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Original Article

Experiences of Nurses Diagnosed with COVID-19: A Qualitative Study

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Abstract

Introduction: The COVID-19 disease, which has become a health crisis in the world, has affected various aspects of the personal and professional life of nurses. This study investigated the experiences of nurses diagnosed with COVID-19.

Methods: This was a descriptive qualitative study. Ten nurses with COVID-19 were purposefully selected. Data were collected through in-depth interviews and analyzed by Granheim and Lundman content analyze.

Results: In this study, the final five categories included (1) physical deterioration (verity of physical disorders – intensity of physical disorders), (2) Psychological reactions (anxiety, denial, anger, acceptance), (3) Making of sense of life (developing and transformation), (4) Economic burden (family economy restrictions - high cost of treatment- lack of financial support), and (5) Dual reactions of the people around (closeness and isolation - supportive and unsupportive).

Conclusion: Nurses suffering from COVID-19 encountered multiple physical, psychological, economic and empathy challenges. The nurses were transformed to the holistic meanings of their personal and professional life, prioritizing the patients' interventions and education, sharing experiences with the patients, and paying attention to the psychological aspects of care.

Introduction

On December 29, 2019, a series of unexplained pneumonia cases were reported in Wuhan, China. The government and health researchers in China took rapid measures to control the epidemic and began etiological research.[1] After widespread speculation about the cause of this disease, finally, on January 9, 2020, the Chinese Department of the Center for Disease Control and Prevention announced that the cause of this disease is a new coronavirus called COVID-19.[2,3] This virus is mainly transmitted through respiratory droplets; however, it has the ability to transmit it through surfaces.[4] According to the American Center for Disease Control and Prevention, the incubation period of this disease is approximately 2-14 days.[5] Coronaviruses multiple extensively in the upper respiratory tract. Coronavirus also tends to the cells of the lower respiratory system and by multiplying in these areas, it will lead to the creation of lesions in these areas.[4] In the preliminary stage, infection with the new coronavirus is accompanied by non-specific and general symptoms such as feeling of boredom, fatigue and body pain, fever and dry cough. There may be symptoms of nausea and diarrhea before fever.[6] Most of the people who died because of this disease had previous underlying diseases such as high blood pressure, diabetes or cardiovascular diseases that weakened their immune system.[7] According to the latest statistics of the World Health Organization until April 2023, COVID-19 has spread in more than 230 countries of the world and according to the statistics of 684 929 240 cases, 6 837 646 deaths have been reported and it is still claiming victims.[8]

Nurses are at the frontline of caring for patients with COVID-19.[9] The lack of medical facilities and manpower, confusion in the treatment system, the unpredictable nature of the disease, social isolation, and widespread transmission of the virus have had severe consequences for health systems in more than 200 countries in the world. Quality nursing care for patients with COVID-19 is a major challenge.[10] Nurses who care for patients with COVID-19 are at serious risk. Work stress, daily influx of patients to hospitals, low hospital capacity, and inappropriate ratio of nurses to patients have made it difficult to provide care. However, nurses have always sought to provide effective services and care, stress, complex patient care, unclear disease status, and system inefficiency can affect the quality of nursing care and threaten patient safety.[11-15]

The Centers for Disease Control and Prevention of China has reported during the outbreak of COVID-19 until February 11, 2020; Of the 44 672 confirmed cases

of coronavirus, 1716 of them were health care workers which indicates a high risk of infection among them.[16,17] During epidemics, health care workers are expected to work long hours under high pressure, with insufficient resources and facilities, and to accept the inherent risks of close interaction with patients. They are vulnerable to the disease, which drives to an increase in their anxiety level, particularly while witnessing their colleagues infected or death from the disease.[11,18] The increasing number of confirmed and suspected cases, high work pressure, reduction of personal protective equipment, extensive media coverage, lack of specific medicine, and feeling of insufficient support, all lead to mental pressure of health care workers.[19] The latest study of the International Nurses Association shows that the number of nurses who died after contracting COVID-19 is 2600 which includes nurses from only 44 out of 195 countries and indicates an underestimation of the actual number of deaths.[20]

When the nurses themselves experience the disease, it makes them think about the role of nursing and realize the importance of caring for patients and comprehensive care, especially psychological care when patients are in severe distress. It also makes them see the world more from the perspective of the patients and take time to reassure the patients and families and seriously listen to all their concerns.[21] So far, the studies that have been conducted on COVID-19 are on the recognition and control of this disease,[22] diagnosis and treatment,[23] the experiences of nurses from working with these patients,[24] the experiences of nurses in the field of self- protection against this disease. The disease[25] and the psychological effects of this disease have been focused on the treatment staff.[26] Knowing the nurses experiences is of great importance for effective communication between nurses and patients which leads to the improvement of the patients' health outcomes.[27] Despite the high incidence of COVID-19 among medical staff and especially nurses, no study was found to investigate the experience of nurses who, in addition to caring for these patients, were also infected with COVID-19 in this pandemic. Thereupon, this study aims to investigate the nurse's experiences who were diagnosed with COVID-19.

Materials and Methods

This is qualitative research conducted at the Arak University of medical sciences (Iran). Ten nurses who were diagnosed with COVID-19 and have experience of caring for COVID-19 patients participated in this study through purposeful sampling.

The data were collected through in-depth interviews. The interview started with open questions such as "what did you experience when you diagnosed with COVID-19 virus?" Then, the next questions were asked to continue and complete the interview and obtain richer data based on the responses of the participants. The interviews were recorded and continued for approximately 30–45 minutes. The process of data collection continued until data saturation, when no new data emerged. The interviews were transcribed and analyzed using Granheim and Ludman content analysis through the following steps: transcribing data, creating basic codes (coded word-by-word and line-by-line), putting codes in potential themes (categories), reviewing themes (relating themes with each other and with the extracted codes and the entire data set), defining and naming themes, reporting. To ensure rigor, the Guba and Lincoln criteria were considered.[19] To ensure credibility, there was constant engagement with the research subject and data. Besides, the extracted codes were shared with some participants and their opinions were sought (Member checking). To identify data conformability, two external reviewers' expert in qualitative research checked the research process and findings. To increase the dependability of the findings, the research process and findings were recorded, and a report of the research process was provided. Data transferability was considered by sharing the findings with two nurses who were diagnosed with COVID -19 that did not participate in the study.

Ethical attention in this study included; Arak University of medical sciences ethics committee approval, informed consent from the participants obtained and confidentiality and voluntary participation considered.

Results

Ten nurses participated in the study who had 7.9 ± 2.9 years work experience (Table 1). Through data analysis, five main categories were emerged: 1. physical deterioration (verity of physical disorders–intensity of physical disorders) 2. Psychological reactions (anxiety, denial, anger, acceptance), 3. Making sense of life (developing and transformation), 4. Economic burden (family economy restrictions - high cost of treatment-lack of financial support), and 5. Dual reactions of the people around (closeness and isolation-supportive and unsupportive).

Physical Deterioration

Physical deterioration included a variety of physical disorders and intensity of physical disorders. The first experience that all the participants mentioned while diagnosed with COVID-19 was physical disorders. They

Table 1. Demographic characteristics of the participants

Characteristics	Mean (SD)
Age (y)	33 (4.5)
Work experience (y)	7.9 (2.9)
Gender	
Female	6 (60)
Male	4 (40)
Married	7 (70)
Single	3 (30)

said that they were certain that they were infected with COVID-19 by the appearance of physical symptoms.

All participants emphasized the intensity and diversity of physical disorders.

"I experienced almost all Covid's symptoms with the greatest intensity. That is, I had the most intense type of body pain, headache, weakness, and lethargy" [P1].

Another participant said: *"I had shortness of breath from the beginning of my illness, and I had such shortness of breath that I had to be helped by someone to do personal work, or I had to use the wall or all fours to get to the bathroom because I was feeling suffocated due to severe shortness of breath*" [P3].

Psychological Reactions (Anxiety, Denial, Anger, Acceptance)

Psychological manifestations were one of the main categories obtained in this study, which appeared in the forms of anxiety, denial, anger, and acceptance.

For example, a participant who was infected with this disease at the beginning of the pandemic; He said that "*he was shocked after being infected*", or another participant said that "*because he had injected the vaccine twice, he never thought that he would get infected with COVID-19 and he was shocked because of the unexpectedness of his infection*".

In this regard, the 34-year-old female participant said, "*On the first day when my COVID diagnosis was confirmed, I called my husband to come and pick me up. The whole way from the hospital to home, I couldn't speak at all, I was in such a state of shock that I couldn't even explain to my spouse that my lung was involved*" [P6].

The interesting point was that most of the interviewees attributed their initial symptoms to other issues such as fatigue, heavy duty, and fasting; however, they denied that they were infected with COVID 19.

"*When I experienced severe body pain in the middle of my shift, I denied that I had the corona virus. After I went home, I had a severe and unprecedented fever and chills. Despite these symptoms, I still denied having the corona virus*" [P2].

Fear of the unknown of the disease, fear of diagnosis and uncertainty in the treatment of this disease, fear of relatives being infected and also fear of the imminent death of oneself or loved ones due to close observation of the death of patients with this disease and prior knowledge about this disease, had caused the participants to feel anxious about themselves or others.

"I had a lot of lung involvement, and when I went to the doctor, she said that you have a lot of CT involvement and it might be more extensive, and she said that you must be hospitalized, that too in the ICU. This word of my doctor made me very anxious" [P8].

Another male participant stated: *"My child was only 4 months old and I was anxious that she would get infected. I was so anxious for her that even after the negative PCR, I did not hug my child for 2 days because I was afraid of her getting infected*" [P10].

The dimensions of anxiety included the anxiety of self-infection, the anxiety of others' infection, and the anxiety of waiting for death. One of the interviewees who had contracted COVID-19 at the beginning of the pandemic; After being infected, due to the vagueness of the nature of the disease, she became anxious about herself. She said:

"Everything was unclear to me. I didn't know what was going to happen, and there was no clear sign in front of me because I was infected at the beginning of the pandemic. At that time the treatment was not certain and the treatments were based on probabilities, and even the possible treatments were not known to have a definite effect. I thought I might die and the end would be death. All this made me feel very bad worry" [P3].

Another concept of anxiety in the final category of mental manifestations was the anxiety of others getting infected.

Some of the participants were worried about the people around them and the possibility of getting infected. They were worried about infecting the people around them or about the prognosis of the disease in them.

"After contracting the corona virus, many worries came to me because of the small child I had. Worrying about the possibility of my child, my husband, and the people around me getting infected bothered me a lot." [P9].

Another dimension of anxiety that appeared among the participants was the anxiety of waiting for death. Fear of one's own death due to worsening symptoms and prior knowledge from working in the COVID-19 center and observing the death of patients with COVID-19 caused this anxiety to be seen among almost all interviewees.

"Due to the shortness of breath and the relatively extensive involvement in my lungs, the fear of death had crept into me. Sometimes I remembered that the patient I was dealing with was a young lady who had expired; I kept thinking that I might end up like her and this fear of death for my child's future bothered me a lot. Whenever my shortness of breath worsened, this anxiety came to me more." [P7].

The vagueness of the nature of the disease, the lack of definitive treatment and the certainty of the effect of the drugs, as well as the need to observe quarantine for 2 weeks or more and stay away from loved ones and relatives caused the interviewers to experience isolation during this period, and this isolation was expressed through demonstrations, such as boredom, loneliness, lack of motivation, and depression.

"It has never happened to me that I want to be away from my daughter for 2 weeks or not be able to hug her. I had a many shift and I was away from her for several hours due to the nature of my job, but it was very difficult for me not to hug her. Maybe if I was traveling, it would have been easier for me to accept this distance, but being in the same environment with my daughter

but not being able to hug her and play with her or feed her was very difficult for me. I was very lonely during this time, and my husband and my daughter experienced this loneliness too. Not seeing my family and not being able to be at work made me deeply lonely and me whole day passed in silence" [P3].

"Loneliness, being away from my children and loved ones, made me feel tired and unmotivated. The worst days of my life were those quarantine days and I never want to experience it again" [P6].

Making Sense of Life (Development and Transformation)

The participants declared that they have obtained growth and developments resulting in transformations in their personal and professional life. One of the valuable experiences of the participants was a change of their attitude towards life.

Suffering from COVID-19 and the experiences gained from it have made this change of attitude towards personal life, social relationships and change of professional attitude.

A participant said: "*After contracting COVID, my outlook on life changed. I realized that life has unexpected events and at any moment you may have to leave this world with all the love and attachments you have for it; So I tried to appreciate what I had more, than before and at the same time I always be ready to leave this world."* [P2].

Understanding the fragility of life was another example of personal growth and development that the participants mentioned. The interviewers, referring to the perishability of this world and stressing on living in the present, said:

"*During the pandemic, I felt absurd when I saw the conditions of the patients and their deaths, and I feel that everything is destructible, and one should not try too hard for this world, because the world is destructible, and with the sudden deaths that I saw in these conditions, this is the result I realized that our life is very short and my death may come at any moment"* [P5].

"After recovery, it was as if I found life again; it was there that I realized that we should appreciate each other more and help each other more in difficulties and problems" [P4].

Professional growth was one of the most important experiences obtained from the interviews of the participants. In the meantime, the observation of people suffering from this disease and the high mortality of it, resulted in gaining experiences and changing their perspective on towards the nursing profession and their professional growth.

One example of professional growth that was obtained from the interviews was the increase in professional responsibility. A participant who had experienced the shortness of breath caused by this disease was admitted as follows:

"The shortness of breath of this disease bothered me so much that every moment I said to myself what kind of pain patients who live with these symptoms endure. From now on, when a patient came in with shortness of breath or said he had this symptom during hospitalization, I immediately intervened because I understood what he was saying. Or when a person presents with pain or any symptom caused by any other disease; I will try to get to the bedside as soon as possible so that it hurts less." [P2].

What was noticed among the interviews with the participants was that all the interviewers said that they became more sensitive to the issue of educating patients with COVID 19.

"After contracting COVID, because we didn't have enough information about this disease, I just realized how important education is in the treatment process, which has been neglected by us. That the patients or their families have information about the disease and their treatment process, they do not have any and this lack of information is painful for them. Therefore, after this, I tried to pay more attention to educating patients, which is an important part of my care pillars." [P3].

Intensification of the supportive role of nurses was another aspect of professional growth that was obtained from the participants' interviews. The interviewers admitted that after contracting this disease, they have achieved other aspects of nurses' care, which they were less concerned about before.

Creating hope and motivation, consoling, and increasing the threshold of tolerance were the pillars of this support role. A participant said: "*Before, I didn't give much encouragement and hope to patients and their families, but now I try to talk to patients and their families who are in critical situations with simple and hopeful expressions. When the patient comes, I try to speak with a positive and hopeful expression and give them hope as much as I can to fight their disease*" [P4].

Another example of intensifying the supportive role of nurses is comforting. Some of the participants considered comforting patients and their families as a part of their professional growth, which was formed in them because of this disease and suffering from it.

"In my opinion, Corona caused a sense of friendship to form in the society, and all people came to help each other to fight this disease. In our work, this sense of altruism arose for me, especially after I got infected, and I tried to comfort the patients and their families and deal with them more gently." [P8].

They confirmed the intensification of the supportive role of nurses; it was an increase in the threshold of tolerance in the work environment.

"*I feel that after being infected with COVID, my patience in the workplace has increased compared to the past, and I have found a special patience to respond more to patients and their families*."[P.4]

Economic Burden

Another category that was obtained from the interviews

was the economic burden. The high cost of treatment, the lack of coverage of supplementary drugs by mother's insurance, sick leave and long quarantines, and the lack of insurance support for nurses with COVID-19 and as a result the reduction of salaries received during this period, had caused that nurses with COVID-19 during going through this crisis, in addition to experiencing the pain and suffering caused by this disease and the psychological manifestations that appeared on themselves and their families; also face economic challenges.

A participant said the following:

"My quarantine lasted 50 days, and during this time, I had no source of income due to the cutoff of my salary and benefits. I had some savings and I used all of my savings during the quarantine, and I had to ask my father and my mother for help me because all of my installments were delayed, and this was one of my biggest problems during quarantine." [P6].

The participants stated that this disease, unlike other pandemics such as influenza, is a costly disease that reduces income due to the requirement to comply with quarantine for a relatively long time.

Dual Reactions of the People Around Them (Closeness and Isolation - Supportive and Unsupportive)

The nurses were interfered with closeness - isolation and supportive and unsupportive reaction of the people around including their family and colleagues. The interviewers stated that during this crisis, they have observed different behaviors in the people around them, some of which had given them hope and encouragement, while others had caused sadness and discouragement in them.

One of the aspects that was mentioned in the interviews in the category of actions of those around the disease, was the behavior of the children of those who have children. They mentioned that the first action they saw from the people around them, was their child's reaction to their disease. An interviewer who had a young child during the interview recalled her child's reaction to this disease while crying and said:

"I will never forget the day I was diagnosed with this disease. When I went home from the hospital, my 3-year-old daughter ran to me as usual to hug me, but I couldn't hug her and I quickly went to the bedroom. That day, my daughter cried a lot and called me loudly and said, "Mom, don't you love me? Why don't you hug me? And I cried for hours because of my daughter's tears" [P3]

Another behavior of the people around him was his wife's behavior. Interviewers who were married paid attention to the behavior of their spouse as the closest person to them in life and mentioned them in their statements.

A participant stated the following: "*My husband was very supportive of me in all fields. He never blamed me for getting sick or causing them to become infected. No one's support was as agreeable to me as his support*" [P2].

The behavior of the family was repeatedly revealed by the participants. They had mentioned in their talks that they were the only ones who did not get tense during this crisis, and their families were also involved and demonstrated. What was obtained from the interviews was that the family is the main pillar to overcome any crisis.

"When my mother found out about my illness, she kept crying, and her restlessness bothered me a lot. My parents, my husband's family all called or came to greet me every day and they saw me from behind the window and they supported me in every way from preparing food and necessities to psychologically." [P3].

The behavior of the officials and colleagues as another aspect of the action of the people around after the person got sick was considered.

The role of officials is considered as one of the main pillars in the support system. What was obtained from the interviews was that the nurses expected their managers and officials in the treatment system to support them during illness and crisis.

They believed that during the pandemic and in a situation where the country's health system and the entire society were involved in an epidemic and all-encompassing crisis, nurses, along with other members of the treatment system, did their best to deal with this crisis, but instead, the officials did not have any support in front of their self-sacrifice, and during the illness, they refrained them the minimum, which includes full payment of salaries and treatment costs, etc.

One participant stated:

"No one from the authorities called me to say hello. It definitely mattered to me to be asked how I was doing. The Social Security Insurance did not support us at all, even though I was working for this system, instead of supporting me, they cut my salary!!During the quarantine period, I was most saddened by the lack of support, because I did not have the stress of contracting the COVID disease, but I had no support either from the authorities or from Social Security Insurance." [P10].

Discussion

In this research, the experiences of nurses with COVID-19 were studied. Physical manifestation was one of the main categories obtained in this study. Participants described a multitude of physical problems during the course of illness and after recovery ranged widely among them which is in accordance with Adhikari et al and Aghahosseini's studies who stated that the physical symptoms of this disease can vary from mild limiting symptoms to severe shortness of breath and even defects in different organs.[28,29]

The participants declared psychological manifestations included bewilderment and denial, anger, adaptation, anxiety, fell guilty, isolation and obsession. Confirming our results, In Esther Mok's study, it was stated that after the symptoms of the disease appeared in them, the

nurses attributed these symptoms to other diseases such as influenza and denied the symptoms of corona and had used this strategy as a defensive reaction in the face of a vague and unknown disease and had denied it in the early stages of the disease.[22]

As Sakeni et al state, the experience of anger in response to the awareness of health loss is a natural and natural phenomenon for every person and is often accompanied by false thoughts and perceptions, physical arousal and an increasing desire to perform verbal or movement behaviors that it is culturally inappropriate. He states that anger is a reaction that can be provoked at the same time as the diagnosis of a disease such as cancer.[30] Also, Mok et al in a study they conducted on nurses suffering from severe acute respiratory syndrome (SARS), stated that nurses suffering from this disease, after a definitive diagnosis, had a negative attitude towards the authorities and the environment in which they worked because of accepting patients suffering from this disease. They were angry.[21] In the study of Mok et al it is stated that nurses with SARS after the diagnosis feel worried and guilty that their family members, colleagues, friends and patients will be infected with SARS, because they had contact with these people before the diagnosis. In this study, due to the acute and unknown nature of SARS, people were afraid of death and were not prepared for it.[21]

In this study, participants expressed their anxiety and distress in the form of anxiety about their own illness, anxiety about others' illness, and anxiety about the expectation of death due to prior knowledge or due to the aggravation of symptoms, as well as fear of the death of loved ones. In line with our finding, Aghahosseini29 states in his study.

The experiences of patients with the disease of COVID-19 showed that this disease affects the physical, psychological, economic, family and social dimensions of people. Therefore, understanding the challenges, experiences and concerns of patients regarding this disease can help executive decision-makers, medical and health care workers and mental health professionals to understand and be comprehensively aware of its consequences.

The experience of most of the participants was anxiety and worry about the transmission of the disease to family members, which has expressed this experience as one of the subcategories of the category of family concerns. He also introduces the fear of imminent death as one of the main concepts of his study and states that people experience death anxiety upon hearing the news of the death of others or the exacerbation of symptoms.[29] In the systematic review of Balai et al study confirmed that the nurses were twice as likely to psychological symptoms due to fear of infection to self and family members, lack of resources and facilities at workplace, demanding work conditions, working closely with COVID-19 clients in intensive care unit and pre-existing medical and psychological problems.[31]

Isolation was one of the psychological manifestations that emerged in this study. Due to the quarantine and being away from their loved ones and family, the participants were isolated, followed by loneliness and boredom. In parallel to our findings, the feeling of isolation and loneliness was expressed as one of the experiences of nurses with SARS in the study of Sterkok et al.[21] They said that the nurses with SARS had accepted the reality of isolation. They found being alone very stressful. And they described this isolation as a feeling of boredom, loneliness, and abandonment, and over time, isolation became a source of despair.[22] In Aghahosseini's study, feelings of loneliness, isolation, boredom, depression, sadness and grief were expressed as subcategories of life in quarantine in patients with COVID-19.[29]

The feeling of guilt was another of psychological manifestations that was caused by spreading the disease to others and imposing the burden of care on those around. In the study of Mok et al the feeling of guilt is also expressed as one of the experiences of nurses with SARS. They have stated that nurses with SARS had a feeling of guilt due to the spread of the disease to their family members, friends, and colleagues, and also the extra work was revealed to their colleagues.[21]

One of the most prominent positive consequences of being infected with COVID 19 in the participants was the change in their attitude towards life. In parallel with our findings, Esther Mok said in a study that nurses with SARS realized after this disease that not only life is fragile, short and uncertain, but this disease helped them to put life in a broader and meaningful perspective. They stated that they redefined their life priorities after the disease. The desire to return to normal life and re-interact with the outside world had increased in nurses with SARS; In such a way that during the quarantine period, they wanted to continue their life and live again.[21] Asgari and colleagues stated that the epidemic of this disease, despite all the suffering and pain it has brought, has forced man to think about the meaning of existence and related concepts such as death, more than think before and these thoughts will lead to the formation of developed beliefs for him.[32]

The increase in responsibility in the studied nurses was manifested in the form of speeding up the intervention process, increasing education to patients, sharing experiences with patients, and paying attention to the psychological aspect of care. They said that after recovering from this disease and returning to the workplace, they felt more responsible than before. The study of Mok et al is also clear evidence in confirming the content obtained in this study. They stated that the fact that nurses themselves experienced being sick made them reflect on the role of nursing.[21] In other studies, posttraumatic growth by nurses after the diagnosis of COVID-19 included spiritual change, changes in the relationship with others, changes in priorities, and appreciation and importance of life.[33,34]

One of the main categories obtained in this study was the dual reaction of people around the disease. In a study conducted by Asgari et al during the COVID-19 disease, family members have distanced themselves from each other.[32] Accordance with our finding in Yousefi et al study nurses mentioned that they have experienced fear of contracting the infection (for self and family members) and disruption in friendly communication with family and colleagues.[35]

Economic challenge was another main category obtained in this study. Economic problems caused by the high cost of the disease and lack of financial support were one of the main concerns of the participants during this disease.

The findings of Tajbakhsh's qualitative study of life experience of people who are facing COVID-19 have pointed to economic turmoil, economic stagnation, and disruption in experiences and production.[36]

Conclusion

In this study, the nurses diagnosed with COVID 19 experienced physical- psychological-social-economic challenges. Changing the attitude towards personal, social and professional life resulted in the nurses' growth, developments and transformations. Also, their professional growth had caused them to reconsider the dimensions of care as well as the support role of a nurse, and this was their most outstanding achievement, which was acknowledged by all the participants. They prioritized their patients and families psychological health along with physical treatments. Health policy makers should provide multidisciplinary supportive policies and strategies to improve the psycho-social and physical wellbeing of nurses during the pandemic.

Authors' Contribution

Conceptualization: Maryam Sadat Mousavi, Kobra Rahzani, Davood Hekmat Pou.
Data curation: Maryam Sadat Mousavi.
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Software: Maryam Sadat Mousavi, Kobra Rahzani.
Supervision: Kobra Rahzani, Davood Hekmat Pou.
Validation: Kobra Rahzani, Davood Hekmat Pou.
Visualization: Maryam Sadat Mousavi.
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Writing–review & editing: Maryam Sadat Mousavi, Kobra Rahzani.

Competing Interests

The authors declare no conflict of interest in this study.

Data Availability Statement

The datasets are available from the corresponding author upon reasonable request.

Ethical Approval

The Ethics Committee of Arak University of Medical Sciences authorized the permission to conduct this study (ethical code: IR.ARAKMU.REC.1400.048).

Research Highlights

What is the current knowledge?

- Health care providers were more prone to be infected with COVID-19.
- Nurses faced psychological distress caring for patients with COVID-19.

What is new here?

- The nurses suffering from COVID-19 encountered multiple physical, psychological, economic and social challenges.
- The nurses transformed to the holistic meanings of their personal and professional life
- They emphasized spending more time for patients and their families and pay attention to the psychological health of the patients and their families along with physical treatments.
- Multidisciplinary support is essential in helping the recovery process of whom diagnosed with COVID-19.

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