Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Investigating the predictors of perceived social support to control COVID-19: A qualitative study

Razie Toghroli [a], Teamour Aghamolaei [b], Laleh Hassani [c], Vahid Ramezaninejad [d], Javad Yoosefi lebni [e], Nazila NeJhaddadgar [f], Nafiul Mehedi [g], Arash Ziapour [h,*]

[a] Social Determinants in Health Promotion Research Center, Hormozgan Health Institute, Hormozgan University of Medical Sciences, Bandar Abbas, Iran
[b] Cardiovascular Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran
[c] Department of Health Promotion and Education, School of Health, Mother and Child Welfare Research Center Hormozgan University of Medical Sciences, Bandar Abbas, Iran
[d] Department of Political Science, Baft Branch, Islamic Azad University, Baft, Iran
[e] Social Determinants of Health Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran
[f] Social Determinants of Health Research Center, Ardabil University of Medical Sciences, Ardabil, Iran
[g] Department of Social Work, Shahjalal University of Science and Technology, Sylhet, Bangladesh
[h] Cardiovascular Research Center, Health Institute, Imam-Ali Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

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ABSTRACT

Background: Considering the adverse effects of COVID-19 pandemic, the present study aimed to explore the barriers and facilitators of perceived social support to prevent the further spread of the disease.

Methods: In the present qualitative study, a content analysis was done. To this aim, 37 Iranian subjects who had active accounts on Instagram were initially invited to participate in the study. The data were collected through face-to-face (n = 25) and telephone conversations (n = 12). A purposive sampling was used and the data collection continued until data saturation. Finally, 41 interviews were held which took 17–48 min.

Results: The data analysis led to the extraction of two main categories, the barriers and facilitators of perceived social support, as well as 12 subcategories. Economic issues, familial factors, socio-cultural factors, personal and psychological factors, ineffective quarantine rules, and poor management were the main barriers to perceived social support. The facilitators were divided into six categories, including familial influences, personal factors, government support, and improved occupational, social, spiritual, and emotional condition.

Conclusion: The findings showed that a combination of environmental and social variables might influence the COVID-19 disease, either decreasing or increasing its spread. A sound knowledge of these variables, influenced by the social context and real-life experiences during the pandemic, allows to take the right measures and enrich training programs. The prevalence of the disease can be controlled by increasing environmental and social facilitators and decreasing the influence of barriers.

* Corresponding author.
E-mail address: arashziapoor@gmail.com (A. Ziapour).

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1. Introduction

The new coronavirus SARSCoV2 pandemic, which originated in Wuhan, Hubei in December 2019, soon spread rapidly to other countries. Due to the growing number of infection in China and other countries, the World Health Organization (WHO) described the pandemic as a global health threat, on January 30, 2020 [1,2,3]. As a result, many countries set nation-wide quarantine and lockdown rules to prevent a further spread of the virus. On February 18, 2020, the Iranian government publicly announced the COVID-19 spread in Iran and implemented a lockdown rule in all regions [4,5].

The distressing quality of COVID-19 was associated with a high contagion and the consequent increasing number of confirmed cases and mortalities worldwide. It led to strong negative emotions and perceptions in individuals, families, and entire communities, posing a considerable threat to the global population's mental health [6,7,8,9]. As experienced in earlier epidemics and pandemics, major concerns could rise among the healthy population, the unhealthy, and health care staff, such as a fear of death and pervasive worries, loneliness, melancholy, and irritation [10,11,12,13].

Durkheim perceived social integration a key predictor of public health [14]. This broad viewpoint is supported by a significant body of social research, showing that integration into a network of supportive social ties is crucial for mental health [15,16,17]. Notably, the adverse effects of an unprecedented rapid social change on mental health are central to a Durkheimian approach [18]. It is argued that social instability breaks social links in a society [19] and creates conditions that may damage social cohesion [20]. Similarly, following the Durkheimian point of view, Abrutyn and Mueller suggest that periods of social upheaval might endanger or break significant social bonds, resulting in unpleasant feelings [21].

It can be concluded that social policies that introduce large-scale changes to social interaction and particularly increase isolation can cause more psychological suffering. Even if social isolation rules were required to restrict the spread of the virus, they were also likely to have significant detrimental effects on mental health. This argument is supported by empirical research, showing that social isolation is significantly correlated with psychological suffering [22,23,24]. Therefore, the increased isolation to prevent COVID-19 was likely to cause significant psychological distress.

The effect of the pandemic and public health interventions on subjective isolation and community distrust is likely to be influenced by lifelong living conditions. It is believed that historical events can influence people differently depending on the exact time they occur in life [25,26,27]. The issue of time was especially important during the pandemic. The risks of the adverse health effects were higher in the elderly [28,29]. The elderly may have suffered more isolation during the pandemic. For an increased vulnerability and consequent dread of infection, people may have had less trust in the community. More intense psychological suffering could result from a longer duration of isolation and distrust.

Fighting the COVID-19, Wuhan health care professionals withstood considerable pressure due to a high risk of infection, insufficient personal protective measures, longer work hours, self-isolation, frustration in dealing with patients obsessed with negative thoughts, and limited contact with family members. These were the common risk factors for mental diseases [30], which would adversely affect not only the well-being of physicians and health staff, but also the attention scope, tolerance and willingness to make the right clinical recommendations [31].

Although unanticipated changes in everyday life could affect almost everyone, people who had a higher risk of serious diseases during the pandemic were considerably more troubled by current conditions. Furthermore, they were prone to more severe effects of quarantine and social separation than other demographic groups. What all people needed in society were healthcare services for everyone, fair rules and regulations, effective measures to archive the best health-related goals and sustainable health services [32,33].

In recent decades, social support has been to the interest of many researchers [34,35]. Social support is defined as an interactive process through which a person experiences to be appreciated and cared for, therefore feeling to belong to a social network of shared tasks and duties. Emotional, instrumental, informational, and appraisal assistance are all instances of social support [35,36].

Perceived support is the extent to which individuals feel liked and respected and can rely on others for help when stressed [37]. Perceived support can moderate the association between stress and unfavorable outcomes, albeit the association is weaker in individuals with a high level of perceived support [37].

Support, a key term in healthcare domain, has shown to enhance the quality of care. Paykani et al. contended that all kinds of support provided by families, the press, and policymakers during a pandemic help people comply with social isolation rules and lower the rate of infection [38]. Social support is a constituent element of risk perception and a prerequisite for an unfavorable association [39,40]. For instance, Chongyu Yue et al. found that the social support pregnant mothers received in late gestation during COVID-19 adversely affected their perceived susceptibility, which mediated the association between social support and anxiety [41,42].

Overall, high-quality social support helps fight back trauma, stress, and death [43]. Throughout the COVID-19 pandemic, people were seen attempting to help others by publishing online content that could offer solace. To reduce panic and stress, social support acts as a preventive measure to eliminate or minimize stressful events via appropriate coping strategies and changing the perception of events [44].

Rathus described five types of supportive behaviors: *emotional attention* (to listen to individual problems and express emotions, empathy, care, understanding, and encouragement), *assistance* (to provide support to enhance adaptive behaviors), *information* (to guide and advise on specific coping strategies), *evaluation* (to provide feedback on the quality of performance to improve it), and support. These five types of supportive behavior could moderate the adverse psychological and financial effects [45]. Perceived support is a concept which involves a dejected person receiving empathy from those who can help when s/he is powerless and disappointed [46]. The mental component may provide excellent psychological/financial support to a person experiencing stress; this is because the person is sure that there are others to rely on for help when feeling down, thus withstanding disasters more strongly [37]. Perceived support relates to the expectation of help when needed, and this concept is mostly forward-looking [34]. The most important

benefit of social support for a person experiencing stress is that it can improve health [47]. Those who are socially supported are less likely to suffer from a heart disease, hypertension, headaches, digestive problems, and so on. Social support can also increase self-confidence and self-esteem [21,48] and can have a positive and immediate effect on the quality of life [6]. Furthermore, it creates mutual commitments in which the individual feels loved, cared for, esteemed, and valued [37]. Perceived support also significantly contributes to adaptation, stress management in the workplace [11] and depression and poverty. Thus, the present study explored individual experiences of those who were infected with the virus and had to cope with the critical conditions. The aim was to unravel the nuanced process of receiving social support. The current study explored the barriers and facilitators of perceived support in controlling COVID-19. The findings can be used to develop the right strategies for coping with the new coronavirus and controlling the disease.

2. Methods

2.1. Design of study and sampling

A purposive sampling was used in this study to select the participants with maximum variation (age, sex, socioeconomic status, and education level) in April–September 2021. The inclusion criteria were: initial consent to take part in the study posted on Instagram (a popular social network in Iran), rich and useful experience of living with COVID-19 during this pandemic for the subject and his/her family, willingness to participate in the interview and share experiences. The participants were omitted if they were unable to discuss the answers or were afraid of transmitting the disease or for any other similar reason. They were excluded if they were unwilling to continue with the interview. In the first attempt, 89 volunteers who had seen the public call on Instagram were selected. Then, this number was reduced to 37 to ensure the maximum variation in demographic variables.

2.2. Data collection

Twelve semi-structured interviews were conducted as video chats with 12 participants to collect the data. Twenty-five participants were interviewed face-to-face in Hormozgan University of Medical Sciences (in a conference hall). Phone calls were made with the participants to inform them of the time and place of interview one day earlier. Finally, four participants (# 3, 17, 23, and 34) were re-interviewed to better clarify the content of the previous interview. A total number of 41 interviews were held, all between 17 and 48 min' long. In all interviews, the interviewer initially introduced herself and the purpose of study. She also gave the participants a consent form to read and sign. Interviews included an introduction to relevant topics to the barriers of coping with the coronavirus and the quarantine rule. The main questions of the interview are shown in Table 1.

Then, if required, in-depth and exploratory probes followed to further clarify the information. All interviews were audio-recorded and fully transcribed for data analysis. The participants had consented to the audio-recording of interviews. The interviews continued until data saturation, which occurred when the 37th participant was interviewed. The first and fourth authors collected the data. The language of the interview was Persian, and all transcriptions and translations were done by a native English speaker. There were three data coders (the first, second, and fifth authors). When no new code or concept emerged, the data were considered as saturated. That is to say that after extracting all layers of a code, when there was no new idea to add or expand the existing codes, the sampling was over.

2.3. Data analysis

The data analysis was done in MAXQDA10, based on Granheim and Landman's five stages of analysis [49]. Immediately after each interview, the audio-recorded content was transcribed verbatim. Before the next interview, the preliminary data analysis and coding were done. The transcripts were read line by line, with each component of the participant's speech linked to the topic of interest receiving a unique code. The codes were classified based on similarities and differences, and then codes and categories were compared, resulting in the extraction of categories and subcategories.

2.4. Rigor

Guba and Lincoln's criteria were used to improve the quality of research. While the participants were in quarantine and spending days off work at home, the researchers contacted them on a regular basis to increase the validity of research. To collect the data, several means of communication were used including telephone calls, face-to-face talks, and video calls. The analyzed data were sent to a panel of experts in qualitative research. Their ideas were used to make revisions. The findings were also provided to the participants for

Table 1
The interview guide.

No	Question
1	What are the most essential supports you feel/need during the pandemic ? Please explain.
2	What are the perceived barriers to social support when someone is prone to the disease?
3	How can the government and other relevant institutions help you during the COVID-19 crisis?
4	What are the most essential problems facing you during the pandemic? Please explain.

a final approval. Three qualitative research experts reviewed and approved the content. They received the coding and data analysis procedure as an email, and shared their opinions to decide on the categories and sub-categories. Besides, a complete description of the topic was provided, as well as direct quotations from the respondents. The final codes collected through interviews with several participants were confirmed by them.

2.5. Ethical considerations

This study was approved by the ethical committee at Hormozgan University of Medical Sciences (#IR.HUMS.REC.1399.012). For ethical considerations, the interviewer first introduced herself. Next, she explained the purpose of study, and handed the participants a consent form to read and sign. Participants could answer any of the questions they wanted or withdraw from the study at any moment. The confidentiality of data was assured. Their identities were not revealed in interviews, final descriptions, or data analysis. Each participant was assigned a code that would be used to identify him/her in subsequent phases. In the case of distant interviews, the consent form was sent through the WhatsApp or as an email. All participants were assured of the confidentiality of the information they provided. The signed forms were returned via the same online platform.

3. Results

3.1. Participants' demographic characteristics

The participants' age ranged between 17 and 67 years ($\bar{X} = 42$). The education level of most participants ranged between diploma and a bachelor's degree (51%). Table 2 summarizes the other demographic characteristics of 37 participants.

A total number of 70 codes, 12 subcategories, and two main categories were extracted (Table 3), which are shown below along with excerpts and further explanations. There were two main categories of barriers and facilitators of perceived support. In addition, six sub-categories of barriers were found, including: economic factors, familial factors, socio-cultural factors, personal and psychological factors, ineffective quarantine rules, and poor management. Also six sub-categories of facilitators were extracted, including: familial factors, personal factors, government supportive policies, improved job status, social status, and spiritual-emotional status (Table 3).

Barriers to perceived social support: There were several challenges in Iran caused by the pandemic, with people receiving less social support. Economic factors, familial factors, socio-cultural issues, personal and psychological variables, political, and management issues are all subcategories of barriers to perceived social support.

1 **Economic factors:** With the emergence of the COVID-19 in Iran, several businesses were severely damaged. They were either totally or partially lost. Many private companies went bankrupt, resulting in a severe drop in household income. Furthermore, the prices of many consumer goods and health supplies increased. These challenges increased pressure on Iranian families, and made it hard to earn a living. Families found it hard to make a living, pay for tuition fees and purchase mobile phones for children for online classes. They were burdened with substantial debts. Here are excerpts from the participants' accounts:

Participant # 12 :"In the quarantine, my father lost his job as he was a freelancer".

Participant # 7: "In the very beginning, there was a shortage of alcohol and masks. Now they are available but too expensive to buy."

Participant # 16: "I have little money to buy things I need. So, I barely leave home."

Participant # 20: "The firm I was working for has just gone bankrupt. Right now, I'm unemployed and do not expect to get back to my job even after the disease is gone".

Participant # 23: "When we kept our shop closed, our revenues hit zero. How could we pay the bills"?

Table 2
Participants' demographic information.

Variable	level	N (%)
Sex	Female	19 (51%)
	Male	18 (49%)
Age	35-18 years	18 (49%)
	36–55 years	15 (40%)
	More than 55	4 (11%)
Financial position	Weak	8 (22%)
	Moderate	10 (27%)
	Strong and Very strong	19 (51%)
Education level	< diploma	5 (13%)
	Diploma - BA	19 (51%)
	> BA	13 (35%)

Table 3
Categories, subcategories, and codes.

Categories	Subcategories	Codes
Barriers to perceived social support	Economic factors	Family financial problems, High price of disinfectant solutions, High price of masks, gloves, and detergents, No income during quarantine, Inability of low-income families to earn a living during quarantine, Inability of low-income families to pay utility bills, Quarantine coincidence with the high-sale time of year, Rising rate of unemployment, Not affording to buy smartphones for students' online classes.
	Familial factors	Increased domestic violence among family members, The need to support unemployed members of family during the COVID-19 pandemic, The need to support suspicious and infected cases during the COVID-19 pandemic by family members.
	Socio-cultural factors	Social stigma, Not observing social distancing and quarantine, People's distrust in each other,
	Personal and psychological factors	No personal sanitation, inability to obtain up-to-date and reliable information, Blood type, Low physical health, low mental health. Age, Anxiety and fear of infection, Anxiety and fear of poverty and death, Loss of family members, No specific goal in life, Despair, Depression.
	Ineffective quarantine rules	The government's lack of support for the poor and low-income groups, Non-observance of nationwide quarantine due to the outbreak of the disease in China, Non-compulsory quarantine in the main cities involved in the outbreak of COVID-19 in Iran, Delayed public announcement of the first cases of infections,
	Poor management	Poor management of sacred places, Poor or delayed production and distribution of disinfectants, No clear plan for the future, Poor management of working hours and environments, Failure to make decisions about the school year and the academic prospects of students, Incomplete school year and consequent damages to education.
Facilitators of perceived social support	Familial factors	Spending more time with family members, Supporting family members,
	Personal factors	Increasing the education level. Better training skills, personal care, More access to the Internet.
	The government's supportive rules	Free internet accounts, Quarantine, Monitoring, Surveillance.
	Improved job status	Higher job positions, Improved public perception of medical staff, Higher income for online jobs.
	Social status	Sharing experiences and entertainment.
	Spiritual-emotional status	Prayers, Gratitude for God, Public help.

Participant # 10: "What about our children struggling to use their smartphones? Neither can they listen to the teacher, nor can we send their homework back to the teacher".

2. **Ineffective quarantine rules:** The majority of participants admitted the government had not set out effective rules to prevent infection. There were several defects, including the failure to ensure the nation followed the quarantine correctly, failure to enforce the lockdown in major cities infected with the virus, and delayed public awareness-raising of the illnesses. Here are some comments made by the participants:

Participant # 12: "The government should have imposed a lockdown in the main cities first".

Participant # 16: "I suppose they delayed in raising people's awareness of the virus and its potential risks for the country".

Participant # 34: "I think we would face fewer pandemic-related disasters if we were not under sanctions".

3. **Poor management:** The way the government handled the matter was disliked by most participants. They said the government and the associated bodies failed to develop a clear strategy for managing sacred places, working conditions, availability of disinfectants, and children's education prospects. People felt helpless due to this poor management. Here are some relevant accounts from the interviews:

   Participant # 10: "I wish they had an effective plan for children not to fall behind their studies".

   Participant # 3: "Sacred places and mosques increased the number of infections as they hosted many gatherings".

   Participant # 30: "No one has a certain plan to see what to do next. There is no clear plan for the employees. One day, they decide to reduce working hours, and another day they change back to the previous hours. Still another day, they decide to split the number of staff".

   Participant # 9: "What will happen to the national university entrance exam? We went halfway through".

   Participant # 11: "You know online education is not comparable to traditional classes. Practical courses cannot be held online".

4. **Personal and psychological factors:** Individual variables such as age and blood type, according to the participants, might lead to lower perceived social support. Anxiety and fear, a lack of personal sanitation, and failure to get up-to-date and credible information were all the contributing factors to the fear of infection. Excessive fear and anxiety were also associated with despair and depression. Here are some relevant accounts:

   Participant # 30: "I think there are many people who still don't know how to wash their hands. There are those who do not keep washing their hands for twenty seconds, as they may not know about it or just rush to finish the hand-wash".

   Participant # 37: "There is gossip everywhere. One is not sure to trust the TV news or online sources; they are many contradictions".

   Participant # 27: "This virus was developed to get rid of the elderly population in the world as they were the mere consumer population".

   Participant # 21: "The fact that this issue is taking time confuses me".

   Participant # 22: "I wish I could get back to my job as soon as possible. I'm fed up with being idle".

5. **Familial factors:** Many families were faced with challenges after the outbreak of the virus in Iran. On the one hand, they tolerated a lot of economic pressure, and on the other, most of them could not tolerate staying altogether at home, which caused many tensions. Some participants were concerned that their families would fail to be there for them at hard times. Here are some relevant excerpts:

   Participant # 22: "We had a lot of quarrels at home during the quarantine".

   Participant # 27:"The kids are all angry, and I also argue with them a lot".

   Participant # 27: "I wish my family understood how stressful unemployment was to a man as the breadwinner of the family".

   Participant # 1: "My husband keeps saying I am sure to get infected and get things messed up".

   Participant # 36: "If I get sick, I am not sure if I will be able to support my family or not".

6. **Socio-cultural factors:** Since this virus spread so fast, many people were afraid of being isolated if they were infected. Many people were concerned about how those dying from COVID-19 were buried, fearing that they would have various rituals depending on the time of death and even after the ceremony. As several participants mentioned, many people did not comply with the quarantine rules. Here are some of the participants' comemnts on this topic.

   Participant # 28: "If you have the symptoms of the coronavirus, no one will approach you".

   Participant # 19: "I'm too concerned about dying of the virus. No one will attend my funeral".

   Participant # 20: "The issue has not yet been taken seriously. People are buying things and moving freely on streets".

   Participant # 34: "No one is to be trusted anymore. For me, everybody is infected unless it is proved otherwise".

Facilitators of perceived social support: With the rise of the coronavirus pandemic in Iran, many individuals had to adjust their daily routines and spend more time together. Several participants recalled facilitators having an increasing effect on the lives of people in society. These facilitators were divided into the following subcategories: familial factors, personal variables, government rules to

promote employment, enhancing employment, and social status.

1. **Familial factors:** People were forced to stay at home due to the pandemic. Because most companies, schools, and colleges were closed, family members spent more time together and supported each other more than ever before. On the one hand, people suffering from the disease or who had an infected family member received complete emotional support from their families. Most families shared their experiences, and parents helped their children with their schoolwork over the summer vacation while spending more time with them. Some relevant accounts are presented here:

   Participant # 1: "Since the coronavirus emerged, my husband has been at home most of the time. Formerly, we would only see him on rare occasions".

   Participant # 9: "My parents monitor us quite eagerly; I take Vitamin C and sometimes carrot syrup".

   Participant # 10: "My mom always thinks she will die if she gets infected with the virus. We sympathize with her most of the time and speak to her to lessen her worries".

   Participant # 21: "Each afternoon, at 6 p.m., I make a video call to my mom and two of my sisters to see them and feel relieved. It is as though we are sitting closely next to each other. That's so much fun".

   Participant # 16: "I learned to cook from my mom during the pandemic".

   Participant # 14: "Now I work on work shifts while schools are closed. So, I have more time to spend with my children".

   Participant # 21: "Parents have somehow become their children's teachers and work with them to get their homework done".

   Participant #13: "It feels great when you see your husband constantly worried about your health, for example while going to buy masks, disinfectants, etc.".

   Participant # 1: "Before the pandemic, my husband rarely washed the dishes; now things have changed and when I arrive home, I see him disinfecting the dishes".

2. **Personal factors:** Certain personal affairs served to alleviate people's fear of the disease. Some grew new talents, while others studied more and fulfilled more tasks in their free time. Some people were seen spending a significant time surfing the net. Sometimes, they found the time to improve their health and increase personal healthcare. Here are some relevant comments:

   Participant # 3: "I spent more time studying during the quarantine. I'm satisfied with it".

   Participant # 18: "I used several recipes to cook within the one-month quarantine. It is now the time to cook some donuts by myself".

   Participant # 16: "As I had plenty of free time, I took care of my skin more than ever".

   Participant # 13: "I have a lot to do after the pandemic. I have written a long list of things. I'm going to do things after the crisis, e.g., tailoring. I need to go for them".

   Participant # 31: "We did not wash our hands well. Now, we know everything. I have learned numerous new things about health and hygiene".

3. **Government supportive rules:** Following coronavirus preventive rules and the need for individuals to stay in, the government decided to give free internet accounts to families. The government measures to enact the lockdown rule and implement other precautionary measures proved effective. Here are some of the participants' accounts:

   Participant # 18: "The free internet accounts given to people was a good idea as it entertained people at home".

   Participant # 6: "Though cities have been locked down lately, it's better than nothing".

   Participant # 14: "Social distancing was a good idea, and I was hoping it would continue".

   Participant # 31: "It was an interesting idea that we had our body temperature gauged. I also saw cars being sprayed with disinfectants at the entrances of cities".

4. **Improved job status:** Some participants, particularly medical professionals, i.e., physicians and nurses, indicated that their job status changed so that it their job status could improve after the government decided to modify the status. Therefore, they enjoyed more stability in their jobs. Here are some of the participants' comments:

Participant # 18: "The government promised to permanently employ the nurses working in COVID-19 wards. That's a very good idea. I am a member of the hospital's management team. Our working prestige has improved too. I think the coronavirus managed to change people's ideas about the medical staff".

Participant # 6: "We are waiting to get the vaccine and drugs. All are waiting for the scientists to see what they have for us".

5. **Social aspect:** Many people in society were able to share their experiences with others because of the special features of the disease. Some participants also noted that during the pandemic, individuals shared numerous interests in the cyberspace, such as developing challenges and games for pleasure. Here are some relevant excerpts.

Participant # 4: "All are posting different instructional videos or texts on websites and online pages, ranging from recipes, such as the making of donuts, to home-made yogurt".

Participant # 1: "We demand everyone introduce whatever book s/he has read online or share it with the rest".

Participant # 17: "Every time I log in the Instagram, a new challenge is on, such as a laughing challenge. We are busy working on this stuff".

6 **Spiritual-emotional factors:** As the participants mentioned, the pandemic increased people's interest in spiritual matters. Other participants recalled they paid more attention to spirituality and prayed more than ever before. Some expressed gratitude to the health care team. Meanwhile, many people began to help others by offering relief to fellow citizens. Low-income populations benefited from the pandemic. Here are some relevant comemnts made by the participants:

Participant # 19: "I think I prayed more during the pandemic than ever before".

Participant # 10: "May God help us all".

Participant # 36: "I have committed myself to paying alms even though none of my family members were infected with the coronavirus".

Participant # 24: "We collected many aids for the poor in deprived areas, i.e., both foods and disinfectants".

Participant # 32: "Now people respect the medical staff for the first time. Formerly, they kept complaining about them".

Participant # 18: "We are now valued in people's minds, and this helps remove the fatigue we go through. People and my relatives were quite encouraging at this time. They were constantly concerned about us and our colleagues".

Participant # 19: "When we were told that a country had developed a drug for the coronavirus, it felt great, and I prayed to God".

4. Discussion

The present study aimed to explore the barriers and facilitators of perceived societal support in the aftermath of COVID-19 in Iran. The findings revealed two main categories: 1. barriers to perceived social support, including economic factors, familial factors, sociocultural factors, personal and psychological factors, ineffective quarantine rules, and poor management; and 2. facilitators of perceived social support, including familial factors, personal factors, supportive government rules, improved job status, social and spiritual factors.

One of the most significant barriers to perceived support was economic factors. On the one hand, individuals had difficulty maintaining their livelihoods. On the other hand, acquiring the necessary health equipment to prevent coronavirus has made things hard for the overall population. These findings agree with those of Salahshoori et al. [50], Amber Akbari et al. [51], Barua [52], Van Bavel et al. [53], and Gentilini et al. [54]. Iran has been dealing with a wide range of economic issues in recent years, and the closure of businesses has exacerbated the conditions, making it hard for individuals to satisfy their basic needs. Furthermore, the cost of sanitary appliances was too high for most people.

The country is experiencing lower revenues and serious economic issues. Therefore, citizens need additional social protection because they lack social development support and sufficient social insurance, and are faced with financial limits, poverty, and other risks [54]. In response to the COVID-19 crisis, social support and protective measures should be taken to liven up people's spirits. This mechanism ensures that food is available at all times [54,55]. Many of the world's poor rely on public space and mobility to support their families, including seasonal farming and going to markets to sell or buy things. Many limits were set on people's presence in public places, which caused many individuals to lose their jobs. The majority of the poor did not have health insurance and did not receive unemployment benefits. Hence, they were more prone to nutritional problems [54,56].

Another barrier to perceived support was found to be familial problems. Violence at home, particularly against women, was increased by quarantine and the presence of all family members together for an extended period of time. The surge in violence among family members, the need for the unemployed to receive help from family members during the pandemic, and the need for sick people to be supported by family members throughout the pandemic all corroborated this issue [57]. A study in the United States showed that health discrimination against women was followed by more unhealthy behaviors and physical and mental health issues among them.

Also, changes in labor market influenced marital conflict, violence at home, and child abuse [58].

Barriers to perceived support were identified as social and cultural issues. The fear of infection, how to cope with the infected, and the potential of social isolation were identified as the underlying causes of people's distrust in one another. Participants who claimed so also mentioned the problems of social stigma, non-compliance with social distance or quarantine rules, and distrust in one another. Occasionally, those who had recovered were abandoned by their family and friends. Furthermore, they were obliged to observe quarantine and isolation rules, which resulted in a loss of confidence and psychological disorders [59].

Personal and psychological problems were another barrier to social assistance. Individuals used to continually assess themselves in the aftermath of the disease, which had both positive and negative effects on social support and self-appraisal. This finding is consistent with the evaluation type's social support [46].

In this regard, social media act as the primary source of COVID-19-related information. They can immediately disseminate critical information so that individuals can take effective precautions to protect themselves. However, rumors, misinformation, and fear may readily spread over social media, causing even more concern [60,61].

Other barriers to social protection included ineffective quarantine rules, government's failure to provide support for the poor and low-income populations, failure to implement an effective lockdown nationwide, failure to implement fruitful quarantine rules in major cities infected with the virus, and delayed and unreliable information about the first cases of infection [46]. Raising public awareness of government's measures to fight back rumors, as well as the voluntary setting of limits to raise public awareness of the therapeutic process, can help reduce people's worries [60].

Poor management involved failure to control sacred places, manage adequate production and distribution of disinfectants, develop a definite plan for the future, manage working hours and workplaces, decide on the school year and students' academic progress, incomplete academic year, and students' academic prospects. These were found as the barriers to perceived support [61,62]. For example, the closure of universities and popularity of online education raised new issues to professors and students because the country lacked adequate facilities for online education. Even after securing the required facilities, teachers were unsure whether students could meet their expectations, especially in practical courses. Teachers were also concerned about the possibility of cheating on exams. Students were unable to attend online classes, which made a barrier in and of itself [63].

Another key feature of social support facilitators was the fact that they made it simpler to cope with the critical condition. Familial variables were found among the facilitators of perceived support. During the quarantine, people were continuously reminded of healthcare issues, such as the risk of getting infected and transmitting the disease to family members. They also received advice on prioritizing the healthcare services for their aging parents. Even individuals felt responsible for leaving home to accomplish essential tasks, as long as they adhered to all health rules and regulations [64].

Personal factors had the subcategories of increased study hours, training skills, greater personal care, and expanded internet access, all among social support facilitators. Increased personal care during the early stages of the pandemic was one adverse effect of the crisis, since it applied to those with special diseases as well as those who had to follow health protocols to avoid a further spread of the disease. During this time, online sources were commonly used to get the latest news on preventive measures and even treatment for some comorbidities. Iran was expected to be ready to adopt the internet system to provide electronic services as it had already experienced different natural disasters such as floods, earthquakes, and so on [65].

The government's supporting rules to provide free internet accounts, as well as commencing quarantine procedures, monitoring, and surveillance of infected areas, were the other facilitator of societal support. The act of giving free internet accounts served to provide access to accurate information, encourage investment in online enterprises, and promote online and traditional face-to-face education modes (instrumental social support). During the COVID-19 pandemic, several countries attempted to set and enact rule to protect the public [38]. For example, China, as the origin of the global threat, managed to diagnose infections in public places including homes, and quarantine the affected areas, and set strict transportation limits on millions of citizens to stop the spread of virus. The most significant measures taken by the Chinese government to effectively deal with the virus were the mobilization of all government amenities and hospitals, extension of the Chinese New Year holiday, traffic control, the cancellation of all gatherings, and the promotion of public health training. South Korea repeatedly warned about the major health issues to withstand any underestimation of the severity of the pandemic. However, in mid-February, they imposed strict quarantine restrictions in many cities as well as the northern Gyeongsang region. The Korean government closed higher education institutions and schools for long periods of time, restricted public gatherings, and quarantined areas where the virus had spread rapidly, diagnosed the infected cases and raised awareness of how they moved around using electronic maps, maintained quarantine standards, allocated adequate funds to deal with the virus, and increased public awareness. Hong Kong government's efforts included setting strict rules, and high fines for those who did not comply with the rules, granting subsidies to compensate for company closures, granting low-interest loans, and distributing free masks and health supplies among the poor [38].

Japan managed to keep the mortality rate low despite having a large elderly population. This country took measures such as promoting working from home, delegating decision-making to local governments, closing schools and universities for a longer time, granting subsidies to workers and employees to stay home for childcare, prohibiting public gatherings, and increasing diagnostic tests to deal with the new coronavirus. In Iran, an improper use of information technology to shape public opinion, and imprudence in healthcare provision caused a panic and emotional anguish in society, followed by a high mortality rate which exacerbated the current conditions during the sociopolitical sanctions. The measures that the government took included distinguishing affected areas as red spots and the less infected areas as orange, setting traffic limits and screening on high-traffic areas, city gateways and departure points, establishing an active and standard patient-search system, and so on [66].

Improving people's employment through promoting the job status, increasing the value of science and medical staff in the public, and developing online jobs were among the other social support facilitators. By the time of the pandemic, cyberspace was used not just

to receive news, but also for many shops to sell their goods online, and it had a significant effect on reducing traffic [67]. During the pandemic, however, many people had to work on regular shifts, take lower-paid jobs, and end up frustrated [68]. As pinpointed by Ali and Bhuiyan (2020), many people lost their employment during the pandemic, and many more were at a higher risk of losing their job sooner or later. The poor, especially those who with little or no savings, were the most unfortunate victims of the downturn in economy. COVID-19 was believed to have forced 16.5 million people back into recession, mostly rickshaw drivers, transport workers, day laborers, hawkers, construction workers, and hotel, motel, and restaurant employees [69]. Riaz (2020) reported that 20 million more people who depended only on menial jobs for a living had already lost their jobs or been intermittently jobless due to the government's efforts to stop the spread of the virus [70]. In Europe, Eurofound [71] explored and reported the case of 85,000 participants from 27 EU member nations in April 2020. As this research showed, the EU population faced high levels of anxiety and depression, low levels of confidence, employment and economic difficulties, and a low wellbeing. Germany's well-being was slightly lower than the EU27 average. There is evidence that it decreased dramatically in the early phases of the pandemic, between March 2020 and May 2020 [72].

Other facilitators of perceived support included sharing experience and entertainment, as well as sharing the experience of making home masks and keeping social distance. As WHO reported, social distance played a major role in stopping the spread of the virus. Also, animated movies created to show the need for social distance proved to be helpful online materials. They managed to guide educational facilities and raise public awareness [73].

Other facilitators of social support included spiritual and emotional sources such as prayers, gratitude to God, and offering public assistance or charity work. Keeping up spirits and doing mandatory religious tasks can help individuals help each other in the aftermath of the pandemic. In this regard, Muslims might pray and undertake religious rites to implore God to heal the patients, which contribute to the general public's support [74].

Social support in social networks can directly affect health, the type of health behavior and preventative behavior needed to cope with the disease. For example, social capital, or the existing resources in Iranian society can help at-risk groups, the patients, and even those who have recovered from the disease. One dependable information source found in the interviews was the available financial services and medical resources. Another function of social support is social criticism which is levelled at government's measures to provide the best health services. Other functions of social network include social collaboration though sharing information and talents, amusing others, and sharing experiences in virtual and real situations. The final function of social networks is social support, which serves to offer material, spiritual, and emotional help. It also contributes to resources and experiences in interpersonal relationships. It helps prevent and even improve the critical conditions during the pandemic, which has directly and indirectly affected people's physical, mental, psychological, and social health.

4.1. Limitations and strengths

The present research is among the few qualitative studies on the determinants of perceived support during the pandemic in Iran. The findings serve as a guide for stakeholders and policymakers to raise the issues and challenges facing people in preventing and managing the pandemic. Any effective plan in the political, social, managerial, and even financial domains should be guided by the information gathered from the individual members of society. Another distinctive feature of the present study is maximum variety of the sample in terms of sex, education, age, and income.

There were some limitations to this study. For one, several participants were hesitant to take part in the study as they would have been in trouble if they had admitted to nonadherence to rules. To remove their hesitation, they were assured of the confidentiality of the information they provided. Furthermore, for the fear of infection, many were unwilling to be interviewed face to face. Telephone interviews, keeping a social distance, using disinfectants to sanitize the place (of interview), choosing a safe and secure place for interview, and wearing masks were the precautionary measures to tackle these issues. Another limitation was that phone calls failed to show the body language and nuances of nonverbal cues in the interview. It was also harder to ask for more details. Finally, a mere reliance on the surface meaning of the participants' words does not suffice to make an accurate conclusion, and there is a need for a mixed approach to research.

5. Conclusion

The COVID-19 pandemic led to significant changes in social interaction patterns as governments imposed social distancing and other safety measures to prevent the spread of the disease. According to Durkheim, large-scale social changes can damage social relationships, resulting in a loss of social integration and a consequent damage to public health. In the aftermath of the COVID-19 pandemic, people were expected to avoid face-to-face encounters and social gatherings; thus, a loss of social integration was quite expected.

The results of the present study can probably be used as a basis of interventional studies such as theory-based and prospective research or cohort studies. These results were obtained from direct interviews with people and managed to reveal the barriers and facilitators of social support during the pandemic; thus, they can be used to guide future line of scientific and empirical research in similar critical conditions.

Declarations

Author contribution statement

Razie Toghroli; Teamour Aghamolaei; Laleh Hassani; Vahid Ramezaninejad; Javad Yoosefi lebni; Nazila NeJhaddadgar; Nafiul Mehedi; Arash Ziapour; Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data will be made available on request.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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