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Experiences of Nurses Caring of patients during the COVID-19 Pandemic: A Qualitative Study

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Abstract

Background: Nurses are at the forefront of dealing with patients and providing them with many services during Covid-19 pandemic and the most work stress is directed to this high-risk group.

Aim: The current study aims to investigate nurses who have experienced COVID-19 patient care.

Method: Eighteen participants were purposefully selected and participated into this qualitative study by using a conventional content analysis method. Data were obtained through semi-structured interviews. Participants included Nurses working in the Covid-19 wards of educational hospitals of Shahid Beheshti University of Medical Sciences where considered as hospitalization center for these patients. Purposive sampling continued from 25 June to 9 September of 2020 until the data were completed. The data were analyzed based on Graneheim and Landman's approach by MAXQDA 10 software.

Results: The results of the data had two categories, Organizational Structure Challenges with five subcategories (high workload, deficiency in management, lack of facilities and equipment, irregularity and financial motivation) and care difficulty with four subcategories (psychological concern, recovery and treatment, insufficient care training programs and personal self-protection).

Implications for Practice: Considering the position of nursing and expressing their views on the care of patients with Covid-19 can be an important step to improve the management care in these conditions.

Keywords: COVID-19, Nursing care, Pandemic, Qualitative study

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Introduction

The Covid-19 Pandemic is recently a challenge to the history of the world (1). Health care workers of intensive care units, hospital admissions, managers, treatment policy makers, and researchers need to be prepared to intervene in patients and the crisis caused by spreading the virus (2). According to the latest updated: the mortality rate from this virus in Iran is 63,332 with 1,945,964 Covid-19 cases and 1,658,978 recovered until April 06, 2021 (3). In addition, the Covid-19 virus seriously challenges the health structure of countries internationally in less than two months with a fatality rate of 20 percent among the elderly and those with underlying diseases (2). This pandemic increases in the burden of health care workers, especially nurses. Contacting the Covid-19 patients increases the risk of the virus spread, beside the medical and equipment challenges in caring for them (1). The disease was spreading severely that in some cases a large number of personnel in a center infected to the disease simultaneously, which brought the health care system many problems. (4).

Atashi and Yazdinejad in 2020 concluded that the lack of information and knowledge in Iran's health systems and insufficiency of equipment and accurate monitoring of challenges in Iran's health systems became more prominent during the Covid-19 pandemic (5). Rezaei et al. in a qualitative study in 2020 identified the threat to professional values and the lack of a comprehensive approach to caring for Covid-19 patients as the two main themes of ethical challenges in caring these patients (6).

Nurses are at the forefront of health and social care in the most difficult situations. Nurses have the highest level of job stress compared to the other groups in the prevalence of similar diseases and they constitute a high-risk group. Nurses feel neglected by employers when they are concerned about their own mental health. Focusing on personal responsibility for mental health and well-being as well as the overemphasizing on nurses' resilience in personnel shortages are challenged by nurses (7). Since the nurses and other health care workers at the forefront are asked to work under high risk conditions, their overall health is a concern. Three ethical issues caused countless concerns and affect all nurses worldwide in different ways: the safety of the nurse, the patient and their families, the allocation of resources, the change in the nurse's relationship with the patients and their families (8).

Diagnosing and poor controlling of the infection might led to the current prevalence. Since tracking the transmission cycle through hospitals and supporting health care workers is an important step in controlling the prevalence of this epidemic, sufficient knowledge about the available facilities, transmission routes, and management practices significantly control spreading the disease. Health care workers, especially nurses, are in close contact with infected patients. Evaluating COVID-19 patient care can be an effective step in controlling the disease in Iran as one of the ten countries with the highest rates of infection (9).

Watson based on the care theory emphasized the mental experiences of the patient and the nurse considering the widespread prevalence of the disease, the differences between the health systems of the countries and the need to empower them and its personnel (10). Also Martin in 2015 declared that care is still not of acceptable quality and more research is required on this subject despite many conducted studies and theories (11). Therefore, the present study aims to explore nurses experience about care of patient with Covid-19 and make suggestions to address them and thus increasing their ability to cope with the this crisis.

Methods

The researcher observed the selected hospitals of Shahid Beheshti, Tehran, Iran in this qualitative and extracted the list of nurses working in Covid-19 ward (emergency ward, Covid-19 intensive care unit, and regular medical ward) by using a conventional content analysis method. We obtained informed oral consent from all participants to record conversations after explaining them the study objectives and methods of the research on the phone.

In total, 18 participants selected by purposive sampling in this study. They were employees of the selected hospitals affiliated with Shahid Beheshti University of Medical Sciences Tehran, Iran. Most of the COVID-19 services in the Tehran are provided by Shahid Beheshti University of Medical Sciences according to the documents. Most of its affiliated teaching hospitals were COVID-19 admission centers. It is decided to discharge ICU beds and select new patients. The problem of labor shortage was serious in the intensive care units which exhausts the nurses and paramedics. It lowers the personnel immunity system and increases the possibility of getting sick even with personal protective equipment. ICU personnel and anesthesiologists made up the personnel shortage by

increasing the shifts length which is considered as self-sacrifice.

There were personnel who stayed sacrificially in the hospital for 21 days or colleagues from different cities came to the rescue so that the patients' care would not be compromised. The introduced patient is admitted and a hospital file is submitted during the process of hospitalization. The requested tests was performed, necessarily. A specialist in a specific hospital might visit patients each morning and the patient's condition was reported to the treating physician in the evening and night shifts. The physician would be notified immediately in case of exacerbating symptoms such as (Hypoxemia, hemodynamic disturbance, decreased level of consciousness and other disorders). The patient would not be accompanied and visited during the hospitalization. The nurses with at least two years of working full time in the educational hospitals were selected for the interviews. We totally obtained the data through semi-structured interviews. Sample interview questions included: "Describe your experience in caring for patients with Covid-19?", "Describe the challenges of caring for patients with Covid-19?", "Please share your experiences in this field.", "What are the factors affecting the care of patients with Covid-19?" We used exploratory and clarifying questions in the interview such as: Please explain more, please provide an example, please clarify the issue.

The interviews lasted between 10 to 20 minutes until the end presenting new information. Thus, we carefully listened to the recorded information after the end of each interview and then wrote them word for word by using Microsoft Word 2016 software. The transcripts were then reviewed by the researcher and were edited after verifying their accuracy. A general and new idea was generated after studying the data several times. Each interview was considered as a unit of analysis. Then researchers used MAXQDA 10 software to analyze information. Data were analyzed by conventional content analysis of Granheim and Landman 2004 (12-13).

The semantic units of each text were specified and then converted to the initial code. Then the initial codes, which had the same meaning and concept, became a summary code. The codes were placed in subcategories based on common features which formed the main categories. We used Lincoln and Guba criteria in order to strengthen the data (2005), which include credibility, dependability, conformability and transferability (14).

Eighteen participants were selected for data credibility for clarifying participants' intentions, correcting errors, and providing additional information if necessary. The researcher was deeply involved in the process of collecting and analyzing data for three months. Extracted codes and themes were reviewed and approved by three participants and two professors for dependability of the data. The research process in the present study was described conformably so that others could be able to judge by reading it.

The participants were also selected by maximum diversity (meaning interview with different people in terms of age, gender, job position, educational degree). Also, the method and collected data were clearly described to be usable for future researchers by transcribing the interviews immediately after the interview and describing statements and participants' experiences accurately through providing their examples and quotations.

Results

Findings are the result of 18 interviews, most of which (88%) were female. The mean age of participants was 34.33 ± 8.23 with 9.52 ± 7.14 years of work experience. Other demographic variables of participants are mentioned in table 1.

Two categories were extracted from the participants' interviews in this study: Organizational structure challenges and care difficulty, with nine subcategories. The organizational structure challenges as the first category had five subcategories: heavy workload, deficiency in management, lack of facilities and equipment, irregularity and financial motivation as well as care difficulty category with four subcategories: psychological concern, recovery and treatment, insufficient care training programs and Personal self-protection.

Organizational Structure Challenges

Challenges of management structure playing a decisive role in the quality of care and maintaining a stable and robust organizational framework. Identifying the organizational structure, for example, improper management which affects job motivation and complicates the decision-making process, is essential.

Table 1. Demographic characteristics of the participants

Demographic characteristics		Frequency (%)	
Age	Male	2	12%
	Female	16	88%
Marital status	Single	12	66.7%
	Married	6	33.3%
Service ward	Emergency ward	3	16.8%
	Covid-19 Intensive Care Unit	10	55.5%
	Medical ward	5	27.7%
Position	Head nurse	3	16.7%
	Nurse	15	83.3%
Educational degree	Bachelor	15	83.3%
	Master	3	16.7%

Heavy Workload

In health systems, the heavier is the workload, the accuracy is lower for patient care, and the nursing error is higher. According to the interviews, working in Covid-19 units is really heavy and solutions should be provided in this regard. A 27-year-old nurse with five years of work experience said about heavy workload:

"Nursing these patients with their poor mood was really heavy. The number of nurses was limit unlike their heavy workload. Personal protective equipment also made working more difficult (12)."

Another female nurse described her experience:

" The patient was prescribed a lot of drugs as the disease is unknown with no definitive treatment. Doctors had to prescribe a wide range of antibiotics which carrying out all these orders was really difficult due to the low nurse staffing (15)".

Deficiency in Management

Fighting the Covid-19 requires more discipline and the implementation of order in structures requires proper management. Lack of discipline and diligence indicates an improper management in work. According to the opinions, due to lack of preparation and knowledge about the disease, deficiency in management was clearly observed. In this regard, a male nurse states:

"Many patients' disease is exacerbating in the hospital due to improper management . The reason was that patients suspected of having Covid-19 positive were admitted to the same room. I wish the hospital had a separate ward for these patients to be assigned (16)."

Other female nurse stated:

" Samples should be taken by controlling infection. This is the responsibility of the nurses. This is why some employees fail to do it well for the fear of infection. This causes errors in test the and diagnosis. In this way, one day all the tests become negative and the other day all of them become positive (17)".

Shortage of facilities and equipment

The serious shortage of personal protective equipment is crucially troubling rather than the disease itself which caused many concerns among medical staff and the general public. According to what a female nurse stated:

"We had shortage of medical equipment such as ventilator and bed. Access to a specialist was difficult. For example, we had to ask the emergency physician for help if a patient's condition suddenly worsened, but they could not do anything proper(15)".

Irregularity

Poor management is sometimes turmoil, but according to the conducted interviews during this period many irregularities in the admission of patients makes the situation worse, additionally. A female nurse stated:

"Non-Covid-19 patients are admitted alongside those with covid-19 and transmitting virus through nurse, air, crew and equipment is possible" (12).

Financial motivation

The nurses' comments indicated inadequate motivation based on financial problems which increased their psychological stress. For example, a female nurse said:

"Shortage of personal equipment, inadequate motivation and unfavorable rest environment made us feeling worthless. Most of the staff provided the equipment themselves but there was no compensation (9)".

Care difficulty

The care difficulty as the second category had four sub-categories: psychological concern, patient specific conditions, recovery and treatment, insufficient care training and Personal self-protection. Care difficulty creates many challenges in daily activities and additional support may be needed depending on the severity of it. Also, Care difficulty affects prioritization of care plans.

Psychological concern

The disease is unknown and being infected and a carrier bears a lot of stress. However, the desired performance is not achieved despite the efforts which leads to lots of anxiety and stress.

Regarding the psychological concern of nurses, a female nurse said:

"We had a lot of mental stress. We treated patients with symptomatic therapies and we could not do anything about it, so we were stressed not to get involved. The death of a colleague related to Covid-19 caused us additional stress. I quarantined myself at home and limited my relationships to reduce the mental pressure of not transmitting the disease or causing my family became infected".

In an interview with a male nurse with eight years of work experience, the mental state of the nurse is described as follows:

"Stress and psychological pressure have been extended to our house. I am married, but could not been able to see my family since March. I have limited my contact to reduce the possibility of being transferred to my family(7)".

A female nurse with six years of experience said:

"Some of the patients came into their own but died after a while. This situation had weakened our morale. I myself became depressed. I greatly reduced my family ties and I did not go to my parents' house for two months. I had trouble sleeping and was taking sleeping pills (3)".

Recovery and treatment

Recovery and treatment depend on various factors. The different symptoms and the lack of definitive treatment as well as high mortality rate have caused panic in everyone. A 30-year-old nurse with eight years of experience in the intensive care unit said about the recovery of patients:

"There were two groups of patients with Covid-19: those with more than 90% blood oxygen saturation, who recovered after a while, and those with less than 90%. Their shortness of breath became severe and did not improve with the performed treatments even if they were young. Those who came earlier or those who drank the herbal tea seemed to have a better recovery (9)".

Insufficient care training

Proper education based on needs assessment is one of the most important issue in the field of health. Taking proper health measures depend on the type and method of education. The method of education also depends on the type of learner. For example, providing education to the general public varies according to the level of education. On the other hand, proper education is one of the important factors in disease prevention. Thus, failure to provide proper training can worsen the situation, waste valuable human resources, reduce efficiency and effectiveness, and reduce job motivation ultimately. In this regard, a male nurse described the experience of caring for patients with Covid- 19 as follows:

"The necessary training was not given to the patient and the companions regarding the nature of the disease and its transmission" (7).

The nurse also said in this regard:

"Most of the clients were unaware of the health issues regarding this disease; although we did not

know much about the disease and the method of its transmission as well, little by little our knowledge increased. I think all people should be informed through the media (2)".

Personal self-protection such as injecting COVID-19 vaccine, wearing a mask to protect and avoiding crowds in poorly ventilated spaces is important for disease prevention. Personal self-protection was not standard based on opinions. In this regard, a nurse said:

"Masks were not standard and equipment was not enough, so we used disposable personal protective clothing several times, which lost its effectiveness (8)".

A female nurse also said:

"Gloves are rationed. Some nurses do not follow the isolation and do not change gloves or disinfect gloves from one patient to another due to the shortage of equipment (17)".

Another female nurse also said:

"The clothes cause excessive sweating and make annoying noise while walking in them (12)".

Discussion

The conducted study aimed to investigate nurses' experience about care of patient with Covid-19. Management structure challenges as a first category indicated that nurses' perspectives about caring are very complicated. The accountability of managers in caring for patients is a challenge. In fact, the outbreak of the disease, like the crisis, is an event on a large scale and at high speed, resulting in a high degree of uncertainty that leads to disorder and a sense of losing control. Boland et al. (2020) stated that underestimating the outbreak of SARS in 2002-2003 and the current Covid-19 pandemic as a crisis needs a predefined response plan of managers (18).

The results of the present research have extracted the care difficulty for Covid-19 patients with four subcategories of psychological concern, recovery and treatment, insufficient care training and personal self-protection.

Providing psychological counseling for healthcare workers especially nurses to cope with their stress is essential. Unfortunately, the death of several infected medical staff who initially had mild symptoms, has raised fears of the disease. Huang et al (2020) resulted that the head nurse has a 30-minute session with the nurses who work in the isolation area each day to relieve the nurses' stress. Avoiding unnecessary contact is very important to minimize disease transmission. All medical records, including physicians' sheets, medical records, personal consent forms, examination results, and nursing materials are infected items which should be avoided as much as possible (19).

Specific conditions of patients such as old age and chronic diseases were the most important prognosis for recovery and treatment of Covid-19. Studies in Iran to the best of our knowledge indicated that that elderly patients or those with underlying diseases were admitted to the ICU and a high percentage of them will die (20).

Lee et al. in a similar qualitative study conducted in 2020 extracted three themes through interviewing nine nurses and four physicians. The first theme was 'Responsibility for Patient Welfare'. Voluntary health care providers did their best to provide patient care. Nurses played an essential role in providing intensive care and assisting in activities of daily living. The second theme was "Challenges of Working in the COVID-19 cohort wards".

Under-challenged health care providers by working in a whole new environment bears heavy workload and shortage of protective equipment, fear of getting infected and contaminating others, feel of being unable to care for patients and manage relationships in these stressful situations. The third theme was "Resistance to Challenges". Health care providers identified many sources of social support and used self-management strategies to address the situation. They have also excelled in this unique experience (21).

Covid-19 patient care training programs, especially the techniques of using the ventilator, is vital for educating health care workers. Royal Australian College of General Practitioners declared that the majority of patients experience a wide range of symptoms. So providing training programs for health care worker is necessary for Covid-19 management (22).

Covid-19 patients' self- isolation for 14 days is important and they should be cared by standard precautions. Hung et al. (2020) focused on protecting nurses during Covid-19 pandemic. The factors include: accurate and comprehensive training in using personal protective equipment (PPE), hand hygiene, ward disinfection, medical waste disposal and patient care equipment and determination a logical and scientific shift program. Increasing the number of patients, rapidly which leads to a

shortage of nurses is very important to determine a reasonable scientific program and change the nursing practice (20).

Based on the results of previous studies, prevailing COVID-19 and other infectious respiratory diseases increase concerns in nurses who are in direct exposure to potentially deadly virus about personal or family health and continue working due to their moral obligations. Other stresses include concern about workforce shortage and personal protective equipment (PPE), navigation in an unfamiliar environment or care system as well as lack of organizational support.

Also, George et al. stated in 2020 that policymakers are being asked to reflect the nurses' voices and perspectives in local and global decision-making so that structural injustices for many nurses are minimized. For example, the safety of nurses and other front-line health care workers is a major concern in the fight against Covid-19 as they are required to work under high-risk conditions. Health care workers are required to take a large risk following inadequate understanding of the virus, its pathophysiology, mode of transmission, and deficiencies in the supply chains of personal protective equipment (PPE) (8).

Implications for Practice

Obviously, some measures should be taken to get through this unprecedented situation. Besides, nurses require the appropriate support of employers and proper management of the situation and resources. If employees are under pressure, they may feel that they have not received enough training or are not capable enough for managing shortage of equipment and workforce as well as moral and emotional challenges. Let this be an opportunity to fully recognize and support the inherent stresses and emotional pressures that the nurses endure from the society, thereby identifying management deficiencies and taking steps to improve the situation.

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Conflicts of Interest

There is no conflict of interests to declare.

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