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Exploring the experiences of nurses and physicians infected with COVID-19

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Abstract:

BACKGROUND: Health-care providers, including physicians and nurses, are vital resources of the health-care system, and their health is essential to ensure safe care and to control outbreaks in the community. The aim of this study was to explore the experiences of physicians and nurses infected with COVID-19.

MATERIALS AND METHODS: This descriptive exploratory qualitative study was conducted in 2020. To conduct this study, 19 participants (5 physicians and 14 nurses) were selected using purposive sampling. Data were collected using semi-structured interviews. Data analysis was performed using conventional content analysis.

RESULTS: Eight main categories of "Fear and anxiety," "Fighting against COVID-19," "Feeling abandoned during home quarantine period," "Denial of disease despite testing positive," "Recovery: the second opportunity," "Imposition of psychological burden after returning to work," "Promotion of the health professional perception," and "Promising supportive resources," as well as 21 subcategories, were extracted from the participants' experiences.

CONCLUSION: The experiences of physicians and nurses with COVID-19 revealed that their perception of the profession and providing care had changed. This experience has highlighted the focus and effort to promote patient-centered care and interprofessional collaboration among them.

Keywords:

COVID-19, experiences, nurse, physician, qualitative

Introduction

The first case of COVID-19 was reported in December 2019 in Wuhan, China, and the disease has spread rapidly worldwide since April.[1] In Iran, the prevalence of this disease was observed in early 2020.[2] This rapid spread, as a crisis, put increasing stress on the health-care system, and maximum capacity of hospitals was allocated to patients with COVID-19.[3]

Many health-care providers had inadequate clinical experience in providing intensive care to patients with COVID-19. Nurses and physicians with the increasing number of suspected and confirmed cases in the early stages of the disease outbreak provided care of COVID-19 patients using their knowledge regarding the care and treatment of acute respiratory patients. As the epidemic progressed in Iran, most health-care providers in hospitals joined the treatment team of these patients. However, there was not enough knowledge about this disease anywhere in the world. As the outbreak continued, the condition of COVID-19 patients who were severely ill changed rapidly, and most of them showed many complications with multiple organ failures. Like many new infectious diseases such as Ebola, there was no definitive effective drug[4] and patient care was paramount.

Family members are not allowed to accompany the patients and only nurses and physicians are responsible for care and

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treatment. They have to continue their efforts until the end of this epidemic. Caring for patients and wearing personal protective equipment for long hours has caused their physical and mental distress. Working in hospital for long hours also put health-care providers at risk of reduced safety. At the same time, the safety of the workforce is a high priority and protecting staff is one of the duties of organizations in times of crisis and outbreak of diseases.[5] Health-care centers must through provide a safe work environment and adequate protective equipment help to health-care providers to reduce their anxiety and fear that caused by outbreaks.[6] Health-care providers, including physicians and nurses, are vital resources of health system, and their health is essential to safe care and to control any outbreak in the community. They make every effort to improve the quality of care, and the issue that is less addressed is their own health.[7]

With a sense of responsibility for reducing the suffering of patients in the face of this unknown disease and unpredictable dangers, physicians and nurses focused on their professional duties and continued to care for patients with professional sacrifice to the point that some of them also got infected.[8-10] There are no formal statistics on the number of physicians and nurses with COVID-19 in Iran and the world, but according to the Anatolian News Agency, the medical staff makes up about 14% of people with COVID-19 in the world.[11] When some of the physicians and nurses were affected with COVID-19, concerns were raised about the ability to control the outbreak and treat patients. In addition to being exposed to the disease, they also experienced major mental health risks such as anxiety, depression, insomnia, and work and family stress. Medical staff experience stressful reactions and double fatigue due to long work during the COVID-19 crisis, family separation, constant work, and emotional pain from separation from their children, which increase the risk of illness. Sometimes, the job satisfaction of these people is subject to these problems. Some have even been shown to lose confidence in the treatment of COVID-19. It has sometimes been observed that these individuals did not have sufficient physical and mental capacity to provide services, which increased their stress in the form of a defective cycle. Therefore, to maintain efficient work, it was necessary to reduce the team's stress.[8-10] Many physicians and nurses with COVID-19 return to work in the recovery phase due to shortage of staff and provided care to patients. Therefore, this study was conducted to explore the experiences of nurses and physicians infected with COVID-19.

Materials and Methods

Study design and setting

This descriptive exploratory qualitative study was conducted in the hospitals affiliated to Isfahan University of Medical Sciences, Isfahan, Iran, in 2020.

Study participants and sampling

Participants were selected from among physicians and nurses affected with COVID-19 and having at least 3 months' work experience in treatment and care of COVID-19 patients. Participants were selected using purposeful sampling method. Sampling was performed with maximum variation by considering the characteristics of participants regarding age, gender, work experience, and their perspectives and experiences. Participants' selection continued till the saturation point: the stage where no new concept was obtained by data analysis.[12]

Data collection tool and technique

The data were collected from June to November 2020 using semi-structured in-depth interviews. All interviews were organized in a quiet room at the hospital. The timing and place of interview were determined with the consent of the participants. The length of interviews varied between 30 and 60 min. After communicating with the participants, the interview began with the general question: "As a nurse/physician who also has the role of caring for/treating COVID-19 patients, what is your experience of affected with COVID-19?" In all the interviews, following the main question, more specific questions were asked based on what the participants said.

This study employed the qualitative content analysis method of Graneheim and Lundman for data analysis.[13] The interviews were transcribed verbatim. First, SF independently selected all meaning units and condensed the meaning units of selected manuscripts. After that, SF extracted the condensed meaning units from the remaining transcripts and reviewed them with MM. Subsequently, SF and MM assigned codes to the condensed meaning units, reflecting the participants' words in a more abstract manner. Finally, similar codes were grouped into specific subcategories and categories using an inductive process involving constant comparison, reflection, and interpretation by SF and MM.

Rigor

This study applied confirmability, credibility, dependability, and transferability to achieve the aspects of rigor indicated by Guba.[14] To enhance the conformability and to facilitate audit, detailed information was explicitly expressed for different stages of data gathering, analysis, and inference. To obtain the credibility, information approval by peer debriefing and reviews of the data, codes, subcategories, and main categories. The extracted codes and results were retrieved and shared with the participants to validate the congruency of the codes with their experiences. Dependability was achieved by engaging more than one researcher in data analysis (SF and MM). It was attempted to increase the transferability

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of the study results by selecting participants from different demographic characteristics.

Ethical consideration

Informed consent was obtained from the participants. We used numeric codes in place of personal names to secure the confidentiality of the interviews. The participants were free to withdraw from the study anytime.

Results

Participants in this study were 14 nurses and 5 physicians. The demographic characteristics are presented in Table 1. After analyzing the data, the eight categories of "Fear and anxiety," "Fighting against COVID-19," "Feeling abandoned during home quarantine period," "Denial of disease despite testing positive," "Recovery: the second opportunity," "Imposition of psychological burden after returning to work," "Promotion of the health professional perception," and "Heartwarming supportive resources," as well as 21 subcategories, were extracted from the participants' experiences [Table 2].

Fear and anxiety

The participants' experiences showed that they experienced additional fear and anxiety after the symptoms and diagnosis of the disease. They were worried about transmitting the disease to family members. This category includes three subcategories: "Transmission of disease to spouse and children," "Transmission of disease to parents," and "Disruption of family relationships." One of the physicians said: "*After I found out that my test was positive, I said to myself, my parents should not get sick. What about my child, my husband? My God, they shouldn't get sick because of me? I was afraid I would die....*" (p_1). In addition, participants expressed the fear of disruption in family relationships. One of the nurses said: "*Once I found out I had COVID, I was worried about my husband's reaction. My husband is always looking for an excuse to tell me you bring home the disease from the hospital. My baby has a weak immune system and he is worried. After I tested positive, he argued with me and complained constantly*" (p_2).

Table 1: Participants' characteristics

Number	Gender	Age (years)	Job status	Work experience (years)	Education
P_1	Male	48	Physician	15	Specialist
P_2	Female	50	Nurse	20	Bachelor
P_3	Male	60	Physician	25	Specialist
P_4	Male	57	Physician	27	Specialist
P_5	Female	38	Nurse	12	Bachelor
P_6	Female	52	Nurse	25	Bachelor
P_7	Female	35	Nurse	10	Bachelor
P_8	Female	40	Nurse	15	Bachelor
P_9	Male	32	Nurse	8	Bachelor
P_{10}	Male	52	Nurse	20	Bachelor
P_{11}	Female	55	Physician	20	Specialist
P_{12}	Female	38	Nurse	14	Bachelor
P_{13}	Female	30	Nurse	7	Bachelor
P_{14}	Male	32	Nurse	8	Bachelor
P_{15}	Female	37	Nurse	12	Bachelor
P_{16}	Female	40	Physician	15	Specialist
P_{17}	Male	29	Nurse	5	Bachelor
P_{18}	Female	38	Nurse	12	Master
P_{19}	Female	42	Nurse	16	Master

Fighting against COVID-19

Physicians and nurses with COVID-19 experienced a wide range of physical and psychological signs and symptoms. In the fight against the disease, they tried to take care of themselves as physician/nurse. This category includes two subcategories: "Facing physical signs and symptoms" and "Experiencing psychological symptoms." One of the participants said: "*After several consecutive shifts while I was on call, I experienced headaches, chest pain and severe shortness of breath. My oxygen saturation had dropped. I had to use a PCR for a definitive diagnosis. Surprisingly it was positive…*" (p_4). One of the nurses stated, "*Sleep deprivation for me was disastrous because I normally sleep soundly. The pain and anorexia increased in the evening and night. I had not experienced anorexia in my 50 years of life, but this time it was different. Even water was bitter for me*" (p_6).

In addition to the above problems, participants experienced a wide range of psychological symptoms such as anxiety, sadness, grief, and the feeling of imminent death after tested positive and during the disease. One of the participants said: "*The thought of what I had seen in the hospital and what COVID patients had experienced really bothered me, every time I felt it might be my last breath…*" (p_7). Another participant said: "*I was very sad and I saw death approaching me, so I called my mother and made a will, because I was not really sure I would survive*" (p_5).

Feeling abandoned during home quarantine period

Participants' experiences showed that physicians and nurses with COVID-19 did not receive sufficient support from hospital administrators and colleagues. This category includes three subcategories: "Being ignored by hospital managers and colleagues," "Being rejected by neighbors and friends," and "Being reprimanded and rejected by spouse." One of the physicians stated: "*When I was in home quarantine, none of the hospital administrators or even my co-workers called me. They left me alone. I was very upset. Little by little, I came to believe that they only care about me as long as I am healthy, and now that I cannot do shifts, I am no longer useful*" (p_{11}). Improper behavior of others, especially neighbors, exacerbated loneliness and discomfort of home quarantine. One of the nurses

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Table 2: Category and subcategories

Categories	Subcategories
Fear and anxiety	Transmission of disease to spouse and children
	Transmission of disease to parents
	Disruption of family relationships
Fighting against COVID-19	Facing physical signs and symptoms
	Experiencing psychological symptoms
Feeling abandoned during home quarantine period	Being ignored by hospital managers and colleagues
	Being rejected by neighbors and friends
	Being reprimanded and rejected by spouse
Denial of disease despite testing positive	Attributing the symptoms of the disease to work-related fatigue
	The disease is only for others
Recovery: the second opportunity	Thanking God for being alive
	Having the second opportunity for better management of life
	Making up for the past
	Improving the patient-centered care
Imposition of psychological burden after returning to work	Inappropriate behavior of colleagues
	Imposing more work shifts
	Treating people as machine
Promotion of the health professional perception	Improving the professional perception
	Improving the interprofessional perception
Promising supportive resources	Support from family members
	Support from close friends

said, "*Our neighbor, as soon as she found out that I had tested positive, told the building manager to tell me not to use the elevator. Even after I was well, she said we would get sick because of your carelessness*" (p_{10}).

In addition, participants suffered from being rejected by their spouses; one participant said, "*I felt the moments pass slowly. I waited for the rapid passage of time that I might recover. It was here, I felt that important people in my life, like my husband, have a phobia of the disease being transmitted through mobile waves! Because my husband did not even call me during this time. But if he was in quarantine instead of me, I would definitely support him*" (p_{12}).

Denying the disease despite testing positive

The participants' experiences showed that although they had been exposed to COVID-19 for months and were familiar with the symptoms of the disease, they denied it as soon as the signs and symptoms of the disease appeared. This category can be discussed into two subcategories of "Attributing the symptoms of the disease to work-related fatigue" and "The disease is only for others." One of the participants said: "*I came home after the shift, I was very tired, I said I had a busy day; I will rest tonight and I will get better tomorrow. I slept, but I was getting worse the next day, my whole body ached, as if I had been run over by a truck. I thought the disease belonged to others and I would not get sick....*" (p_{13}). One of the physician said: "*Even though I was fully aware of the symptoms and could clearly see the symptoms in myself, I still could not believe it, I thought I would not get sick. I visited a lot of COVID patients every day, but I did not think that one day I would get COVID. I hoped my test would be negative, but my test result was positive*" (p_1).

Recovery: The second opportunity

The participants' experiences showed that after their recovery, they felt that God had given them a second life and that they were thankful to God. They had decided to do better planning for their personal and professional lives and make up for past shortcomings. This category includes four subcategories: "Thanking God for being alive," "Having the second opportunity for better management of life," "Making up for the past," and "Improving the patient-centered care." One of the nurses said: "*God helped me a lot to be able to get over this disease. Although my lung function has decreased, I thank God that I am still alive. I think I should spend the rest of my life with more careful planning. The disease made me realize that I should not waste my time and I should get the best out of every moment of my life*" (p_2).

In addition, participants acknowledged that the experience of the disease had changed their perspective on care, and they decided to pay attention to patients and to participate better than before in the care process. One of the participants said, "*Now that I'm back to work, I try to see the patients more, to empathize with them, to have a better relationship with them and to listen to them until they get well and discharged*" (p3). One of the nurses also said in this regard, "*When you are in pain, you understand what it means when the patient says that he is in pain. When I felt better and my shifts started. I found that I talked to them more about the quantity and quality of their pain and felt closer to*

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them" (p_8). Attempt in developing patient-centered care and patient participation in the care process was one of the most important achievements that participants attained after contracting COVID-19.

Imposing a double psychological burden after returning to work

Physicians and nurses affected with COVID-19 suffered severe psychological burden after recovering from the disease and returning to work. The number of work shifts was increased, while fatigue did not allow them to shift further. Such behavior of hospital administers induced this idea into participants that they are viewed as machine. This category includes three subcategories: "Inappropriate behavior of colleagues," "Imposing more work shifts," and "Treating people as machine."

One of the participants said, "*You know, at one point I think we are just being treated as machine. As soon as I got back to work, they gave me 15 days shifts in a row, it was awful to give me such shifts. I was still tired and I couldn't do so many shifts. I was not a robot, I felt that they thought I had two weeks of quarantine and I did not do shifts, I ate at home and slept, and now, after recovering, I have to make up for those two weeks of quarantine. This made me very upset, even worse than the experience of contracting COVID-19"* (p_9).

In addition, participants acknowledged that they did not have a close contact with their colleagues after quarantine period and returning to work because their colleagues feared of being infected. One of the nurses said, "*When I went to the nurse station, everyone left. If I were in the resting room, no one ate anything there. It was really upsetting because I had tested negative now and they should not have behaved like this"* (p_{15}). Another participant said: "*The same day that my test result was positive, the news was announced on WhatsApp group of the colleagues, and one of my colleagues told me that you did not follow the health protocols so you contracted COVID-19. I was very upset. He should have motivated me instead of blaming me. In such a condition, I expected support, not destruction"* (p_6).

Promotion of the health professional perception

The participants' experiences showed that contracting COVID-19 increased their perception of their professional role as a member of the health team and provided quality care to the patient. This category includes two subcategories: "Improving the professional perception" and "Improving the interprofessional perception."

One of the participants said: "*I loved nursing from the beginning. I love it more since I got sick. I realized how helpful a nurse is in the health team. From now on, I will love my patients more and I will smile more and I will behave better with my patients. Because I know how important it is to understand the patient and provide proper care. It plays a great role in the patient's recovery…"* (p_7). Another participant stated: "*contracting COVID-19 changed my attitude toward my profession; I realized how effective it is to understand the patient's situation, family, and attention to various dimensions. I have to pay more attention to my professional oath and commitment"* (p_4).

Furthermore, participants' experiences showed that during the fight against COVID-19, they realized the importance of the role of other members of the health team and the interprofessional approach in patient care. One of the participants said, "*During my hospital stay, the staff were very kind to me. They tried to do everything they could for me. I felt their self-sacrifice more. I realized how hard they try to care for the patients. I was paying attention to their work. Nothing, really nothing, no reward or nothing can compensate for their hard work. I saw that the nurses were caring for me and the rest of the patients despite the fact that we had the virus and they might get it at any moment"* (p_1).

Promising supportive resources

Receiving support from family members and close friends gave encouragement and hope for recovery to physicians and nurses with COVID-19. Participants acknowledged that despite the lack of attention of some officials and colleagues, family members and close friends provided adequate support. This category includes two subcategories: "Support from family members" and "Support from close friends."

One of the participants admitted, "*My family members, especially my parents, were very supportive, very caring, very encouraging, and this behavior was very effective in my recovery process. I realized how much they love me. How important I am to them, and this increased my motivation to recover and fight against Coronavirus"* (p_{14}). Another participant said: "*Two of my co-workers, who were close friends, called me every day and if I wanted something they brought it for me. Well, in the beginning I needed more oxygen, the oxygen capsule had to be changed regularly, and they did that. God bless them. I always prayed for them. I will never forget their kindness"* (p_{17}). Meeting the physical and psychological needs of COVID-19 patients, such as providing food, oxygen, telephone communication, and video calling via WhatsApp by family members and close friends, gave the hope of recovery to physicians and nurses with COVID-19.

Discussion

The aim of this study was to explore the experiences of nurses and physicians infected with COVID-19. In addition to all the problems caused by the disease, physicians and nurses experienced a major anxiety and worry of family members being affected and the disruption of their family relationships. The most

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obvious aspect of this fear and anxiety is the ambiguity of the situation and the feeling of having no control over it. Anxious people often perceive vague situations as disturbing and stressful, so in the face of such situations, they experience severe fear and anxiety, which leads to cognitive avoidance or mental rumination and other nonadaptive strategies related to the problem.[14] The unknown condition of the disease and the fear of disability and unintended harm to those around them had made physicians and nurses more and more anxious and afraid, and they had found no solution except introjection. This finding is consistent with the results of studies on the psychological dimensions of COVID-19.[15]

Nurses and physicians experienced feeling of abandonment during the home quarantine period. Quarantining the nurses and physicians with COVID-19 reduces their social activities and limits their relationships and interactions while their existence is vital for caring for patients during the COVID-19 outbreak. Their distance from work and inability to meet their daily needs, their sense of rejection, and social isolation damaged their self-esteem. Other studies have concluded that the experience of being quarantined and dependent on others may cause the sense of losing control, autonomy, and independence. Because communication with others and regular social interactions are tools through which people maintain their sense of self and social identity. When these relationships change due to isolation and distance, the quality of life is also impaired.[16] At the same time, despite severe nostalgia for family members, some patients had a positive attitude toward quarantine due to their concerns about the involvement of other family members, and they preferred to be quarantined until full recovery.

Another extracted category was denial of the disease despite testing positive. A variety of clinical symptoms from being asymptomatic to having severe symptoms that lead to hospitalization and sometimes to death[17] have led the nurses and physicians to be skeptical of their disease and sometimes deny it.

After recovering from COVID-19, physicians and nurses felt that God had given them a new life and opportunity to better manage their lives and make up for their past shortcomings and work harder to help patients. It was as if the disease had put them on a path of self-awareness to have an extra ability to cope effectively with stress. The results of similar studies have shown that this spiritual reinforcement can affect people's well-being and welfare.[18] Although COVID-19 contraction was one of the most stressful occupational events for physicians and nurses and could have a negative impact on their mental health, it seems that the strong spirituality hidden in these professions has acted like a shield between the patient and the stresses caused by the disease and occupational conditions and has limited the negative effects of the disease.

One of the valuable experiences of nurses and physicians was paying more attention to patients. They believed more than ever that they should pay more attention to patients' demands, or at least listen to them and respond, and they stated that for a patient who is worried about life, death, and disability, relieving worries is the most valuable care that will help them achieve hope. Experiences in other studies also confirm that patients' carelessness and negligence will create many ambiguities in their minds about trust in the health team, which is contrary to the principles of professional care and ethics.[19] However, the participation of the patients and their family in care and treatment, proper communication with the patient, and integration in service delivery are effective in increasing patient satisfaction. Unfortunately, despite the perceived experiences and the attention paid to the patient-centered care, it is not yet considered as a basic and priority requirement.[20] However, the experience of COVID-19 contraction has improved the attitude of physicians and nurses toward patient-centered care.

Imposition of double psychological burden is another category extracted from this research. The psychological and physiological problems of nurses and physicians as the frontline fighters against COVID-19 are more prominent than those of other people. With the outbreak of the corona epidemic, nurses and physicians, like everyone else in the community, tended to express negative feelings about the situation, but they interjected the tension and anxiety and rushed to the aid of patients. When they became ill as a result of a double workload, it created the responsibility for the managers of the organization to pay attention to the change in their mental state, to listen to their concerns, to provide conditions for these people to rest easy and in peace, and to introduce counselors to help them resolve their negative feelings.[21] But unfortunately, after recovering from the disease and returning to work, physicians and nurses witness the inappropriate behavior of colleagues and the imposition of additional shifts. This issue requires a review of how managers support health team members. They need spiritual support and the provision of their human and professional rights to calmly use their capabilities in caring for patients. Supporting the health team is essential in helping them provide good quality care. Lack of nurses and physicians, lack of necessary facilities, and inadequacy of measures in the face of crisis are obvious examples of imposing a double psychological burden on nurses and physicians who return to work after a difficult period of having the disease.[22] The manager should take measures and plan mandatory periodic vacations according to the

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physical condition of nurses and physicians, so that they can calmly face the current crisis again.[23] The staff education about how to treat a nurse or physician after he/she comes to hospital after COVID-19 is important and it is a duty of managers.

Promotion of the health professional perception was another finding of this study. Participants' experiences showed that the disease has changed nurses' and physicians' perceptions of their role in their profession. Nurses and physicians who joined the frontlines of fight against the epidemic and lost their health in the process felt an unprecedented pride and had higher expectations for their professional advancement. They established therapeutic communication with patients more than ever and therefore should be supported.[24] The results of studies confirm that promotion of the health professional perception leads to the facilitation of interprofessional communication as well as the professionalization of the health team.[25] Given the current critical and complex situation, the creation of a new culture and a standard framework of interpersonal relationships, especially among nurses, physicians, and patients, is emphasized.

Promising supportive resources is another category that was extracted from the experiences of the participants. The perception of social and psychological support from family and friends created a sense of worth and deep appreciation in the nurses and physicians with COVID-19. These experiences ultimately had a positive effect on one's self-concept, disease, and conditions. This was more important because they were not allowed to visit their family members while they were in quarantine. Studies have shown that social support is a major facilitation for psychological well-being in stressful situations and important transitional periods of life. Although having a dangerous disease can have devastating effects on a person's mental health, social support acts as a shield between the sick person and the stresses caused by the disease and limits its negative effects.[26] Social support, on the other hand, meets basic needs such as love, self-esteem, loyalty, and a sense of belonging.[27] In lack of physical communication with family members, social support of friends and family members through social media or video calls is necessary for satisfying these needs. Family support gives nurses and physicians' greater power and confidence in fighting against the epidemic.[28,29]

Limitations and recommendation

The present study had some limitations. First, the interviews were recorded and analyzed only in audio and written form. However, videotaping the participants during the interview could provide more information about the nonverbal clues and body language of the participants during the interview, but the participants did not want to be on camera. Although the generalizability of the findings is one of the inherent limitations of qualitative studies, we tried to increase generalizability by selecting maximum variation participants. It is suggested that similar studies are performed in different sociocultural situations. In this way, common experiences can be identified and the necessary measures can be taken to address these concerns.

Conclusion

The experiences of nurses and physicians with COVID-19 showed that they need special attention as they are in the frontline of fight against the COVID-19 epidemic. Managers in health-care systems need to timely address their physical and mental needs. There should be creating an atmosphere of respect for health-care providers in the community so that nurses and physicians understand the value of their work and gain a sense of professional pride. Experience COVID-19 causes physicians and nurses to focus on patient needs and concerns rather than focusing on their decisions and priorities. Furthermore, managers of health-care centers should cooperate and monitor patient-centered care.

Acknowledgment and ethical-moral code

This study has been approved by the Ethics Committee of Isfahan University of Medical Sciences (IR.MUI.RESEARCH.REC.1399.378). We express a deep sense of gratitude to the participants in the study, and we also like to thank the Vice-Chancellor for Research and Technology of Isfahan University of Medical Sciences, Iran, for the financial support of this research (project No. 199320).

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Conflicts of interest

There are no conflicts of interest.

References

1. Organization WH. Coronavirus Disease 2019 (COVID-19): Situation Report, 209. World Health Organization WH; 2020.
2. Pourmalek F, Rezaei Hemami M, Janani L, Moradi-Lakeh M. Rapid review of COVID-19 epidemic estimation studies for Iran. BMC Public Health 2021;21:257.
3. Li L, Xv Q, Yan J. COVID-19: The need for continuous medical education and training. Lancet Respir Med 2020;8:e23.
4. McDermott MM, Newman AB. Preserving clinical trial integrity during the coronavirus pandemic. JAMA 2020;323:2135-6.
5. Marjanovic Z, Greenglass ER, Coffey S. The relevance of psychosocial variables and working conditions in predicting nurses' coping strategies during the SARS crisis: An online questionnaire survey. Int J Nurs Stud 2007;44:991-8.

[Downloaded free from http://www.jehp.net on Friday, February 18, 2022, IP: 31.7.96.41]

6. Adams JG, Walls RM. Supporting the health care workforce during the COVID-19 global epidemic. JAMA 2020;323:1439-40.
7. Chang D, Xu H, Rebaza A, Sharma L, Dela Cruz CS. Protecting health-care workers from subclinical coronavirus infection. Lancet Respir Med 2020;8:e13.
8. Liu S, Yang L, Zhang C, Xiang YT, Liu Z, Hu S, *et al*. Online mental health services in China during the COVID-19 outbreak. Lancet Psychiatry 2020;7:e17-8.
9. Salemi S, Shamsi SH, Mirzabaigi GH, Sanjari M, Ala M. Quality of life Iranian nurses. J Mashhad School Nurs Midw 2010;10:1-13.
10. McElligott D, Siemers S, Thomas L, Kohn N. Health promotion in nurses: Is there a healthy nurse in the house? Appl Nurs Res 2009;22:211-5.
11. Anatolian News Agency. The Medical Staff Makes up about 14% of People with Corona Virus in the World. Available from: https://www.aa.com.tr/fa/. https://www.aa.com.tr/fa/.last access, 20 Aprill 2021.
12. Munhall P. Nursing Researh. Sudbury: Jones and Bartlett Publishers; 2007.
13. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004;24:105-12.
14. Guba EG. Criteria for assessing the trustworthiness of naturalistic inquiries. Educ Technol Res Dev 1981;29:75-91.
15. Shihata S, McEvoy PM, Mullan BA, Carleton RN. Intolerance of uncertainty in emotional disorders: What uncertainties remain? J Anxiety Disord 2016;41:115-24.
16. Zarghami M. Psychiatric aspects of coronavirus (2019-nCoV) infection. Iran J Psychiatry Behav Sci 2020;14:2019-21.
17. Datta R. COVID-2019: Experience of setting up quarantine center. J Anaesthesiol Clin Pharmacol 2020;36:S14-8.
18. Hu Y, Sun J, Dai Z, Deng H, Li X, Huang Q, Xu Y. Prevalence and severity of corona virus disease 2019 (COVID-19): A systematic review and meta-analysis. J Clin Virol 2020;127:1-7.
19. Chen Y, Xiao H, Yang Y, Lan X. The effects of life review on psycho-spiritual well-being among patients with life-threatening illness: A systematic review and meta-analysis. J Adv Nurs 2017;73:1539-54.
20. Pinto S, Fumincelli L, Mazzo A, Caldeira S, Martins JC. Similarities among the concepts. Porto Biomed J 2017;2:6-12.
21. Arab M, Hamouzadeh P, Yousefvand M, Namani F, Abdi M. Comparison of patient-centered situation in selected hospitals affiliated to Tehran University Of Medical Sciences from the viewpoint of nurses and patients. J Hosp 2016;15:31-9.
22. He Y, Zhou YH, Hou AH. The impact of organizational climate and psychological empowerment on nurses' job burnout. J Nur Adm 2015;15:685-8.
23. Dehnavi H. The Participation of Patients in Their Services is Low; 2015. Available from: http://healthcareimprovement.ir. [Last accessed on 2018 Jul 02].
24. Xu MC, Zhang Y. Psychological status survey of first clinical first-line support nurses fighting against pneumonia caused by a 2019 novel coronavirus infection. Chin Nurs Res 2020;34:368-70.
25. Agarwal UA, Khatri N. The relationships between perceived organizational support, affective commitment, psychological contract breach, organizational citizenship behavior and work engagement. J Adv Nurs 2016;72:2806-17.
26. Wu F, Sheng Y, Zhang YJ, Zhu LL, Liu XH. Qualitative study on rescue experience of nurses in disaster response: A meta synthesis. J Nurs (China) 2019;26:28-33.
27. Liu QQ, Li RQ, Geng XW. Survey of status quo of nurses' cognition level and attitude to disaster nursing. Chin Nurs Res 2011;25:3028-30.
28. Qureshi K, Gershon RR, Sherman MF, Straub T, Gebbie E, McCollum M, *et al.* Health care workers' ability and willingness to report to duty during catastrophic disasters. J Urban Health 2005;82:378-88.
29. Campoe K. Inter-Professional Collaboration during COVID-19. Medsurg Nursing 2020; 29(5):297-298.