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Qualitative Research

Healthcare professionals' families' perception of life during COVID-19 in Iran: a qualitative study

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Abstract

Background: The families of healthcare professionals are one of the most vulnerable groups whose lives have been severely damaged by the COVID-19 pandemic. So far, the experiences and perceptions of these individuals have not been explored. The present study aims to investigate the experiences and perceptions of the family members of the healthcare professionals during COVID-19.

Methods: The present study is a qualitative research with a phenomenological design. The participants were 25 family members of healthcare professionals which were selected from the medical centres in Iran via purposeful sampling from August 2021 to October 2021. The sampling was kept on until the data became saturated. To collect data, individual semi-structured interviews were conducted online. The Colaizzi approach was used to analyse the data collected.

Results: The findings of the study emerged as two main themes: psychological tension with five categories (indescribable fear and worry, longing to see their loved ones, patient stone, bitter farewell, fear of the future) and dignity with four categories (acclamation, appreciation, feeling proud, spiritual growth).

Conclusion: During the COVID-19 pandemic, the family members of healthcare professionals have experienced dignity combined with the degrees of psychological tension which were beyond the experiences of the majority of people in the society, but similar to the psychological tension experienced by the families of COVID-19 victims. The families of healthcare workers are continuously anxious about the safety of their loved ones who are responsible to obtain the treatment of COVID-19 patients, which potentially jeopardizes their physical and psychological well-being. Therefore, the appreciation and support of people in the community of the family members of healthcare professionals have increased their tolerance. Healthcare providers can successfully promote the health of healthcare professionals' families by providing comprehensive assistance to healthcare personnel and their families.

Key words: COVID-19, dignity, healthcare professional, psychological tension, qualitative study

Background

The emerging coronavirus (COVID-19) has caused high fear and concern worldwide.[1] This virus originated in China and quickly spread to practically every country in the world, including Iran.[2,3] The genetic structure of the virus frequently changes, new symptoms are continuously recorded in the infected, and, most importantly, there is not a definite cure or vaccine. To date, more than 210 million people in the world have contracted the disease, and more than 4,000,000 have lost their lives as a result.[4,5] However, in Iran, the spread of COVID-19 was complex. At the beginning of the pandemic, Iran had the third highest reported cases of COVID-19, following China and Italy. Currently, Iran is faced with the fifth wave of the pandemic, while many other countries are going via the second wave.[6] Although the majority of Iranians wear masks, poor economic conditions have prevented the effective imposition of restrictions on jobs, social activities, and travel in all the cities of Iran. As a result, during the pandemic, a large number of people will use public transportation every day, roads will be clogged, many employees

Key messages

- Main themes were psychological crisis and dignity.
- Families experienced proud combined with psychological tension.

will report to work, and telecommuting will be unusual.[6,7] These factors have caused more than 4,000,000 cases of the infection, more than 100,000 of which have led to death.[7,8] The high fatality rate of COVID-19 worldwide has caused many people to experience considerable tension with adverse effects on their social activities and psychological security.[8] In dealing with this highly contagious condition, healthcare professionals, the first and most crucial guardians of people's health, confront a variety of clinical obstacles. Several studies showed that caregivers of patients with COVID-19 are exposed to psychological issues, including stress, anxiety, and depression, as well as physical issues like high blood pressure and fatigue.[3,4,7] Although in the last 3 years, many studies have examined the challenges of care and the psychological problems of the patients and healthcare professionals,[7] but the study with a qualitative approach has not investigated the experiences of healthcare professionals' families during the COVID-19 pandemic. However, Amakiri et al. stated that families of healthcare providers reported severe fear, anxiety, and depression during COVID-19.[9] The authors suggest to obtain more comprehensive information and improve the health of these families, more research is needed with quantitative and qualitative approaches. It is clear that the families of these caregivers had experienced many challenges and issues when their loved ones were in direct contact with the infected in medical centres and faced the risk of getting infected and losing their lives, feelings that they probably had not experienced before. As a result, this research investigated healthcare workers' families' perceptions of life during COVID-19.

Methods

Study design and research question

A qualitative study with a descriptive, phenomenological approach was used to answer the research question, "How do healthcare professionals' families experience living during COVID-19?" The study was conducted from August 2021 to October 2021. Descriptive phenomenology is a philosophy and a scientific method that explores and describes individuals' lived experiences. The phenomenological technique aims to emphasize the unique, to perceive phenomena through how they are included in the situation. In the human sphere, this normally translates into gathering "deep" information and perceptions via inductive, qualitative methods, such as interviews, discussions, and participant observation, and representing it from the perspective of the research participant(s). Phenomenology is concerned with studying the experience from the perspective of individual, "bracketing" taken-for-granted assumptions, and usual ways of perceiving. This type of design is usually appropriate when present theory or research literature on a phenomenon is limited. Researchers avoid the predetermined classifications, preferring to let categories and their names emerge from the data. Researchers immerse themselves in the data to allow new insights to emerge.[10,11] As the experience of the families of the healthcare professionals living during COVID-19 has never been studied before in Iran, the researchers applied conventional content analysis.[12]

Participants

The participants consisted of the families of 25 healthcare professionals who provided care to COVID-19 patients. The participants represented a wide variety due to age, gender, work experience, and so on. The inclusion criteria were: being willing to participate in the study, having at least 1-year work experience in hospital wards for patients with COVID-19 for the healthcare professionals, being Iranian, having a good command of Farsi, and being able to provide adequate and rich information. The corresponding author visited the nursing services office and obtained the phone numbers of all healthcare workers working in the COVID-19 wards of four hospitals associated with the Hamadan University of Medical Sciences in western Iran. Then, the corresponding author contacted these healthcare professionals, explained the objectives of the study to them, and asked them to invite their families to participate in the study. Family members of healthcare professionals were selected via purposeful sampling. Purposive sampling is often used in qualitative research to discover persons who can provide extensive information on the issue under investigation. Studying information-rich cases results in an in-depth understanding, rather than empirical generalizations, of the research topic.[12] The family members of 25 healthcare professionals were interviewed. The participants consisted of 13 females and 12 males (6 wives, 6 husbands, 4 sons, 3 daughters, 4 mothers, and 2 fathers). The average age of participants was 51.67 ± 4.34 years. The majority of them had an academic degree and had an income of about $250 per month.

Data collection

Data were collected using 25 individual semi-structured interviews. Based on the literature review, three key questions were initially considered for this study. To develop and test the questions, two interviews were conducted in the presence of all members of the research team. Based on the process of two interviews, the interview schedule was developed. On WhatsApp, the participants were video phoned for interviews at times that were convenient to them. All of the interviews were done and evaluated by the corresponding author. Each interview began with a few general questions, including "Can you describe a typical day of your life during COVID-19?" "What feelings have you experienced during this period?" "How has this crisis affected your life?" and "How do you feel about living with a healthcare professional who has to work during COVID-19?" Subsequently, based on the respondents' initial answers, follow-up questions were asked to add to the clarity of the information; the questions included, "Can you explain further?" "What do you mean by that?" and "Can you give an example?" The

interviews were centred on the main objective of the study. Each interview lasted between 45 and 75 min. The interviews were recorded with the consent of the individuals, both verbally and in writing. The corresponding author listened to each interview many times after it was completed in order to get a thorough understanding and deep insight. Then, the interviews were transcribed, and field notes were recorded. Interviews continued until the data were saturated, and no new categories emerged. Data were organized with MAXQDA software. The collected data were analysed based on Colaizzi's method which consists of seven steps: 1—reading and re-reading each transcribed interview, 2—extracting important terms and phrases from the transcripts, 3—assigning meaning to the extracted units, 4—organizing and categorizing similar units, 5—providing comprehensive descriptions of the extracted categories, 6—creating a basic paradigm of subject under study based on extracted categories, and 7—confirming the basic paradigm with the participants verify themes and categories.[13–15]

Rigor

To assure the data's dependability and quality, the researchers used a combination of processes, including semi-structured interviews, prolonged contact with the data, member verification, and peer checking. The extracted concepts and themes were shown to two of the participants and three peers who, after examining the data, stated that the findings were in line with their understandings and interpretations. Furthermore, the researchers limited the textual reviews to reduce bias in collecting, analysing, and coding data to increase the validity of data. Confirmability was assured via exact transcription of the participants' narratives and detailed reporting of the study results to make it possible for other researchers to follow up.

Results

Two main themes—psychological crisis and dignity—with nine categories were extracted from the data.

Psychological crisis

Twenty-five participants of the present study stated that they had experienced frequent psychological tension when their loved ones were caring for COVID-19 patients in the clinical centres. They had lived via indescribable fear and worry, longing to see their loved ones, and fear of the future, which made them vulnerable and stressed their need for systematic psychological support to adapt to their current situation. The psychological tension theme is separated into five categories: incomprehensible anxiety and concern, a wish to see their loved ones, a terrible parting, being a patient listener, and fear of the future.

- Indescribable fear and worry

Twenty-one families of healthcare professionals stated that they experienced great fear and anxiety during COVID-19 when one of their family members was caring for severely ill patients in hospitals, especially in special care units. They were constantly worried that their loved ones would get infected and even lose their lives.

> My husband is a member of the medical team that looks after COVID-19 patients. He's been caring for Covid-19 patients in special care facilities in Iran since the outbreak began and through all five waves. Throughout all these months, I've felt indescribable distress in my mind and my heart every day and night…. I'm constantly afraid that he might get sick. His life is in danger, and all I can do is pray to relieve some of my fear and feel calm. (Participant 4)

- Longing to see their loved ones

Twenty-two participants stated that because of the extended work shifts, work overload, fatigue, long commute, and most importantly, fear of transmitting the infection to their family members, especially the elder ones, the healthcare professionals did not come home to rest, not even between their work shifts and occasionally came home once every few days. Due to their frequent absences, family members, particularly children, longing to see them.

> My wife has to work longer shifts now. Her work overload has multiplied during this pandemic. Sometimes, when a colleague gets an infection, she has to fill in for that person and may only be able to take a break and rest for 12 hours between two shifts. She spends her time off at the hospital due to the severe traffic on the way home, her exhaustion, and her fear of becoming a carrier of the sickness. I try to accept the circumstances and suppress my desire to see her, but our kid is always restless since she misses her mother so much. She tells me, "I miss mom, but maybe she doesn't love us anymore". We are all filled with a sense of longing to see each other, and the feeling never seems to end. (Participant 7)

- Patient stone

Furthermore, this research included a category called patient stone. According to the participants, in this research, their family members who worked in medical institutions encountered several distressing sights that weakened their mental power, and their family members attempted to calm them by patiently listening to them.

> I've always been proud of my son. He loves his job and enjoys treating and helping out his patients. Before COVID-19 started, I could see how thrilled he got when his patients were cured. But since the pandemic started, I've seen only sadness in his eyes. He sometimes speaks about his patients. He once told me of a young lady who was in a coma due to an illness, and the only option to preserve her baby was by a C-section since the mother's condition was hopeless. I can hear the pain in his voice and see the tears in his eyes. I'm a mother; I bottle up my own emotions, and try to soothe my son by listening to him and telling him that he's done all he could. (Participant 12)

- Bitter farewell

Bitter farewell was another significant component under the psychological distress theme. Twenty-two families of healthcare workers responded that they never believed they would have to part with their loved ones when they left for work and would be unable to touch or hug them.

> Every time my daughter is going back to work after days of absence at home and spending just a couple of days with us, I see her off to the door. I feel great pain, fear, and anx-

iety. I want to hug her and kiss her. All can do is watch her leave with tears in my eyes. (Participant 5)

- Fear of the future

Twenty-five participants stated that fear of the future was constantly haunting them. They were worried about the safety of their loved ones and the future of their families. Those whose wives or daughters were pregnant were especially anxious about their personal safety and the safety of their children, fearing that something might go wrong in the future.

> My wife is pregnant; she is in her 24th week. She loves her job and says she became a doctor for times like this. I understand her, but I can't help worrying. I'm afraid of the future. What if something happens to her and puts her life in danger. I'm afraid of premature birth, having a premature baby, and many complications that may follow. We don't know how this unknown disease affects mothers and their babies. Thinking about the future and uncertainty about what it holds is always with me. (Participant 22)

Dignity

The statistics also revealed another theme, i.e. dignity. Twenty-four families of healthcare workers expressed their pride in their loved ones for risking their lives to rescue COVID-19 patients. All people in the society treated them with respect and gave them acclamation. This theme consists of four categories: acclamation, appreciation, feeling proud, and spiritual growth.

- Acclamation

Twenty-one participants reported that others who knew them and were aware that one of their family members worked on the medical team caring for COVID-19 patients appreciated them in their words and appearance because they risked their lives to benefit society.

> The neighbors who know us and know that my daughter is a nurse who looks after COVID-19 patients, they look at me with admiration and respect when they see me at the door seeing my daughter off and smiling at her. They wonder how I can send my only daughter to help the people with COVID-19. Admiration in their looks quells my anxiety and agitation. (Participant 9)

- Appreciation

Twenty-three participants stated that society treated them with kindness and used words and actions to express their gratitude for their tolerating fear and anxiety and the absence of their loved ones.

> My wife is one of the medical staff, and I work in the bank. We have an 8-year-old boy who's very playful. He is in the second grade, and we were worried about his education, because, unlike other parents, we couldn't be near him during his online classes and support him. However, his teacher and administrator, who were aware of our circumstances, agreed to allow him to attend school while his instructor was teaching online from school, so that he could be near her and get face-to-face instruction. His teacher and principal told my wife it was the least they could do to show their appreciation for what she was doing. (Participant 23)

- Feeling proud

Feeling proud was another category extracted from the collected data. Twenty-four participants declared that their family members made them feel proud by risking their health and even lives to provide care to COVID-19 patients.

> I repeatedly asked my husband to change his unit and not to visit patients with COVID-19. But, every time he would just smile and say that he'd sworn to serve patients to his last breath. He finally got severely ill and had to be hospitalized. When I was by his side in the hospital, all the personnel and patients and their companions spoke about his dignity and self-sacrifice. That was when I felt deeply proud of him. (Participant 20)

- Spiritual growth

Twenty-two participants stated that during the COVID-19 grew spiritually. In such a way that vows, prayers and supplications, philanthropy, and helping the deserving have become part of their daily activities.

> Since COVID-19 began to spread; I've only prayed to God, health for all humans, especially my son. During this time, I have done more talking with God, vows, good deeds, and altruism. I feel more spiritual than before (Participant 17).

Discussion

An investigation of the experiences of healthcare professionals' families during the COVID-19 pandemic showed that these families had experienced psychological tension and dignity during this period. Several studies addressed the experiences and psychological tensions of caregivers, patients, and even patients' families during COVID-19, yet the experiences of healthcare professionals' families have not been less explored. As a consequence, the writers had a limited number of papers to draw from for a detailed examination of subject. What follows is mostly based on the findings of the studies of experiences and psychological–physical tensions with patients and their families. One of the most important extracted themes was psychological tension. The families of healthcare professionals are not in the frontline of caring for COVID-19 patients, yet they are the most important providers of comfort and support for the care providers of the infected. In order to cope with their agonizing agony, stress, and emotional and psychological weariness, these caregivers need the safety of their families. They are also obliged to delegate personal chores to other family members as a consequence of their weariness and long shifts. The presence of healthcare professionals near severely ill COVID-19 patients exposes their families to emotional tensions, fear, anxiety, longing to see them, and uncertainty about the future.[16,17]

The results of the present study showed that fear and anxiety, misgivings, longing to see their loved ones, sharing their loved ones' sorrows, bitter farewell, and fear of the future

exposed healthcare professionals' families to considerable emotional shock. COVID-19 infection waves in Iran, daily increases in the number of infected people, and high COVID-19 mortality rates, some of which may be attributed to care providers and their families, have led care providers' families to be tormented by the dread of infection and even death of their loved ones. On a similar note, several other studies report that caregivers, patients, and patients' families have experienced great fear of the disease and the possibility of losing their loved ones during COVID-19.[1,6,18–20] Taylor et al. state that family members of healthcare workers experience a lot of stress. Fear, anxiety, and stigma have caused them to experience severe depression.[21] While family members of healthcare professionals in Iran face considerable worry and anxiety, they have never reported experiencing stigma. This distinction may be founded in cultural distinctions. Iranians have always faced several crises and adversity, and with their assistance, they have conquered natural disasters, wars, and sanctions. These difficult conditions caused them to always have a positive and appreciative attitude towards those who sacrifice their lives for the sake of preserving the lives and dignity of other people. McConnell expresses healthcare workers experience indescribable fear and anxiety about transmitting COVID-19 to their family members. In this regard, the vulnerability of family members, physical and mental condition of themselves and their families, their financial situation are very effective to leave their jobs.[22] Méndez-Echevarría et al., in their study, stated that the healthcare workers are very worried about the transfer of COVID-19 to their families, this is while the children of the healthcare workers have been infected more than other family members with COVID-19. This subject has increased the fear and anxiety of these staff.[23] Despite the fact that all of the studies show that healthcare workers and their families confront substantial fear and anxiety, Arora et al. argue that increasing healthcare workers' knowledge and awareness will improve their behaviour, attitude, and awareness.[24] On the other hand, though the families of healthcare professionals are often upset about the absence of their loved ones at home and ceremonies because of their many work shifts, they never imagined they would have to be away from their family members for days.[6] Hence, the family members, especially children, of healthcare professionals have had to tolerate the absence of their loved ones for days and even weeks and feel a strong sense of longing to see them again. Mohammadi et al. find that caregivers for COVID-19 patients miss their families tremendously when they are required to be away for extended periods of time and are concerned about their family members, particularly their children.[1] Similarly, Kackin et al. report that the nurses who care for COVID-19 patients not only experience immense tension at work, but also miss their families who can relieve their pains and sorrows.[25] The healthcare professionals' family members tried to be good listeners and patient stone: they hid their own anxiety and fears and helped their loved ones relieve their stress and tension by listening to them. These families tried to patiently give emotional support to their loved ones. Studies show that the family is the main shelter and source of support in times of trouble.[26,27] The fact that healthcare professionals' family members had to listen to and share the sorrows of their loved ones is an indication of tension that care providers experience as a result of dreadful events in clinical environments. Measures should be taken to relieve healthcare professionals' workplace tension and preserve their health. Bitter farewell was one of the most significant experiences of healthcare professionals' families. The sudden emergence of COVID-19 in the world and ineffective control of the infection in Iran—Iran is currently going via the fifth wave of COVID-19—has caused care providers and their families to still feel the initial shock and concern created by the pandemic. They declared that the infection seemed to be endless and each wave caused more deaths and took the lives of more care providers. They were concerned that each time they parted from their family members; it would be their last goodbye. What made it all the more heartbreaking was their inability to embrace or hug their loved ones. Other research on the clinical issues and perspectives of care providers during COVID-19 has omitted this component of their existence. However, in their study of the psychological tensions of bereaved families of COVID-19 victims, Mohammadi et al. report that these families have experienced bitter farewell.[1] This similarity shows that during the COVID-19 pandemic, care providers' families were worried about losing their loved ones and gone via the tensions similar to those experienced by the bereaved families of the victims. Thus, there is the requirement for measures to promote their psychological health. Fear of the future was another category extracted from the data in the present study. Families of healthcare workers expressed concern about the future. They were particularly concerned with family unity and the health of their loved ones, particularly pregnant female healthcare providers and their infants. Similarly, several other studies report that healthcare providers, patients, and patients' families are afraid of the future because they do not know how this little-known disease is going to affect their loved ones and personal lives.[1,7,28,29]

The other extracted theme in the present study was dignity. Healthcare providers' persistence in the frontline of the battle against COVID-19 despite repeated waves of infection in Iran has caused the society to treat the healthcare providers and their families with respect and admiration in their looks, words, and actions. Furthermore, healthcare professionals' commitment to their duties and professional ethics and their acts of self-sacrifice has made their families feel proud of them. It was found that healthcare providers' families have experienced acclamation, appreciation, feeling proud, and spiritual growth more than before the pandemic. Commitment to one's duties and professional ethics, especially in healthcare professions, is among the principles of professionalism.[11] Throughout the pandemic, all healthcare professionals worldwide have placed their own safety on the line to care for COVID-19 victims; nevertheless, Iran's economic situation has deteriorated significantly as a result of the sanctions imposed on the country. Many individuals in Iran must go to work each day, and the majority of them must do so by congested public transit, which means that controlling the infection in Iran will take longer than in other nations, and the number of casualties will be higher. Despite medical sanctions, lack of medical equipment, and their awareness of the difficult conditions in hospitals in Iran, healthcare professionals have stood strong and continue to risk their own lives to save their patients. Many healthcare providers have died during the pandemic. Iranian people appreciate the healthcare providers' sacrifice and try to show their gratitude with their looks and actions. The healthcare professionals' families mentioned that they had frequently experienced acclamation and

acts of appreciation. Likewise, Freebairn et al. report that public appreciation of the healthcare personnel, especially nurses, has increased during the COVID-19 pandemic.[30] Moreover, according to McAllister et al. and Huang et al., people have come to appreciate the difficulties of healthcare professionals' jobs more than before and admire them for their sacrifices.[31,32] These findings indicate a rise in public respect for healthcare workers, but also an acknowledgement of the public's responsibility to the families of healthcare providers. The self-sacrifice of healthcare providers in saving the lives of COVID-19 patients filled their families with pride in the society, a fact not mentioned in any other studies. However, Taylor et al. in their study stated that people are concerned that healthcare workers may be infected with the COVID-19 and cause them to become ill. Moreover, they stigmatize the healthcare workers and avoid them.[21] Ramaci et al. express lack of definitive treatment, the possibility of transmitting the disease to other people, stigma are the most important factors that have affected the adaptation of health workers to the COVID-19 crisis.[33] Although participants in the present study reported their fears and anxieties about COVID-19, they never reported stigma. This difference might be explained by Iranians seeing healthcare staff in COVID-19 scenarios with insufficient equipment to aid patients, and even becoming sick and dying. The forbearance and sacrifice of Iranian healthcare personnel, who are unable to import critical medications and equipment owing to tough economic sanctions, has motivated Iranians to hold healthcare workers and their families in high esteem. This subject has caused a sense of dignity and feeling proud in the families of the healthcare workers. To cope with their fears and misgivings resulting from the presence of their loved ones near patients with COVID-19, the families of the healthcare personnel often prayed to God and asked for comfort. Many of them were found to have experienced greater spirituality than ever before. Seeking help from an infinite supernatural source is many people's natural reaction in times of hardship to achieve inner peace and the power to tolerate crises. In view of the dominant religious-cultural atmosphere in Iran, it was predictable that healthcare professionals' families relied on their religious beliefs to achieve inner peace and spiritual growth. On a similar note, studies show that the patients and their families, especially when they are faced with a hard-to-treat disease, turn to God, and try to develop their spirituality to better cope with their hardships.[1,14,34]

In conclusion, during the COVID-19 pandemic, healthcare professionals' families have experienced various forms of psychological tension—indescribable fear and worry, longing to see their loved ones, bitter farewell, sharing their loved ones' sorrows, and fear of the future—alongside feeling proud in their indications with the society. Moreover, it is recommended that policymakers and administrators with a wider reflection of the performance and sacrifice of the healthcare professional in virtual networks and television highlight the role and sacrifice of them in controlling and managing the COVID-19 crisis in Iran. This subject causes people to be more familiar with the sacrifice of healthcare professionals and be grateful more grateful to them than before. Policymakers can also develop relaxation and stress management training programmes to take effective measures to relieve the psychological tension of healthcare providers and their families and promote their mental health and security.

Limitations

One of the study's flaws is that data were collected through individual video conversations with healthcare professionals' family members, which was intended to prevent sickness transmission during the pandemic. However, other methods of data collection, including observation, field notes, and focus group interviews, could have enriched the findings of this qualitative research. It is, therefore, suggested that future studies use a wider range of methods to collect qualitative data.

Conclusion

During the COVID-19 pandemic, healthcare professionals' families have experienced feelings of feeling proud combined with psychological tension, experiences which are beyond what the majority of people were exposed to and are very similar to the psychological tension experienced by the bereaved families of COVID-19 victims. Families of healthcare workers who care for COVID-19 patients face significant anxiety and foreboding, jeopardizing their mental health and security. On the other side, the society's thankfulness, shown via their looks, words, and acts, as well as through prayer, assists this group in relieving their strain and concerns. By providing the extensive support to healthcare professionals and their families, healthcare policymakers and administrators can take effective measures to maintain and promote the health of healthcare professionals' families.

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Supplementary material

Supplementary material is available at *Family Practice* online.

Authors' contributions

FM, MB, KHO, SB, MKH, SRB, and SZM were involved in the conception of the study and designed the study. They are responsible for data collection. Then FM, MB, and KHO analysed the data. FM, MB, KHO, FSH, and FCH drafted the primary manuscript, and FM, MB, and MKH revised and approved the final manuscript.

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Conflict of interest

The authors declare that they have no competing interests.

Data availability

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

The institutional review board of the Hamadan University of Medical Sciences, the Chronic Diseases (Home Care) Research Center provided ethics approval (approval number: IR.UMSHA.REC. 1400.492). Also at the beginning of each interview, the researcher introduced herself and explained the goals of the study and provided assurance that all information would remain confidential and that they could withdraw from the study at any time. The researchers provided the opportunity for participants to inform the researcher about their withdrawal from the study at any stage and assured them that their lack of participation or withdrawal would not have any consequence for them. Finally, the written consent was obtained from study participants. Therefore, before the start of each interview, a written consent form was sent to them via WhatsApp. After completing the consent form, the interviews were planned and implemented.

Consent for publication

Not applicable.

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