *"As a member of the healthcare team, I have a duty to collaborate with other colleagues to improve the situation in this epidemic. It is a professional task that not only falls on me, but also on the other nurses." (P3)*

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Some participants believed that COVID-19 make an opportunity for nurses to prove their importance to the community. For example, one of the participants said:*" despite many burdens and dangers that this virus has imposed on people, it has made the role of nurses more prominent in our society and contributes to the reputation of the nursing profession. Nursing did not have an appropriate social status, but during this pandemic, people became more aware of our nurse's role."(P2)*

**3. c. Professional responsibility**

Another subject raised by the participants was professional responsibility for patient's care. They consider its professional duty to deliver care to all patients in every circumstances. For example, participant number 15 stated that: *"As a nurse in this community, I have a duty to help patients to regain their health. That is why I have been trained. In addition, until the day I have ability to do my duties. I do my best to look after patients in any situation like this."(P15)*

**4. Multi-dimensional care**

The nurses of this study stated that the care of COVID 19 patients includes several aspects because these patients are admitted to the hospital at different stages. They may be admitted with moderate, severe, or extremely severe symptoms. Some of them may need physical and mental care and patients in the last stages of life may need care that is more spiritual. This category consists of three subcategories, including physiological care, psychological care, and spiritual care.

**4. a. Physiological care**

Despite being aware of the potential risks, shortages, and difficulties, participants make every effort to address the physiological needs of patients. For example, participant number eight stated that: *"Patients are completely dependent on our care. Most conscious patients suffer due to the nature of this virus. They are really suffered physically in different parts of their body. In spite of my fear, I try to provide optimal and comprehensive physical care for the patients."(P4)*

**4. b. Psychological care**

One of the aspect mentioned in the participants' experiences was empathy in caring. Most of the participants understood the patients due to their previous experience of COVID-19 infection and were aware of their mental and physiological needs. For instance, one of the participants stated that*: "I have experienced this disease and I understand patients to a great extent. I know that psychological concerns in these patients have a great impact on their clinical aspects, so in addition to meeting physiological needs, I try to reduce their concerns and anxiety."(P3)*

4. c. **Spiritual care**

Most of the participants stated that spiritual care is a requirement of physical and psychological care because the culture and context of hospitalized patients in Iran is very effective on the disease process and the recovery of them. *One of the participants mentioned that Spiritual care could help the patient adjust COVID 19 and help the patient to follow the treatment regimen.In addition, when spiritual care is provided for patients, they forget their pain and suffering, and we try to provide the relevant spiritual care with the help of the hospital's religious counselors (P14).*

**Discussions**

Challenging care context is the first category in our study, which has two subcategories including nursing shortage due to numerous reasons and difficulties related to protective equipment. Based

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on first category of this study and its subcategories, staff shortage and high workload are main issues mentioned by participants. In line with our study, a number of studies have pointed to this issue that lack of nursing staff and high workload are among reasons of nurses' dissatisfaction (13, 14). However, these shortages did not impaired care delivery, and in spite of high workload, nurses provide integrative and optimal care (15). In another study the most common problem in taking care of isolated patient were dryness (70.3%), and this manifestation were associated with more than 6 hours of continuous PPE use and low quality of them (16) that is congruous with our findings.

Second category of this study was negative issues for nurses with two categories consist of psychological issues and physical issues for nurses. Nurses are under psychological pressure. Factors such as quarantine, working in high-risk wards, and being in contact with Corona virus infected patients were shown to be associated with long-term post-traumatic symptoms during the SARS (Severe Acute Respiratory Syndrome) epidemic (17). The first studies on the psychological burden of healthcare professionals in association with the COVID-19 pandemic have recently been published and were mainly conducted in China. Increased levels of depression, stress, and anxiety were reported as common psychological consequences, while suitable protective equipment, clear guidelines, social support, and job recognition were indicated as important resources (18, 19). During outbreaks, the nurses experience considerable stress. In a Chinese study during the Ebola outbreak, nurses reported significant depression, and anxiety (20). During the MERS outbreak, a Saudi study reported almost two-third of nurses felt unsafe at work because of risk of being infected with MERS. (21). The findings of present study are consistent with previous SARS situations in which nurses reported high levels of fear and stress of contagion and infecting family members, uncertainty, and emotional disturbance (22). This is not dissimilar to experiences in the past with nurses exposed to the SARS outbreak in 2003 (23) risk factors for mental health include overwhelming situations, feeling vulnerable, at risk of getting infected, fear of transmitting the disease to families, social disruption of daily life (24). In addition to the psychological problems that caring for these patients has brought to nurses, it has also resulted in numerous physical problems and it was another subcategory of this study. A cross-sectional study reported skin damage in 97% of the medical staff. The most commonly affected site was nasal bridge (83.1%). Majority of participants acquire the infection and developed clinical symptoms. In this regard, similar studies have confirmed the involvement of nurses in care wards for COVID-19 infected patients. Similarly, another study showed that COVID-19 infected 30 medical staff, including 20 doctors and 8 nurses in a hospital. Of these, 26 had mild, and four had a severe symptom (25). Given the high burden, there is a growing demand and focus on protecting nurses across the world through provision of addressing fatigue, PPE, training, and countering the psychosocial consequences (26, 27).

Another category of this study was ethical reasons for providing care such as humanitarianism, social accountability, and professional responsibility. According to the results of a research, one of the new and professional features in nursing is having the basics of individual responsibility. Todays, given the increase of people awareness and their familiarity with the patient rights are elements of professional responsibility and social accountability especially in COVID 19 outbreak (28). In addition, another results of a study showed nurses are required to do altruistic behavior. This feature, which includes philanthropic activities, distinguishes nursing from other occupations that these statements are adherent of our findings (29).

The last theme discussed in this study is multi-dimensional care. Physiological care, psychological care and spiritual care are the three main subcategories of this category. A comprehensive approach must be applied to the whole process of treatment, whether in the field

of medicine, nursing, or rehabilitation (30). The results of a study in United States support the use of multi-dimensional care for patients. It is suggest that healthcare providers should provide an integrated plan for cognitive, emotional, interpersonal care because this form of caring improves community functioning and quality of life after course of the disease(31).

## Conclusion

The nurses are at risk of physical and physiological consequences directly as the result of providing care to patients with COVID-19 and shortages that existed in Iranian care delivery system. Implementation strategies to reduce the chances of transmission, employing nurses, shorter shift lengths, and mental health support could reduce the morbidity and mortality amongst nurses.

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