Original Manuscript

Nursing Ethics
2022, Vol. 29(2) 280–292

10.1177/09697330211020439
journals.sagepub.com/home/nej
SAGE

Workplace challenges and nurses recovered from COVID-19

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Abstract

Background: Although many studies have addressed COVID-19, the challenges faced by nurses in their workplace after recovering from this disease have not been investigated. As the backbone of the health system and at the forefront of the fight against COVID-19, nurses are exposed to serious risks of infection and even death. They may also face numerous challenges in their workplace after recovering from COVID-19. It is therefore ethically recommended that the problems of these nurses be solved to increase their job satisfaction and encourage them to remain in their profession.

Objectives: The present research was conducted to determine the workplace challenges faced by nurses who had recovered from COVID-19.

Methods: This qualitative study was conducted using the interpretive phenomenological approach proposed by van Manen. The data collected through 17 in-depth semi-structured interviews with 14 eligible nurses at different occupational levels were analyzed using the six steps proposed by van Manen. These nurses had also recovered from COVID-19.

Ethical considerations: This study was approved by the Ethics Committee of Urmia University of Medical Sciences (IR.UMSU.REC.1399.318).

Findings: Four themes and 20 subthemes extracted from analyzing the data explained the challenges faced by the nurses after their return to work. The themes included declined ethical values (four subthemes), infected nurses, forgotten patients (three subthemes), gradually leaving the job (six subthemes), and corona phobia (seven subthemes).

Conclusion: The present findings can be used to lay the foundations for adopting humanitarian policies in health organizations in terms of ethical care provision during future pandemics.

Keywords

COVID-19, phenomenology, recovered nurses, return to work, ethical values

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Introduction

In the year celebrating the 200th birthday of Florence Nightingale, the founder of modern nursing, the world faced a new disease caused by coronavirus, which caused an international health challenge as declared by the World Health Organization (WHO) in late January.[1] By 6 February 2021, approximately 106 million cases were infected with this emerging disease worldwide and about 2.3 million died. According to the latest estimates, 60,000 out of 1.5 million Iranians so far infected with COVID-19 have died.[2] Past pandemics such as influenza, severe acute respiratory syndrome (SARS), and Ebola[3] continue to threaten the health of the world population, including nurses.[4] The history of the role played by nurses in pandemics includes the care and assistance they provided during the 1918 pandemic and spread of SARS.[5] With the emergence of the COVID-19 pandemic, nurses play a key role as the backbone of the health system in developing and implementing the policies associated with patient care standards. At the forefront of fighting the disease and caring for the patients, nurses are affected by numerous problems caused by the complicated situation associated with COVID-19. Research suggests nurses may experience moral distress, long working hours, unhappiness, fatigue, fear of infection, and concerns over their family and physical complications.[6,7] The lack of hospital facilities, the unpredictable and unknown nature of COVID-19 and the high transmission rate of the virus have caused serious consequences for nurses in the world. Being exposed to serious risks of injection and death during caregiving also complicates the provision of high-quality care for patients with COVID-19 in these conditions.[8] Despite all these problems and limitations, nurses continue to provide services to ensure the quality of life of the patients. Nurses commit themselves to providing uninterrupted services for the patients.[9] As in the case of ordinary individuals of a community, nurses are vulnerable to diseases, including COVID-19, and face many problems after witnessing the infection or death of their colleagues.[10] The reports of the death of nurses infected with COVID-19 during patient care demonstrate the seriousness of the disease transmission in healthcare centers.[11,12] According to a study conducted during the flu pandemic in Britain, infection of nurses with the disease served as an obstacle to fulfilling their duties and obligations.[13] Being aware of the potential impact of pandemics on nurses is therefore crucial, given that they are at the forefront of the fight with diseases. A large gap was also observed in literature in terms of protecting nurses against the emerging COVID-19.[10]

This study was conducted, given the prevalence and pathogenicity of coronavirus,[10] the high rate of infection with this disease among nurses, their key role in tackling pandemics such as COVID-19, and the importance of exploring their experiences and challenges as well as the lack of a study in this context. Given the experiences of nurses in the workplace after recovering from COVID-19 as a context-based concept, a qualitative approach can be adopted to effectively explore these experiences. This article was extracted from a study on the experiences of patients recovered from COVID-19, which was approved by Urmia University of Medical Sciences. This study thus aimed at determining the challenges faced by nurses recovered from COVID-19 in their workplace. The data obtained from the interviews with these nurses helped determine their challenges after their return to work.

Materials and methods

Design

This qualitative study was conducted using the interpretive phenomenological approach proposed by van Manen. Interpretive phenomenology can be used as a systematic method to investigate and interpret phenomena. The study phenomenon should be accordingly analyzed and discovered from an interpretive perspective to acquire a more profound understanding of lived experiences.[14]

Sampling and study setting

Purposive sampling and snowball sampling were used to select the participants. As a nurse with caregiving experiences recovered from COVID-19, the first participant was introduced by the head nurse of the corona ward of a hospital in Urmia. The other participants were selected using snowball sampling or from the list of infected nurses in Urmia hospitals. Maximum variation was observed by selecting the participants from all nursing levels and different hospitals in Urmia. The inclusion criteria comprised having the history of being diagnosed with COVID-19 by a specialist, willingness to talk, ability to express experiences, lack of hearing or visual impairment, and fluency in Turkish or Persian. The recovered nurses were assured of their right to withdraw from the interview at their own discretion. The interviews continued until reaching data saturation, in which no new codes emerged and insignificant changes were observed in the themes and subthemes in the final three interviews.

Participants

The participants comprised 10 female and 4 male nurses recovered from COVID-19 and working in the hospitals of Urmia. They were 24–58 years old and had a mean age of 39.85 years. A total of 79% were married and the rest were single. Their work experience was 2–29 years with a mean of 16.35 years. Ten had a bachelor's degree in nursing, three a master's degree, and one a PhD degree in nursing. Five were working in the COVID-19 unit and nine in other units and levels. In addition to the clinical nurses, one head nurse, one supervisor, and two nurses as members of the Iranian Nurses Association were interviewed.

Data collection

The data were collected using in-depth semi-structured interviews as the most common data collection method in phenomenological research. The interviews began in September 2020 and ended in February 2021. Seventeen interviews were conducted with the 14 participants. The researcher and the participants agreed on the location and time of the interviews. Ten interviews were conducted in the hospital as the workplace of the participants, three were performed online, and four in places determined by the participants. The interviews lasted 30–80 min with a mean duration of 45 min, focused on the study objectives, began with an open-ended question such as "Please talk about your infection with COVID-19," and continued depending on the responses of the participants. The sequence of the questions was not therefore the same for all the participants. Follow-up questions asked included "What problems did you encounter during the disease and sick leave?," "What was the difference in your perception of the nursing profession between before and after your infection?," and "Tell us about your experiences after your return to work." Exploratory questions asked to clarify and increase the depth of the interview included "Please elaborate on this," "Can you give an example," and "What do you mean by that?" After obtaining the participants' consent, all the interviews were audio recorded using an Android smartphone and then immediately transcribed verbatim. The handwritten drafts of the interviews were distributed among the participants to be reviewed and their unclear points be elucidated (Table 1).

Data analysis

The data collected were analyzed after the first interview using the six steps proposed by van Manen as follows: (1) turning to the nature of lived experience, (2) investigating the experience as lived, (3) reflecting on the essential themes that characterize the phenomenon, (4) describing the phenomenon through the art of writing and rewriting, (5) maintaining a strong and oriented relation to the phenomenon, and (6) balancing the research context considering the parts and the whole.[14] Phenomenological questions were designed, and

Table 1. A sample of the questions used in interviews.

Questions:
1. Please talk about your infection with COVID-19.
2. What problems did you encounter during the disease and leave?
3. Tell us about your most enjoyable and most unpleasant experiences.
4. What was the difference in your perception of the nursing profession between before and after your infection?
5. Tell us about your experiences after your return to work.
6. Tell us about your quarantine experiences.

a review of literature was performed based on the van Manen's approach. Immersing in the data was performed by transcribing the interviews verbatim and reviewing them several times to acquire a general understanding, which was written in a few paragraphs. The sentences and phrases describing the phenomenon were selected and themes were extracted by referring to the text of the interviews several times, revealing the relationship among the themes and thus resolving the contradictions. Being involved with the research question throughout the study helped extract and interpret the themes. After separating the main themes from the subthemes, four main themes were ultimately obtained by reflecting upon and repeatedly referring to the data. The software MAXQDA-10 was used for management of data (coding and classifying and attachment conceptual label).

Trustworthiness of the study

Lincoln and Guba's[15] evaluative criteria were employed to confirm the trustworthiness of the data included validity, reliability, verifiability, and transferability. To increase the data validity, trust-based communication was established with the participants, the interview texts were returned to them, and it was confirmed that the researchers were representing their perspectives and experiences. In case of any disagreement, discussions were held to reach consensus among authors and participants. Moreover, peer review was conducted throughout the study, expert comments were implemented, and long-term involvement with the data was continuously performed. To confirm the reliability, the study stages were reviewed by the research team and a member of the School of Nursing and Midwifery of Urmia University of Medical Sciences as an external audit familiar with qualitative and clinical research, their comments were applied in all the stages, and the results were approved. The research team exchanged ideas about the extracted codes and categories to achieve consensus. Verifiability and transferability were also confirmed by documenting and recording all the study steps for the use of others.

Ethical considerations

This study was approved by the Ethics Committee of Urmia University of Medical Sciences (IR.UMSU.REC.1399.318) and received a written letter of introduction from the university. After briefing the participants on the study objectives, they gave consent to participate in the interviews and have their voice recorded. They were also assured of the confidentiality of their information and their right to receive the study results if they wished.

Findings

Analyzing the data obtained from the narrations resulted in 4 main themes and 20 subthemes as per Table 2.

Table 2. Themes and subthemes.

Themes	Subthemes	Code number	No. of participants
Declined ethical values	Conflict between the care for patients and infected nurses	18	8
	Providing quality care in return for support from the system	21	9
	Disputes	26	11
	Dictatorial behavior	24	10
Infected nurses, forgotten patients	Human rights of sick nurses	20	9
	The entitlement of sick nurses to patient rights	18	8
	The need of sick nurses for patient rights	16	8
Gradually leaving the job	Feeling abandoned	28	11
	Being frustrated	23	10
	Suffering a bad mood	33	10
	Disrupted prospect	19	8
	Reforming the occupational image	25	9
	Willingness to quit the job	12	7
Corona phobia	Risk of re-exposure	23	8
	Fear of reinfection	31	12
	Stress of being a carrier	16	6
	Anxiety	28	11
	Fear of being judged	10	6
	Psychological turmoil	21	9
	Concerns about oneself/others	17	7

Theme 1: declined ethical values

It is inferred from the participants' lived experiences that after affecting COVID-19 and returning to work, they encounter some ethical events that affect them. According to the narrators of the participants, these events capture a broader range, which can be called "Declined ethical values." "Declined ethical values" mentioned in most of the interviews was one of the main themes of this study. The subthemes of this theme included conflict between the care for patients and infected nurses, providing quality care in return for support from the system, disputes, and dictatorial behavior.

Conflict between the care for patients and infected nurses. The infected nurses complained about not receiving the care in a way that is required for themselves to provide for other patients in terms of ethical principles. They argued that as patients, their rights were not respected in the same way as nurses were expected to observe them in the face of patients. One of the nurses said,

> So, what has happened? We have to wholeheartedly take care of patients presenting with COVID-19, while we ourselves should get through the disease with stress and anxiety because we are nurses, although we've always been taught to observe patient rights and care for both patients' diseases and their psychological status and stress and anxiety. (P10, female, 44 years)

Providing quality care in return for support from the system. Nurses were willing to provide quality care in exchange for the support and value they would receive from the system. On the other hand, the system failure to provide them with the necessary support negatively affected the quality of care. One of the nurses said,

> When I went at the bedside of patients and took care of them, I tried to do my job as fast as possible and return to the nursing station; I don't know why we should endanger our lives when they do not value us. (P9, female, 51 years)

Disputes. The dispute of nurses with the system was another subtheme. They preferred their own protection over that of patients, stating that they would disobey and yet observe other hygienic principles such as hand rub for their own sake rather than for the patients'. One of the nurses said,

> When taking care of patients, I use a hand rub or sterilizer and wear personal protective clothing for the sake of my own protection rather than theirs. (P13, male, 33 years)

Dictatorial behavior. The dictatorial and domineering behavior of administrators constituted a challenge for the nurses. A nurse said,

> My leave finished before I completely recovered and when my husband got infected to my surprise. I had to work the night shift. So I called and asked for canceling my shift work and extending my leave, but they didn't support me at all and said I had to be at work on time. They talked to me arrogantly and ordered me to return to work. (P8, female, 43 years)

Theme 2: infected nurses, forgotten patients

As a main theme of this study, "infected nurses, forgotten patients" presented another horizon for examining the challenges faced by nurses. Admittedly, nurses are considered humans before their entry into the nursing profession. If they get sick, they must be granted basic patient rights and the charter of patient rights should be applied to them as in the case of other patients. This theme comprised three subthemes, namely human rights of sick nurses, the entitlement of sick nurses to patient rights, and the need of sick nurses for patient rights.

Human rights of sick nurses. Every human might contract diseases in their life, especially during pandemics such as COVID-19, which has affected a significant percentage of the medical staff. Meanwhile, infected nurses should not be forgotten and, like all patients, their rights must be respected. A nurse said,

> I got sick like others. So many people got COVID-19, so did I. Am I not a human? None of the administrators respected me as a human being and they were only concerned about shift work. (P10, female, 44 years)

The entitlement of sick nurses to patient rights. As the essence of nursing, care should be provided for infected nurses who are entitled to patient rights. According to the nurses, not giving them the right to contract a disease was the missing link in this neglect. A participant said,

> The support I received as a patient was not the same as that for other patients. I did not receive care like a patient. I also have the right to live like a patient when I get sick. As a patient, I have the right to be hospitalized for a few days, and be supported and receive care like all patients, but I was deprived of the care. (P4, female, 35 years)

Another participant expressed,

> When I got the disease, I was not treated like a patient during the illness and after returning to work. At this point in my life I was a patient, not a nurse. But I saw that I was not taken care of. (P11, female, 40 years)

The need of sick nurses for patient rights. Nurses' health is a major pillar of the health system, as an unhealthy nurse is unable to take care of the health of others. This challenge was expressed by a participant as follows:

> When I got sick, I needed a rest, peace of mind and care for going through my illness safely like all patients, but it was all stress. (P1, female, 24 years)

Theme 3: gradually leaving the job

Analyzing the data obtained from the experiences of nurses recovered from COVID-19 found the numerous challenges and problems faced by these nurses during their disease and after recovery and return to work to cause their gradual resignation. This theme comprised six subthemes, namely feeling abandoned, being frustrated, suffering a bad mood, disrupted prospect, reforming the occupational image, and willingness to quit the job.

Feeling abandoned. Failing to support the recovered nurses caused them to feel abandoned. A nurse said,

> We have been abandoned with no support since COVID-19 emerged. Neither our direct supervisor nor higher-level officials support us. We took care of so many patients, but no one came to thank us so we feel relieved. They didn't even simply say "Thank You". (P7, male, 50 years)

Being frustrated. The nurses who had recovered from COVID-19 regretted selecting their job and still holding their position despite the increasing difficulties in their profession with the advent of COVID-19. One of them said,

> I deeply regret that I selected this field and that I still continue working in this field. (P6, female, 38 years)

Suffering a bad mood. The recovered nurses frequently revealed and emphasized decreases in their job motivation. They expressed boredom with the nursing profession and dedication to others while their sacrifices were not valued. One of them said,

> This failure to appreciate by the administrators and the discrimination between nursing and other jobs have demotivated me. I ask myself how much I should work, for what and for whom and how much I should sacrifice. I always wish I had a better and easier job than nursing, a job where I could work less and earn better. (P12, male, 32 years)

Disrupted prospect. The lack of a bright prospect appeared effective in reinforcing frustration in the nurses and leading to their resignation. They did not envision any promising prospect for the nursing profession and themselves. A recovered nurse said,

> What I experienced is that nursing has no future and problems must be solved individually. Nursing in Iran has its own difficulties and problems, and it is really frustrating. (P3, male, 46 years)

Reforming the occupational image. Interviewing the recovered nurses showed that they were re-evaluating their job by reforming their occupational image in their mind mainly as a hard profession. One of the participants highlighted this issue by saying,

> Seeing the difficulties of nursing changed my view of this job from the first day of entering this profession as apprenticeship.[i] The more difficulties I encountered on a daily basis, the more changes I experienced in my perspective. These changes culminated with the spread of COVID-19, and I felt how difficult is nursing as a job. (P4, female, 35 years)

Willingness to quit the job. As another challenge, willingness to quit the job in the nurses, especially during a pandemic, demonstrated the failure of the organization to maintain its capable workforce. A nurse stated,

> I decided to resign several times, as I thought they wouldn't extend my leave. I announced my resignation, but, well, I still continue with my job. I am so bothered about the views and attitudes of the administrators that I'll take early retirement, even though I won't resign. (P10, female, 44 years)

Theme 4: corona phobia

The psychological problems during the COVID-19 pandemic were well discussed in nurses. These problems were different, given that they were experienced by nurses who had themselves contracted COVID-19 and returned to work after recovery. This theme comprised seven subthemes, namely risk of re-exposure, fear of reinfection, stress of being a carrier, anxiety, fear of being judged, psychological turmoil, and concerns about oneself/others.

Risk of re-exposure. The majority of the participants were worried about the risk of their re-exposure to the disease.

> I have lots of stress after my return to work; I was directly exposed to the virus at the bedside of patients with unpredictable status. Knowing that there was the risk of re-exposure scared me even more. (P2, female, 58 years)

Fear of reinfection. They were also afraid of getting sick again. A nurse said,

> With a weaker immune system, I went back to the same hospital environment. If I get sick again, God forbid, I don't know what will happen. Although it was relieved then, it may not finish this time; these are my serious concerns. (P5, female, 36 years)

Stress of being a carrier. The vast majority of the participants were worried about the transmission of the virus to their families. A nurse said,

> Getting COVID-19 enhanced my awareness of the disadvantages of my job; a job that involves both you and your family, as you bring the infection back to your family and loved ones. I worried lest I would be infected again or my clothes, stuff and car would take the infection home and my family might get infected, too. (P13, male, 33 years)

Anxiety. The results showed several types of anxiety in the nurses who were not psychologically supported. They reported the different causes of their anxiety. A participant said,

> My test result was negative first. The hospital authorities asked why I had gone and taken the test and if I actually had had the symptoms or not, which bothered me a lot. I was always worried about why it was negative. (P11, female, 40 years)

Fear of being judged. Although fear of being judged can be observed in any individual, its presence in nurses with COVID-19 can be interpreted differently. A nurse said,

> Well, I must admit I had symptoms and took a test and it was positive. The administrators looked at me as if I was simulating my disease, and I was scared, as if the test was negative, God knew how they would judge me. (P8, female, 43 years)

Psychological turmoil. Turmoil in the recovered nurses manifested itself as sleep disorders, nightmares, insomnia, nervousness, and avoiding thinking about the time of the disease. A nurse said,

> I saw nightmares every night when I was sick. I never had a nightmare before, but I experienced it every night when I was sick. (P9, female, 51 years)

Concerns about oneself/others. Another problem the nurses experienced regarding COVID-19 was concerns about their own health and that of relatives. According to the analyzed results, the majority of the nurses were worried about their families and loved ones. A nurse said,

> As I got sick, I was more worried about my children than about myself. I have two small kids who need me. I asked myself who would take care of them if I died or if they get infected and have symptoms. These really worried me. (P6, female, 38 years)

Discussion

The COVID-19 pandemic caused nurses in different countries to face numerous challenges. A group of nurses have been ignored in both literature and the health system. As forgotten patients, nurses with COVID-19 were found to spend their course of disease with anxiety and stress, return to work before they completely recover, and face many challenges during and after their disease. The present research was therefore conducted to explore the challenges faced by nurses recovered from COVID-19 after their return to work. According to the analyzed findings, declined ethical values was a challenge faced by the nurses. According to the recovered nurses, ethical values threatened at different levels, including patient rights, professional values governing nursing, and the way administrators treated nurses regarding their human rights might eventually reduce the quality of patient care. These threats were rooted in the workplace of the recovered nurses. The nurses complained about the conflict between the care for patients and infected nurses. Nurses are legally required to respect patient rights and incorporate them in their care programs; nevertheless, these rights were not respected in cases of themselves as hospitalized patients. The nurses found the contradictory attitudes of the administrators toward patient rights to undermine the ethical values of care in the nursing profession. Moreover, they can provide quality care to patients when the organization also supports them. Subjecting quality care to system support is contrary to the ethical values and the charter of patients' rights and may result in a violation of the patient's rights. According to Khademi et al.,[16] respecting the dignity and position of nurses serves as an example of their human rights, which is consistent with the present findings.

The unwillingness of the nurses to use a hand rub for individual patients while simultaneously taking care of several patients can seriously undermine professional values. The authorities are therefore required to pay attention to the challenges faced by recovered nurses. Moreover, the dictatorial attitudes of administrators, including head nurses and supervisors, as nursing professionals, in terms of ordering the nurses to

work their shift until receiving the polymerase chain reaction (PCR) test results or extending their sick leave annoyed the nurses. Although this type of conduct might have been caused by the shortage of nursing staff, it is noteworthy in terms of its potential effects on patient care. According to the results of studies by Rezaei et al.[17] in Iran and Jia et al.[18] in China, numerous ethical challenges in nurses associated with caring for patients with COVID-19 lowered their professional efficiency. Miljeteig et al.[19] found increased ethical challenges during the COVID-19 pandemic to affect job satisfaction in nurses.

"Infected nurses, forgotten patients" extracted as another theme in this study reflected the experiences of the nurses. Nurses are primarily regarded as humans rather than nurses. All individuals, especially nurses at the forefront of fighting pandemics, may contract diseases. Their human and care rights must be therefore respected as in cases of other patients. The recovered nurses reported difficult situations, which they had never experienced. As in the cases of other patients with COVID-19, they required care, support, nursing, peace of mind, and rest; nevertheless, it was as if their work environment did not give them this right, and, as patients, they were deprived of their rights. The highly important position assigned to patient rights in the intellectual system of medical centers affects the observation of ethical principles.[20] A health center is required to respect these rights for all patients based on their psychophysical, spiritual, and social needs.[21] Respecting patient rights therefore suggests the observation of ethical principles in health centers. In Iran, the charter of patient rights was developed based on five general categories and 34 clauses.[21] The expectations of nurses with COVID-19 of health centers are therefore justified based on their rights as stipulated in the general categories. According to Hadian Jazi and Dehghan Nayeri,[22] respecting patient rights plays a key role in the peace of mind of patients. Rather than anxiety, stress, concern over work shifts, and false-negative COVID-19 results despite having the symptoms, peace of mind and a stress-free atmosphere are needed by sick nurses to go through their disease.

Despite the key role played by the recovered nurses in fighting COVID-19 and caring for the patients, their enhanced awareness of the difficulties of their profession and experiences and negative feelings such as regretting selecting the nursing profession, demotivation, frustration, and a bad mental image of nursing encouraged them to resign. Some of them said they had thought about resigning several times and even submitted their resignation, and if they could not resign, they would take early retirement. Failure of the administrators to support and value the nurses during their disease caused them to feel abandoned and isolated from their profession in a way that they gradually thought of leaving their job and the system. In fact, they felt their work was not appreciated. Although the study nurses were working in their position, their statements suggested they would probably leave their job in the future. They said if they had served as a member of the treatment team, the administrators would have asked about their health and supported them during their disease. Hariri et al.[23] reported high levels of intention to resign (67%) and positive relationships between intention to resign and actually leaving the service in Iranian nurses. According to Lebergo et al.,[24] the psychological reactions caused by COVID-19 as a threatening situation for frontline nurses increased their dissatisfaction and willingness to resign. The existing challenges caused perspective confusion in the nurses, which increased their tendency to resign. Authorities in health organizations are therefore required to overcome the obstacles and create a desirable environment for nurses to enable them of performing their duties effectively with an optimal efficiency.

The numerous sources of stress and anxiety caused by COVID-19 in the recovered nurses included fear of re-exposure and reinfection, fear of being a carrier and infecting others, concerns over the health of oneself and loved ones, fear of being judged by others, anxiety, and psychological turmoil. The increased demand for nursing care during epidemics[25] significantly raises the workload of nurses and their stress. In addition, nurses should adapt themselves to the changing requirements of disease management as a result of daily variations in protocols.[26] Anxiety is developed in nurses as a result of their isolation and quarantine during the COVID-19 pandemic, given that they are at the forefront of the fight against this pandemic and thus at the risk of infection and transmission to their families and other people in contact with them.[27]

Research suggests increased anxiety levels in nurses as a result of increases in their likelihood of exposure to and infection with pandemics such as COVID-19.[27,28] Anxiety levels are higher in nurses who have once infected with COVID-19 and gotten familiar with its complications. Fear of being judged by others also increased anxiety levels in the nurses. All these sources of anxiety can develop unhealthy feelings in recovered nurses, especially after their return to work. Prolonged anxiety can also cause occupational burnout in nurses and thus negatively affect the quality of nursing care. It is recommended that the administrators make serious efforts to meet the challenges revealed by the experiences of recovered nurses in the present research.

Limitations

The study limitations comprised having to interview some of the female participants through WhatsApp rather than in a face-to-face manner owing to religious and cultural restrictions in Iran, prohibiting direct contact between opposite genders. Restricted inter-city transport during the COVID-19 outbreak also caused the participants living in other cities to be interviewed through WhatsApp. Given the high prevalence of COVID-19 among nurses in Iran and its high incidence, the results of this study should be cautiously generalized; it is worth noting that this limitation was partly resolved by selecting the participants from different nursing levels and different hospitals.

Conclusion

The COVID-19 pandemic significantly increased the challenges of nurses and caused their resignation in many cases. The recovered nurses spent every day with the fear of re-exposure and reinfection and transmission of the disease to their loved ones and family. Paying attention to nurses, encouraging and supporting them, and allocating resources to resolve their challenges can assist them in solving their existing problems and providing the most effective services for patients. Moreover, authorities can lighten the burden of nurses' difficulties and help them more effectively fight with diseases by identifying and paying attention to their problems in pandemics. It is recommended that further studies be conducted using the present findings to develop an educational, practical, and research framework for ethical care, adopt humanitarian health policies during pandemics, professionally empower nurses and promote their efficiency, and accelerate recovery in patients and increase their survival rate in critical situations.

Acknowledgements

This article was extracted from a study approved by the Ethics Committee of Urmia University of Medical Sciences (IR.UMSU.REC.1399.318). The research team would like to express their gratitude to all the participants, the staff of the hospitals admitting these patients, and the authorities of the Deputy of Research and Technology and the Student's Research Committee of Nursing and Midwifery Faculty for their sincerely cooperation.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by a research grant from Urmia University of Medical Sciences, Iran.

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Note

i. Nursing apprenticeship: Nursing graduates are required to provide services for 2 years after completing their bachelor's degree in areas and centers designated by the Iranian Ministry of Health and Medical Education, and of course, they receive a salary for these services.

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