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# Physical, psychological, and social experiences of women recovered from COVID-19 in Iran: A qualitative study

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## Abstract:

**BACKGROUND:** This paper aims to examine the impact of COVID-19 on various health aspects of women recovered from this disease in Ardabil province, Iran.

**MATERIALS AND METHODS:** This qualitative study using a content analysis approach was carried out through in-depth individual and focus group discussion using semi-structured interviews schedule in 26 women during June and August 2021. Interviews were recorded, transcribed, and MAXQDA six-stage analysis framework.

**RESULTS:** Negative consequences of COVID-19 were generally categorized into five main themes (including increased self-conscious excitement, perceived social stigma, depression, changes in behavioral patterns, and reduced level of quality of life) and 13 subthemes. The positive consequences were the following five themes (including the development of the spiritual attitude, increasing the importance of personal health, the rise of perceived support, increased sense of altruism, and increased financial management) and four subthemes.

**CONCLUSION:** Based on the findings, it is concluded that effective support by the government, society, and the medical staff could help to relieve people's psychological and social stress through providing financial aid, the right information, and training.

## Keywords:

COVID-19, Mental health, Qualitative research, Women

## Introduction

The outbreak of the coronavirus (SAR CoV2) disease commonly known as COVID-19 which led to a worldwide lockdown in early 2020 has caused much concern and panic among people worldwide.<sup>[1-3]</sup>

The new coronavirus epidemic, compared to previous common coronaviruses (SARS, MERS) and other viruses such as AIDS and Ebola, is more widespread in humans, indicating a high transmission rate. However, the rate of mortality caused by this new coronavirus is much lower than that of

other coronaviruses. Almost 80% of patients who are affected by coronavirus show mild symptoms and recover at home. 14% of the affected people show severe symptoms, including pneumonia and shortness of breath, and in 5% of cases, it leads to respiratory failure, infectious shock, and dysfunction in other organs of the body.<sup>[4,5]</sup> Due to the lack of effective treatment and availability of vaccine in the first year, protective measures and observing personal hygiene were recommended as the best way to cope with this disease and to avoid its transmission.<sup>[1]</sup> Based on the experiences of the countries involved in the outbreak of SARS (2002) and MERS (2012), the affected

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people were exposed to social harms such as social exclusion, discrimination, and stigma. Also, poor mental health was observed in people affected by this virus; they experienced fear of transmission to their family members, social isolation, lack of financial resources, lack of trust, and anxious reactions.<sup>[6-9]</sup>

Psychologists and other experts in this field argue that in situations like the outbreak of a disease, psychological traumas can be more dangerous than physiological traumas. The psychological effects vary, depending on the culture, cognitive disorders, mental conditions, and the media. Quarantining infected people and being away from family exacerbated the psychological traumas.<sup>[10-13]</sup> Also, symptoms such as hypoxia, fever, cough, and drug side effects, including insomnia in people with COVID-19 can worsen the affected people’s mental condition.<sup>[14,15]</sup> Valiente *et al.*<sup>[16]</sup> found a high rate of mental health disorders during the confinement and detected potential predictor variables associated with experiencing both clinical levels of distress and well-being such as perception of loneliness, preexisting mental health difficulties, anxiety due to COVID-19, and substance abuse. Moreover, Tull *et al.* found stay-at-home order was associated with greater health anxiety, financial worry, and loneliness. Furthermore, the perceived impact of COVID-19 on daily life was positively related to health anxiety, financial worry, and social support, but negatively associated with loneliness.<sup>[17]</sup> Since studies on the various consequences of this disease among people recovered from COVID-19 are relatively scarce and given a high prevalence of COVID-9 in the world and the unknown consequences of this disease in recovered women, the present qualitative study was conducted to examine the consequences of this disease on various health dimensions (physical, mental, and social health) of recovered women. Qualitative research, a form of research completely different from quantitative research, can provide important insights into health-related phenomena and can enrich further research inquiries.<sup>[18]</sup> Being aware of the consequences of COVID-19 disease and its risk factors provides a useful indicator for the seriousness of this problem and provides an appropriate and effective public health education program to reduce its effects.

## Materials and Methods

### Study design and setting

This research was a qualitative study with a content analysis approach to examine the consequences of COVID-19 on various health dimensions (physical, mental, and social health) of recovered women in Ardabil province, Iran. The data were collected through in-depth individual interviews and focus group discussions, using semi-structured interview schedules over 10 weeks in June and August 2021.

### Study participants and sampling

A purposeful sampling of maximum variation in characteristics such as age, education, and job was used to understand the consequences of the disease on a diverse group of women who have recovered from COVID-19. Inclusion criteria were females over the age of 18, registered at the health center, recovered from COVID-19, willing to participate, and able to give informed consent. Those with cognitive disorders or severe disabilities were excluded. Twenty-six individuals were recruited for this study, sampling continued until the data saturation was reached.<sup>[19]</sup> Saturation refers to a point at which the researcher finds out that all the needed data have been collected and there is no any new relevant information or data that can be collected from the respondents or subjects of the study.<sup>[20]</sup> All individual interviews were held at the health center and in a quite/private room.

### Data collection procedure

Using semi-structured individual interviews, the experiences of eighteen recovered patients were explored. Interviews lasted a maximum of 40 min. The interviews were continued until no new data could be found to expand new categories (data saturation).

The experienced researcher started the interview by asking general questions. Then, the interviewer guided and continued the interview based on the stated contents and experiences, and when necessary, probing questions (such as Why? How? When?) were used.

The interviews were also recorded with the consent of the participants. In the case of the non-consent of participants to record the interviews, a note-taking method was used. Both individual interviews and group discussions were performed at the health center, in a quite/private room and at a convenient time for the participants.

Coordination was made by obtaining the participants’ consent to confirm the statements or perform the next interviews. The duration of the interview depended on the conditions of the participants. A sample of questions was: [Table 1]

**Table 1: Interview questions of study**

Number	Sample of question
Q1	How old are you? What is your job? Where did you get COVID-19? When did you get infected? When were you hospitalized? What were the symptoms of COVID-19? Did you have an underlying disease?
Q2	Tell us about your experiences when you were sick.
Q3	Describe the changes that happened in your life because of this disease.
Q4	What problems are you currently facing due to the COVID-19 disease?

- What were the side effects of COVID-19 in your life?
- What were the consequences of COVID-19 in your life?

The participants were also asked at the end of the interview to present solutions to overcome these barriers.

### Ethical considerations

The participants who met the inclusion criteria were fully informed about the study's protocol. The study was approved by the Ethics Committee of Khalkhal University of Medical Science (IR.KHALUMS.REC.1399.02). Written consent was obtained from all participants before the interview.

### Data analysis

Each interview was audiotaped and transcribed verbatim. The transcripts were analyzed according to the Graneheim method<sup>[21]</sup> using MAXQDA software. All transcripts were considered as a unit of analysis. Words, sentences, and paragraphs were considered as meaning units. Meaning units were a set of words and sentences that were related to content. Then the semantic units reached the level of abstraction and conceptualization and were named with codes. The codes were compared with each other in terms of their similarities and differences and were classified under more abstract categories with a specific label. In the end, by comparing the categories with each other, reflection was introduced as the theme of the study. An initial analysis of the results was performed at the end of each session, using the notes taken.

### Data trustworthiness

The conformability and dependability criteria of Lincoln were used to ensure the accuracy and trustworthiness of the data.<sup>[22,23]</sup> In the present study, we adopted the necessary strategies to observe these criteria as follows; A. by carefully selecting appropriate participants, and long-term involvement with them, making participants involved in the process of data interpretation, using specialists opinions at different stages of study, especially in extracting themes and final interpretation.

The confirmability criterion<sup>[22]</sup> indicates the extent to which a qualitative researcher was accurate in recording and reporting the research so that other people can follow the subject by reading these writings and achieving similar results. We achieved this by reporting the methodological decisions including a detailed description of the environment and context, participants, and data analysis methods.

To ensure the dependability of the research, another researcher as an outsider observer looked at the data with a view to see if he had a similar understanding of

the data. The quality assessment of the present study was done using criteria for reporting qualitative consolidated research (COREQ-32).

## Results

Twenty-six eligible women (19–75 years old) attended the interviews. The occupational and educational status of the participants was as follows: self-employed (n = 11), government employees (n = 7), housewives (n = 8), those with high school diploma and sub-diploma (n = 7), associate degree (n = 8), bachelor (n = 7), and master and Ph.D. (n = 4). The findings were organized as negative and positive consequences of COVID-19. The negative consequences were categorized into five themes: increased self-conscious emotions, perceived social stigma, depression, changes in behavioral patterns, and diminished quality of life. Each theme contains subthemes that are listed in Table 2. The positive outcomes were also considered in five categories; the development of spirituality, perceived importance of personal health, perceived increased support, increased sense of altruism, and increased financial management [Table 3].

### Negative consequences of COVID-19

#### *Increased self-conscious emotions??*

This theme covered areas of increased fear and anxiety, feel guilty, and stress.

#### *Increased fear and anxiety*

Most participants said that COVID-19 increased their level of fear and anxiety. One participant said she is so frightened that her daily life is disrupted:

*"I'm always afraid to die. It's true that I did not have an underlying disease, but I always think to myself that maybe I have heart disease, maybe I have a stomach ulcer. Maybe I have cancer and I do not know."* (Participant 2, 34 yrs old, sub-diploma, housewife).

Concerns about children's future, excessive concerns about children's health, fear of the name of COVID-19, fear of being a carrier, excessive use of detergents, fear of re-infection, anxiety in other family members, a shock reaction to the individual death, fear of rejection in society, were among the topics frequently mentioned in interviews:

*"I have no problem, I just do not want anyone to know I had a corona, because everyone is told that I had a corona and they distance themselves from me."* (Participant 5, 46 yrs old, bachelor, self-employed).

#### *Feel guilty*

Feelings of guilt about family members' efforts to care for the patient, feelings of guilt over infecting others, and feelings of embarrassment caused in patients' daily lives:

**Table 2: Negative consequences of COVID-19 based on perspectives of recovered patients**

Theme	Subthemes	Example statements and views
Increased self-conscious	Increased fear and anxiety, feel guilty, stress, and anxiety	excessive concerns about children's health, fear of the name COVID-19, fear of being a carrier, feelings of embarrassment
Perceived social stigma	Feeling excluded from society, reducing social interactions	Disruption of family communication, the distance between the patient and his children, restricting family travel
Depression	Feelings of emptiness, pessimism toward health workers	The lack of facilities and manpower in medical centers
Changes in behavioral patterns	Lifestyle changes, obsessive-compulsive behaviors	Changes such as not participating in religious ceremonies, doing work through cyberspace
Reducing the level of quality of life	Creating physical problems, creating economic problems	Weakness in the body, indigestion, premature fatigue

**Table 3: Positive consequences of COVID-19 based on perspectives of recovered patients**

Theme	Subthemes	Example statements and views
Development of the spiritual attitude	Restoring hope	An opportunity to live again, re-assess everyday issues and problems in life
Increasing the importance of personal health	Increasing awareness	More use of Internet information about health, increasing the study of scientific topics
The rise of perceived support	Family support	More attention from family members
Increasing the sense of altruism	Increasing belonging	Appreciating family relationships, increasing values such as family members, showing more love and affection for family members and colleagues
Better financial management	-	Saving daily and reducing additional expenses

*"I have a guilty conscience because I caused my children and grandchildren to get sick. I could have followed the health tips more and distanced myself from them, but I was wrong."*(Participant 11, 58 yrs old, associate degree, government employee).

### Stress and anxiety

COVID-19 caused psychological stress in patients. Some of the interviewees reported psychosomatic illnesses, insomnia, fear, and severe anxiety as a result of the disease.

*"Since the day I got infected with Covid-19, I have scary dreams every night and many times I feel that I will lose my loved ones."* (Participant 11, 58 yrs old, associate degree, government employee).

### Perceived social stigma

This theme included a feeling of being excluded from society, reduced social interactions, and the creation of problems in the workplace.

### Feeling excluded from the society

The behaviors of others and acquaintances caused some patients to feel rejected by society. According to one of the participants, the behavior of her colleague in the workplace was a sign of her rejection by society:

*"Even though I spent time in quarantine, when I was ill, and there were signs of improvement, my co-workers could not accept me, for example, they called me at one of the meetings and said that there was no meeting. My colleague used a two-layer mask in the room, standing away from me, spraying the desk and computer regularly."* (Participant 19, 56 yrs old, Master, government employee).

In this regard, another participant said: *"For a while, no one approached us. In the village, no one passed by our house. Everyone who came in close contact with us, covered their mouth. We were at home for a whole month."* (Participant 8, 43 yrs old, sub-diploma, self-employed).

### Reduced social interactions

Participants reported that their levels of social interaction decreased due to COVID-19. For example, family members and acquaintances keeping distance from the patient, disruption of family communication, limited communication with children and grandchildren, restricting family travel, and the absence of the sick person in the ceremony were among the issues that were expressed in this category:

*"Even now, the behavior of others bothers me. Sometimes when we talk to the neighbors, they say when you had the corona, this thing happened and this sentence makes me nervous, so I try not to communicate too much with others."* (Participant 12, 33 yrs old, high school diploma, housewife).

### Depression

Depression consisted of two categories feeling empty and feeling pessimism toward health workers which was another theme that emerged in this study.

### Feelings of emptiness

COVID-19 in many patients has led to feelings of emptiness in life and a sense of the futility of being in the community, one participant mentioned:

*"After suffering from this disease, I feel that the world is worthless, the issues of life have lost their importance to me, and I feel a lack of motivation to pursue anything in*

life.” (Participant 14, 45 yrs old, high school diploma, self-employed)

### Pessimism toward health workers

According to some patients, the lack of facilities and manpower in medical centers had caused the treatment process to be disrupted, which was one of the reasons for their pessimism toward health workers:

“I was hospitalized and I felt a lack of hospital facilities. I felt health workers could not do anything for my disease.” (Participant 6, 56 yrs old, sub-diploma, housewife).

### Changes in behavioral patterns

Other themes that emerged in this study were changes in behavioral patterns after the disease. This theme also consisted of two categories including lifestyle changes and obsessive-compulsive behaviors.

### Lifestyle changes

One of the most important issues mentioned by the interviewees was changes in their lifestyle due to illness, changes such as not participating in religious ceremonies, doing work through cyberspace, and using medicinal plants:

“Even after recovery, our lifestyles have changed dramatically, for example now all family members are trying to get the food that specialists or doctors recommend. In other words, our eating patterns at home have changed. We did not use herbal medicine at home, but now we do.” (Participant 22, 43 yrs old, Master, government employee).

Participants’ experiences showed that having COVID-19 affected even the smallest habits of their lives, such as buying clothes:

“I have no motivation to buy clothes like before, I used to be very fond of buying clothes, now not anymore, I used to love shopping, but now I am afraid to go shopping again.” (Participant 17, 30 yrs old, bachelor, government employee).

### Obsessive-compulsive behaviors (OCD)

Some participants claimed that they have developed obsessive-compulsive behaviors several months after contracting COVID-19’s disease.

“I behaved normally for the first few days after contracting Covid-19, but almost from the second month, obsessive-compulsive behaviors appeared such as washing hands obsessively.” (Participant 14, 45 yrs old, high school diploma, self-employed).

### Diminished quality of life

The fifth theme consisted of two categories: physical problems and economic problems.

### Physical problems

One of the problems reported by all participants was the development of physical problems after the disease. Problems such as weakness in the body, indigestion, fatigue, tachycardia, tachypnea, physical weakness, severe hair loss, and difficulty hearing were some of the cases reported by patients:

“I feel something weighing down my chest. I’m not as light and comfortable as before. I feel lack of energy as I walk. I feel like my body is completely weak.” (Participant 21, 40 yrs old, associate degree, government employee).

“I feel like my ear has a problem. After the COVID, I hear voices in my ears. The runny nose is still not getting better.” (Participant 1, 48 yrs old, high school diploma, housewife).

### Economic problems

COVID-19 has caused financial problems for many participants, especially those who did not have a permanent government job. One of the participants said that she even had difficulty financing the hospital:

“My husband was a driver and he could not leave home and go to work, which had exacerbated our economic problems. He was worried about the hospital expenses because my husband was old. And if he was going to travel, he might get sick too.” (Participant 4, 58 yrs old, sub-diploma, housewife).

### Positive consequences of COVID-19

#### Development of the spiritual attitude

Some interviewees believed that recovery from illness was like an opportunity to live again, which they believed has strengthened their morale and changed their outlook on life and spiritually:

“I was already preoccupied with some issues, I concluded that I should not upset anyone, Nothing in life is worth when you are ill. God has allowed me to live again.” (Participant 18, 49 yrs old, PhD, government employee).

#### Increasing the importance of personal health

Based on the experiences of many participants, COVID-19 disease increased the importance of personal health to them. Among the positive consequences related to personal health were more health tips, more importance to personal health, more use of cyberspace content about health, increasing the study of scientific topics:

“Since I got the disease, I regularly wash my hands with soap and water, take a bath every day, follow the preventive ways they mention in cyberspace.” (Participant 14, 45 yrs old, high school diploma, self-employed).

#### The rise of perceived social support

From the participants’ point of view, COVID-19 disease increased their perceived social support, as they became

more aware of community and family illness as a result of their disease:

*“After getting sick, all the family members ask me every day how I am. My husband pays more attention to me than before.”* (Participant 21, 40 yrs old, associate degree, government employee).

### *Increased the sense of altruism*

Some participants stated that after recovering from the disease, they decided to be careful and good at dealing with others in social interactions.

*“After recovering, I realized more about the value of family, I try not to complain about anyone anymore, I try more to be good with other people.”* (Participant 13, 30 yrs old, associate degree, government employee).

In this category, better family relationships, appreciating the values of family members and paying more attention to them, showing love and affection to family members and colleagues, increased sense of helping others, avoiding arguments with others, using other patients' experiences, and the opportunity to interact more with the children were among the issues mentioned by the interviewees.

### *Increased financial management*

According to some participants, among the positive behaviors that changed in them was increasing financial management; personal savings, saving daily, and reducing unnecessary expenses in their lives.

*“After recovery, I decided to save more money for the rainy day, so that I would not borrow money from others again if I needed treatment. I think it had a positive effect on me because I did not save much money before.”* (Participant 20, 41 yrs old, associate degree, self-employed).

## **Discussion**

This study investigated the consequences of COVID-19 among those who recovered from this disease. We find out five negative consequences including increased self-conscious emotion, social stigma, depression, changes in behavioral patterns, and decreased quality of life. In addition, positive consequences included the development of the spiritual attitude, increased personal health importance, perceived support, humanity, and saving. Self-conscious emotion, as a fundamental psychological factor, plays an important role in the quality of life. Conscious emotion is linked to interpersonal. The shame and guilt feelings are the emotions that are seen after failure in interactions; these feelings are part of the emotional responses of differentiation or isolation.<sup>[24,25]</sup> In this study, the recovered COVID-19 patients experienced severe fear,

anxiety, stress, feeling guilty, and some psychosomatic illnesses. This echoes similar findings from other studies.<sup>[26-30]</sup> A study regarding 1-year outcomes in survivors of severe acute respiratory syndrome (SARS) and their family caregivers revealed a significant decrease in mental health among 33% of patients. In addition, 44% of patients were required to visit by psychiatrists or psychologists.<sup>[31]</sup> Moreover, a study in China reported post-traumatic stress symptoms (PTS) in 96% of COVID-19 patients.<sup>[32]</sup> In another study in China, Moghaddam *et al.*<sup>[23]</sup> highlighted a high level of depression in patients who experienced COVID-19 infection. In two studies on SARS-CoV-1 survivors, similar to the present study, long-term psychological effects such as fatigue, psychological distress, sleep deprivation,<sup>[33]</sup> pain disorder, depression, and obsessive-compulsive disorder (OCD)<sup>[34]</sup> were reported. In the present study, the participants shared their experiences of fears including fear of re-infection, fear of being a carrier, fear of exclusion from society, and worries about the future and health of their children. The unknown nature of COVID-19 could exacerbate these fears.<sup>[35]</sup> Other negative consequences, such as feeling guilty and annoyed and blaming others for this infection, are noticed.<sup>[36]</sup> In addition, most infected people stay in quarantine and so have adequate time, but according to their physical state, they cannot use their free time in a good way. So they feel lonely and aimless.<sup>[37,38]</sup> Consistent with our findings, in the study by Park *et al.*,<sup>[39]</sup> COVID-19 survivors stated concerns about transmitting to others and being discriminated and that they avoided others for about 1 month after the discharge.<sup>[39]</sup> In a study among residents in Taiwan after the SARS epidemic, the occurrence of psychiatric disorders was that 11.7% and 9.7% of participants had SARS-related discrimination.<sup>[40]</sup> In another study, similarly, there was isolation sense and discrimination in SARS-recovered nurses as they were discharged from the hospital.<sup>[41]</sup> The social interactions of the recovered patients were greatly reduced. The development of stigmatization and subsequent related mental health has been reported worldwide during and after public health emergencies.<sup>[36,42-45]</sup> In a qualitative study on individuals who have recovered from COVID-19 infection, the usual manifestations of stigma were rejection from public spaces, a decrease in social support, a decrease in income, and physical violence. Also, some factors that exacerbated the stigma were lack of information, fear of infection, the implication of police in contact tracing, segregation, and legitimization of isolation by public health interventions.<sup>[46]</sup> Some participants expressed feelings of emptiness and meaningless of life. Health specialists have indicated that feelings during a pandemic are very similar to grief, and individuals experience distress and emptiness, which can result in a loss of meaning in life.<sup>[47-49]</sup> Loneliness and social isolation have been linked to feelings of shame,

grief, emptiness, depression, clinical disease, increased cortisol rate, reduced immunity, and subsequently increased length and frequency of hospital stays.<sup>[48,50]</sup> In this study, some participants stated the lack of facilities and workforce in the medical centers led to pessimism, dissatisfaction, and disrupted the treatment process. In a retrospective cross-sectional study, the high satisfaction level of patients from measures and policies that were performed during the COVID-19 pandemic was associated with the small number of problems and good surgical outcomes.<sup>[51]</sup> Implementation of appropriate facilities such as video consultation instead of in-person clinic visits can lead to patient satisfaction. High workload, especially during epidemics, may have led to a decline in the quality of services and increase in patient dissatisfaction.<sup>[52]</sup> Other themes that emerged in this study were changes in behavioral patterns and lifestyle after discharge. For example, participants stated some new habits such as not participating in ceremonies, doing work using the Internet, and consumption of medicinal plants. A study in the USA indicated an increase in watching TV and using the Internet among adults during the pandemic.<sup>[53]</sup> In Brazil, a decrease in a healthy lifestyle and an increase in behaviors with potentially negative effects on health such as the decrease in the allotted time to physical activity, an increase in time watching TV or using computers mobile or tablets, intake of ultra-processed foods, and increase in smoking and alcohol intake have been found during the social restriction period.<sup>[54]</sup> The use of herbal medicines as a dietary or complementary remedy to boost immunity and prevent infection was very common among people in various countries with a view to reduce the duration and signs of COVID-19 infection.<sup>[55]</sup> The combination of Chinese and Western medicine therapy for COVID-19 seems to have been useful in managing symptoms and decreasing the rate of disease development.<sup>[56]</sup> The emergence of OCD behaviors was another consequence of COVID-19 in this study. In a study in the USA, about 80% of respondents reported OCD symptoms since the outbreak.<sup>[57]</sup> The study of depression and OCD in Saudi Arabia revealed some risk factors related to OCD during the new pandemic including older age, males, married individuals, employed individuals, high income, and levels of education.<sup>[58]</sup> However, the recommended behaviors in COVID-19 such as frequent hand washing and social withdrawal are similar to some compulsive behaviors of OCD.<sup>[59]</sup> One of the complaints reported by all participants was the development of physical illness after the disease such as weakness in the body, indigestion, chronic fatigue, tachycardia, tachypnea, severe hair loss, and hearing problems. It is worth mentioning that during SARS-CoV-1 pandemic, similar physical problems such as tachycardia, bradycardia, hypotension, and cardiomegaly have been indicated.<sup>[60,61]</sup> Gastrointestinal symptoms of COVID-19 including

nausea, anorexia, abdominal pain, diarrhea, and gastric bleeding have been reported in some studies.<sup>[5,62,63]</sup> COVID-19 infection has triggered financial problems based on recovered patients' perspectives. In a qualitative study in Iran, participants expressed financial concerns such as job interruptions and income loss during the COVID-19 pandemic, which was obvious among low-income workers.<sup>[64]</sup> Many of the participants believed that they have found another chance for life and appreciated their family and other people after recovering. They also understand the importance of personal hygiene and saving. In a study on the Spanish population, some positive effects of COVID-19 were found. More than half of the participants mentioned they have learned to value outdoor activities more. Other positive effects were the importance of personal relationships and enjoying passing time with the family.<sup>[65]</sup> Support by family and friends has a great impact on improving mental health. In a case-control study in Turkey, high perceived social support had a negative association with depression symptoms among hospitalized COVID-19 patients.<sup>[66]</sup>

### Limitations and recommendation

Due to the characteristic of a qualitative study, each interviewee's uniqueness and history should be respected, so their specific experiences may not reflect the overall picture of psychological requirements in the studied province. Supports by the government, society, and health workers are important in decreasing mental problems in patients through providing appropriate information, training, and emotional support. In summary, this pandemic appears to have had long-term effects on people's health, economic, and social issues which require further detailed studies. Considering strong religious beliefs in Iran, the quality of life can be increased by strengthening spirituality. Entertaining during quarantine, family empathy, and family relationships can reduce stress and depression. Based on the findings, effective support by the government, society, and the medical staff could help to relieve the people's psychological and social stress through providing financial aid, the right information, and training. Public education about the duration of COVID transmission could increase knowledge and eliminate discrimination and social isolation among those who have contracted COVID-19.

### Conclusions

In the present study, the occurrence of COVID-19 was associated with positive and negative consequences for women. Lack of right information and fear about the transmission of COVID-19 has led to inappropriate social behaviors with patients. However, social exclusion was associated with feelings of fear, guilt, and emptiness,

which led to anxiety and depression and reduced quality of life.

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## Conflicts of interest

There are no conflicts of interest.

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