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Activities and challenges of volunteers in confrontation with COVID-19: A qualitative study in Iran

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ABSTRACT

The control and prevention of COVID-19 requires the active and voluntary participation of the people. Because volunteers experience different activities and challenges, the present study aimed to identify the activities and challenges of volunteers in the face of COVID-19. The present study was conducted with a qualitative approach and conventional content analysis method among 35 volunteers in the field of COVID-19 using snowball sampling and semi-structured interviews. Data management was performed using MAXQDA-2018 software and its scrutiny was done by the Graneheim and Lundman analysis method. After analyzing the data, 2 main categories and 15 subcategories were obtained, including 1- Activities (instruction and training; production and distribution of hygiene items; economic aid; psychological and social support for COVID-19 affected people; cooperation with government organizations to implement quarantine; environmental disinfection; cooperation with and support of the medical staff; encouraging and persuading people to participate in voluntary work; attending and cooperating in high-risk centers) and 2- Challenges (fear and worry of getting infected; rejection; being different from other voluntary activities; experience of failure and helplessness; the difficulty of the recruitment and cooperation process; lack of adequate instruction on how to help). Volunteers have played wide and diverse roles in confrontation with COVID-19 and have been able to provide various types of support to government, health and social organizations and the general public in various ways, but due to the special circumstances of the COVID-19 epidemic, they have experienced many challenges at the same time.

1. Introduction

COVID-19 broke out in Wuhan, China, in December 2019 [1–3]. The outbreak of COVID-19 as an emerging disease has posed a serious challenge to the public health system worldwide [4,5]. Since the beginning of the pandemic until now, more than 555 million

Abbreviations: Atm, Automated teller machine.

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people have been infected with this disease, more than 6 million people have died, and the number of patients is increasing every day [6].

People's participation is one of the basic concepts of development [7] and dealing with crises requires people's participation. In other words, in addition to the fact that public health measures are the most effective tools for controlling and preventing infectious diseases, this measure also requires the active and voluntary participation of the people [8]. The World Health Organization has identified public participation in health as one of the basic principles of health care [9]. Therefore, the health sector with all the facilities and resources cannot overcome the problems alone without the conscious support of the people [8]. The effectiveness of voluntary activities and public participation in promoting health behaviors has been reported in health research [10].

In Iran, due to the large number of disasters triggered by natural hazards, volunteering is also common in emergencies [11] and there has long been a spirit of participation, a sense of altruism and cooperation based on religious, moral and social teachings in various fields such as serving vulnerable groups, charity and humanitarian work [12]. The outbreak of COVID-19, despite its many challenges, has led to empathy and voluntary efforts by various strata of the population to combat the virus, and has strengthened voluntary public participation [8]. To prevent and control COVID-19 in Iran, various governmental and non-governmental organizations and groups have cooperated and participated [13–15]. In other words, along with the health care staff, grassroots groups took actions spontaneously for the health of the people and to help the health care providers (doctors, nurses, etc.) and try to defend the health of the people and create hope in them. These people risked their lives to be able to restore health and peace to society [15].

Participation in voluntary activities may be affected by various factors such as gender, education, marital status, sense of philanthropy, acquiring skills, finding a job, political objectives, etc. [16–20]. Volunteer groups have performed various activities in the face of COVID-19, and in this way, they have also faced challenges [11]. For example, grassroots and volunteer organizations have been active in providing manpower, medical equipment, supporting the vulnerable, raising awareness and persuading the people [8]. Also, the activities of various volunteer groups in Iran, there have been such as cleaning and disinfecting roads, setting up workshops for the production of protective items, medical and health equipment, activities in workshops for the production of personal protective equipment, preparation and distribution of sanitary packages, disinfection of busy roads, bakeries, gas stations, counseling (telephone, internet and in person) by a group of volunteer doctors, sending volunteer specialized doctors to hospitals that were facing manpower shortages, collecting public donations, identifying the weak and low-income sections of society, preparing livelihood assistance packages and distributing them among vulnerable people, public announcement through mosque speakers and holding Informing sessions on the cancellation of congregational prayers and religious gatherings [13–15]. Seddighi et al., 2020 in a study aimed at identifying the challenges and opportunities of online volunteering to answer questions related to COVID-19 from the perspective of managers showed safety, availability, recruit more volunteers, cost reduction, participation, geographical location and local considerations, opportunities for voluntary participation and non-commitment, cultural issues, infrastructure, repayment and managing the volunteers were the challenges of this issue [21]. Mao et al., 2021 showed in a study of voluntary activities in the UK that food purchase and emotional support were the most common activities of volunteer groups, but there are various models of organizing and coordinating in COVID-19-related voluntary work. In addition, supportive groups of the society adjust their activities and scope of them according to current needs and challenges [22].

Given the prominent position and importance of the presence of volunteers for the prevention and control of COVID-19, the importance of this study is clear. On the other hand, to effectively support volunteers and non-governmental groups and to provide a safe environment for their responsibilities and assistance in times of crisis, especially the outbreak of COVID-19, it is necessary to gain new insights through knowing their activities and especially their challenges in voluntary activities. This will be possible through a qualitative approach, and although research with a qualitative approach has been conducted to examine the activities and challenges of volunteer groups in relation to COVID-19, a study that examines these activities and challenges from a qualitative and comprehensive perspective in Iran has not been found. Therefore, the present study was conducted aimed to identify the activities that volunteers have done in Iran in the face of COVID-19 and the challenges and problems that volunteers have faced while performing volunteer activities.

2. Methods

2.1. Design

This research was conducted in Tehran province with a qualitative approach and conventional content analysis method. Content analysis is a systematic approach that can be used to discover large amounts of textual information by coding and classifying data in order to recognize the process and patterns of words, their relationships, structures and communication discourses. In this study, there were two main questions that the researchers attempted to answer: What activities have the volunteers in Iran done in the face of COVID-19? 2. Have the volunteers encountered challenges and problems when doing volunteer activities during COVID-19 pandemic?

2.2. Participants

Participants in this study were individuals who volunteered individually or in groups in the face of the COVID-19 pandemic. Inclusion criteria consisted of having the experience of volunteering in the face of COVID-19, observing hygiene principles during the interview, and the ability and willingness to participate in the study. Exclusion criteria were dissatisfaction with the recording of the interview and unfinished interview. In this study, voluntary activity means any activity that is done as non-profit and without receiving any material reward or coercion of a specific organization, in order to prevent the spread of Covid-19 and/or reduce its psychological and social consequences for different groups of people.

Access to participants and data collection lasted from November 26 to December 31, 2021. Participants were first selected by targeted sampling and then snowball sampling. After receiving the code of ethics from Iran University of Medical Sciences, the researchers asked individuals to participate in the research by referring to voluntary organizations, observing health principles. The researcher first introduced himself and then gave a brief description of the objectives and necessity of the research, and then the interview would begin when the participants signed a written consent form. At the end of the interview, the researcher asked the participant to introduce if she knew other people who met the inclusion criteria. 20 participants were selected through targeted sampling and 15 based on snowball sampling. All interviews were recorded with the consent of the participants and wherever the researcher deemed necessary, he used field notes.

2.3. Data collection

Two methods of face-to-face interview and video-telephone interview through WhatsApp software were used to collect data. 25 interviews were conducted in person and 10 interviews were conducted online. The interviews were conducted by the second, third and fourth authors of the article who had extensive experience in conducting interviews and qualitative research. A guide for questions was developed before doing the interviews. In order to compile a guide to interview questions, first all the authors of the article posed 5 questions during two discussion sessions and then used these questions in 3 pilot interviews to see if the interview questions can lead the researchers to the research objectives or not. After the three pilot interviews, another question was added and the final interview guide was compiled (Table 1). The order of the interview questions for participants varied according to the answer they gave, and other more detailed questions were asked for further research. The average duration of the interviews was 49 min, the minimum was 23 and the maximum was 77 min.

The time and place of the interviews were determined based on the participants' opinions. Most of the in person interviews were carried out in the evening and at the workplace of the volunteers, and the telephone interviews were conducted at night. The interviews continued until the theoretical saturation was obtained [23], which was achieved after 35 interviews. Of course, it should be noted that after the interview with participant NO. 27, all the codes were repeated, but the researchers took 8 more interviews to make sure that the theoretical saturation was achieved, and in all of these 8 interviews, no new code was formed.

2.4. Data analysis

MAXQDA-2018 software was used in data classification. Graneheim and Lundman methods were used to analyze the data [24]. Data analysis was performed by the first and seventh authors of the article.

In the first step, immediately after each interview, the interviews were typed and saved by two members of the research team in Word 2010 software. In the second step, the text of the interviews was read and reviewed several times by the researchers to get a general understanding of the text of the interviews. In the third step, all the texts were read word by word and with great care and the codes were extracted. In the fourth step, the codes that were similar in terms of content and meaning were placed in a class and their relationship was determined. In the fifth step, the data were placed in the main categories, which were more general and abstract than the previous classification, and the themes were extracted. Finally, after the analysis, the data were provided in a table and the codes that had similar meanings were placed in a subcategory. Then, the subcategories that were similar to each other were placed in a category and it was attempted to ensure that the subcategories do not overlap. Also, after the final analysis, its full stages were explained in a meeting for all the authors of the article, and in some cases, the names of the categories and subcategories were partially changed.

2.5. Trustworthiness

32 items of qualitative research report were observed (COREQ) [25]. Guba and Lincoln criteria were observed to improve the quality of results [26]. To increase dependability, all contributors to the article were informed of analyzing and coding process, and in the meetings that were held, they expressed their opinions, and finally, the names of the categories and subcategories were finalized with the approval of all authors. To increase the credibility of the study, the researchers selected participants with the most differences in terms of demographic characteristics to observe the principle of diversity in sampling. At the end of each interview, the researcher briefly stated his general understanding of the participants' experiences and it was confirmed by them. Also, after coding and analyzing the data, the findings of the present article were provided to 10 participants to determine whether the researchers reported their experiences correctly or not; it was confirmed after a few minor corrections. To gain confirmability, the researchers sent the data analysis and findings to 4 outstanding researchers in the field of qualitative research, as well as 2 people who had research experience in similar subjects of this research, and where necessary, corrections were made according to their opinions. To increase transferability, all the details of the research from sampling to the process of data collection and analysis were fully described, participants'

Table 1
Interview question guide.

No.	Questions
1	Why did you decide to volunteer during the COVID-19 pandemic? Explain.
2	What voluntary work did you do when COVID-19 broke out? Did you act spontaneously or through a specific organization? Explain.
3	Have you done such things in the past? If yes, how did volunteering for COVID-19 differ from what you did in the past?
4	What problems did you encounter while volunteering? Explain.
5	What was the reaction and opinion of people, families and government organizations about your work?
6	What were your main obstacles to better volunteering during the COVID-19 pandemic?

quotes were given directly and in large numbers, and research findings were sent to 3 volunteers who met the inclusion criteria in this study but did not participate in the study; they approved it.

2.6. Ethical considerations

In order to observe the ethics in the research, in the first step, to enter the research field, consent was obtained from Iran University of Medical Sciences with the code of ethics (IR.IUMS.REC.1400.759). Written consent was then obtained from all participants to participate in the research as well as to record the interview. At the beginning of each interview, in addition to introducing himself, the researcher explained the goals and process of the research to the participant and reminded that the participant could interrupt the interview anywhere they wanted. Also, the participant was explained about observing the principles of confidentiality and preserving the names of the participants in publishing the research results. It should be noted that in order to maintain the health of the participants and the researcher himself, health protocols such as observing physical distance and using a mask, etc. Were observed in all interviews.

3. Results

35 people participated in this study, whose demographic characteristics are listed in Table 2. Also, after analyzing the data, 2 categories, 15 subcategories and 98 initial codes were obtained (Table 3).

3.1. Activities

The first category obtained from data was the activities that volunteers performed individually or in groups in the face of the COVID-19 crisis. These activities consisted of a wide range of activities from instruction to economic aid.

- **Instruction and training**

One of the most important things that volunteer groups did in the face of COVID-19 was instructional activities. In fact, the volunteers used the space and tribune they had at their disposal to try to provide people with various trainings from COVID-19 prevention to how to care for a COVID-19 patient. Also, some of these volunteers, after closing schools and disrupting the educational process, found students from poor families who did not have much access to cell phones and the Internet and whose education was disrupted, and helped them with their lessons.

> "From the very beginning, we increased our awareness of COVID-19 by studying different texts and tried to teach different people how to take care of themselves" (Participant 5).
>
> "Sometimes we went to families that had a COVID-19 patient and told them how to take care of them so that their own health would not be endangered." (Participant 11).
>
> "We used mosques and Husseiniyahs (a religious place) to instruct people, and since our audience was mostly middle-aged and elderly, I think it could be very useful." (Participant 30)
>
> "From the very beginning, I launched a Telegram channel and uploaded scientific articles related to COVID-19 every day." (Participant 11)
>
> "I sometimes taught math and chemistry to some poor children so that they would not be distracted." (Participant 26).

- **Production and distribution of hygiene items**

One of the main activities of the volunteer groups was the production and distribution of hygiene items related to COVID-19. In the early days of the COVID-19 outbreak, hygiene items became very scarce in Iran and people had very little access to it. Therefore, most individuals and volunteer groups took action in this regard. In the first step, they launched small workshops to make masks and gloves, and in the next step, they bought hygiene items and distributed them among the people.

Table 2
Demographic information of participants.

Variable	Group	Frequency
Gender	Female	10
	Male	25
Marital status	Married	13
	Single	22
Education	Under diploma	7
	Diploma and BA	18
	Higher than BA	10
Age	Under 25	11
	25–50	20
	Over 50	4
Getting COVID-19	Yes	20
	No	15

Table 3
Codes, subcategories and categories obtained from analysis of interviews.

Category	Subcategory	Codes
Activities	Instruction and training	Self-care instruction, training on how to care for a COVID-19 patient, informing people through mosques, use of cyberspace for awareness, training on how to follow health protocols, Teaching children in need
	Production and distribution of hygiene items	Helping the production of hygiene items such as medical masks and gowns, producing disinfectant solution, buying and distributing hygiene items among people, buying and distributing oxygen generators among needy families
	Economic aid	Collecting money and distributing it among the needy people, buying and distributing food among people, buying and distributing virtual education supplies such as tablets and cell phones among people
	Psychological and social support for COVID-19 affected people	Telephone counseling for COVID-19 patients and their families, telephone counseling and support for the families of COVID-19 affected people, bathing and washing of the COVID-19 corpses according to rituals and customs
	Cooperation with government organizations to implement quarantine	Screening and taking temperature of people at the entrances of cities and public places, cooperation in closing religious and recreational places, cooperation with the traffic police to prevent tourists from entering the city
	Environmental disinfection	Disinfection of roads, disinfection of public transportation such as buses and trains, disinfection of gas stations and bakeries, disinfection of crowded places, disinfection of sensitive environments such as drug addicts centers
	Cooperation with and support of medical staff	Going to the hospital and caring for COVID-19 patients, volunteering for the COVID-19 vaccine and participating in the testing process, thanking and appreciating the medical staff, preparing videos, clips, text and … to thank and cheer up the medical staff, making clips and motivational videos to support the treatment staff
	Encouraging and persuading people to participate in voluntary work	Encouraging people to donate money, encouraging people to work in volunteer centers, encouraging people to share health items like home oxygen generator, encouraging people to donate blood,
	Attending and cooperating in high-risk centers	Cooperation with the nursing home, cooperation with the care centers for the disabled, cooperation with the care centers for addicts and the homeless, cooperation with the cemetery officials
Challenges	Fear and worry of getting infected	Fear and worry about getting infected, fear and worry about infecting the family
	Rejection	Family opposition to participating in voluntary work, increasing conflict with family, increasing conflict with spouse, rejected by friends, family and others for fear of being a carrier
	Being different from other voluntary activities	Being widespread, continuous and time consuming work, sustaining and retaining volunteers, having risk, not seeing the results of your work
	Experience of failure and helplessness	Increasing of patients, increasing of the dead, lack of disease control
	The difficulty of the recruitment and cooperation process	Lack of cooperation of organizations with volunteer groups, difficulty in attracting other volunteers, unpleasant behavior of people with volunteer groups
	Lack of adequate instruction on how to help	Wrong way of disinfecting the passages, wrong way of disinfecting the environment, endangering one's own health, endangering the health of others

"In the beginning, when masks and gloves were very few, we set up a small workshop with a few friends and made masks." (Participant 8)

"Our group volunteered to participate in a medical gown production workshop to increase production so that doctors and nurses could work more easily." (Participant 17)

"We collected money and distributed purchased health supplies among poor families to reduce their problems" (Participant 22)

"Some patients who had a poor family needed an oxygen generator, we gave it to them for free, and after their patient recovered, we would take it back and give it to another family." (Participant 7)

- **Economic aid**

With the outbreak of COVID-19 and the closure of many businesses, the Iranian people faced many economic problems, so that it became very difficult for them to continue living, and poor families faced more severe problems, so some volunteer groups took measures such as raising money and distributing it among the needy people and purchasing and distributing food in order to help people. Also, due to the virtualization of educational activities, many students were deprived of educational space due to lack of access to cell phones and laptops, but volunteer groups provided a great help by purchasing this equipment and giving it to poor groups of the society.

"We always had a fund and collected money and gave it to a poor family every month. After the COVID-19 outbreak, our activity increased because many people were unemployed and had no income." (Participant 3)

"Every week we prepared about 100 food packages including rice, oil, chicken, etc. and gave them to poor families." (Participant 9)

"Many people could not get hygiene items such as masks, disinfectants, etc. because of poverty. We bought and gave them to these people to keep them healthy." (Participant 22)

"Some students from poor families could not afford to buy a smart phone or tablet to use for their education, so we tried to spend a large part of the money we had collected in this way." (Participant 34)

- **Psychological and social support for COVID-19 affected people**

Some participants with psychology education provided telephone counseling and support to the families of COVID-19 patients. Also, since the washing of the dead was important to many people in the community according to their cultural customs and the outbreak of COVID-19 had somewhat disrupted this process, some people volunteered to wash the bodies of the dead and buried them according to their customs, which removed a lot of psychological pressure from the families.

> "Sometimes we called families with a COVID-19 patient and told them how to take care of their patient." (Participant 1)

> "Several times I called the families whose patients had died of COVID-19 and talked to them to calm them down, and if necessary, I would definitely go and visit them, because during the COVID-19 period these families were very lonely and no one visited them." (Participant 19)

> "Many families were worried that their dead bodies would not be buried according to their own customs, so one of my friends and I went and did it spontaneously. The families thanked us so much." (Participant 35)

- **Cooperation with government organizations to implement quarantine**

Quarantine was one of the measures taken against COVID-19 in Iran, but due to the large volume of work, the staff of government organizations were not enough to control the quarantine situation, so volunteer individuals and groups came to the aid of government organizations and cooperated in order to better implement the quarantine; they participated in activities such as screening and taking temperature of people at the entrances of cities and public places, cooperating in closing religious and recreational places, and cooperating with the traffic police to prevent tourists from entering the city.

> "When the government imposed quarantine conditions, I volunteered and went to the entrance of the city to do a fever test and refer people suspected of having COVID-19 to health centers." (Participant 9)

> "I cooperated in closing parks and tourist centers, and if I saw a person or family who wanted to go there, I would warn them and try to dissuade them." (Participant 27)

> "I worked with various organizations such as Basij (a paramilitary organization), the traffic police, the police, the Red Crescent, etc. so that we could better implement the quarantine." (Participant 2)

- **Environmental disinfection**

At the beginning of COVID-19 outbreak in Iran, environmental disinfection was used as one of the main strategies to prevent the spread of the disease. Initially, volunteer individuals and groups disinfected the environment, disinfecting and washing environments such as public transportation, gas stations, bakeries, crowded places, and high-risk environments such as drug addict centers.

> "We disinfected sidewalks, buses, trains and many other places with the help of firefighters." (Participant 5)

> "I personally bought a sprayer and disinfected bakeries and crowded places." (Participant 29)

> "My friend and I disinfected wherever we felt could be dangerous. Once we went to disinfect the drug addict center." (Participant 26).

- **Cooperation with and support of medical staff**

With the outbreak of COVID-19 in Iran and the increase in the number of people admitted to hospitals, many medical staff had suffered from burnout, so some voluntary groups and volunteers went to hospitals to reduce the working hours of medical staff and took care of COVID-19 patients. Others also volunteered to work for COVID-19 vaccine and participated in the testing phase. Others thanked the medical staff by making clips, lyrics, songs, etc. And gave them morale.

> "When I saw that the hospitals were very crowded and understaffed, I volunteered and went to the hospital to help and care for COVID-19 patients." (Participant 8)

> "In the beginning, few people volunteered to take part in the vaccine test, but I did because I knew how important it could be." (Participant 13)

> "The treatment staff have been very bothered for these two years. I and some of my friends tried to make several clips for them and thank them to improve their mood." (Participant 7)

> "In cyberspace, we tried to motivate our medical staff, which those days were going to end. We wanted them to know that all Iranians were thinking about them and knew how hard times they had." (Participant 14)

- **Encouraging and persuading people to participate in voluntary work**

COVID-19 affected all aspects of human life, from the financial to the psychological, so need of volunteering to cope with such a situation was felt more than before, while the fear from COVID-19 decreased the voluntary work, so some volunteers tried to alleviate some of the community's problems by encouraging people to participate in voluntary work, such as donating money, working in volunteer centers, sharing health items such as home oxygen generator, and donating blood.

> "Many people became unemployed and had a lot of financial problems. We encouraged people to donate money to distribute it among these people." (Participant 20).

"Voluntary work was reduced. We all tried to invite people to come and cooperate." (Participant 11)

"Many families had COVID-19 patients at home and desperately needed an oxygen generator, while some had them at home and their patients did not need them, so we launched a campaign that anyone with an oxygen generator can share so others can use it."(Participant 26)

"Blood donation has reduced a lot. People did not go to donate blood for fear of COVID-19, so we went to the front of the houses and asked them to go and donate blood." (Participant 18)

- **Attending and cooperating in high-risk centers**

With the expansion of COVID-19 in Iran, some centers such as nursing homes, care centers for the disabled, addicts, and the homeless, which were high risk in terms of COVID-19 outbreaks, confronted many problems. Some employees of these centers were no longer willing to cooperate. Therefore, some people came to these centers voluntarily and cooperated. Also, as the death toll of COVID-19 had risen so much and the graveyard workers were under so much work pressure, some of the volunteers came to the aid of the graveyard workers and eased some of their workload.

"The nursing home was very dangerous and many of its employees were no longer willing to work there, so a friend of mine and I went there and worked for free." (Participant 23)

"Many of the volunteers I knew went to high-risk centers to help, centers such as shelters for the disabled and addicts" (Participant 9)

"The cemeteries were very crowded and the cemetery workers were really bothered, so I tried to work there." (Participant 2)

3.2. Challenges

The second category that emerged from the data was the challenges that individuals and groups of volunteers confronted in facing CVOID-19. It was a dangerous new disease that could have endangered the health of volunteers. Also, there was not enough information about it yet, and many volunteers faced challenges such as fear of getting infected, family barriers, rejection, and being different from other voluntary works.

- **Fear and worry of getting infected**

Many participants stated that they were very concerned about getting COVID-19 and endangering their health while doing voluntary work, and that they were also worried about transmitting the virus to family members after contracting it. That was why they were away from their families.

"I did not volunteer at first because I was really scared, but then I went, but I was still afraid of getting sick and dying." (Participant 15)

"I was afraid of getting COVID-19 and infecting my family, so I stayed away from them and lived in the basement." (Participant 3)

"I had done a lot of voluntary work before, but I was not afraid of any of them, but during the COVID-19 outbreak I was really scared and I often wanted to give up." (Participant 22)

- Rejection

Many participants stated that they had faced strong opposition from their families to volunteer during the COVID-19 outbreak, and that this had led to conflict and tension within the family. Because the families of these people believed that participating in such voluntary activities could cause their death and cause trouble to all family members. Some participants stated that by volunteering in sensitive centers, they were rejected by family, friends, and relatives so that they had to stay away from them.

"When I told my family I wanted to volunteer, they all objected and even my mother got mad at me because they were scared something would happen to me." (Participant 8)

"My wife objected that I volunteered, saying that 'you endanger your own health and that of our children.' This led to several fights between us." (Participant 30).

"Every day when I went out and came back, my family argued with me about why I went to a nursing home and I might get sick." (Participant 9)

"My family forced me to go and live in the basement, they said I might be a carrier and make them miserable." (Participant 3)

"Some of my friends cut with me when they found out I was doing voluntary work in the cemetery." (Participant 2)

- **Being different from other voluntary activities**

One of the major challenges facing the volunteers was the difference between COVID-19 voluntary work and other voluntary activities. In fact, it can be said that COVID-19 voluntary work was different from other voluntary work due to its overspread and stability as well as its risk to the volunteer. Another difference was that in other voluntary work such as floods and earthquakes, one could

see the results of one's work, but in the face of COVID-19, nothing could be predicted and the volunteers did not know how useful their work could be and did not see the results of their work. Due to the prolonged outbreak of this disease, another challenge of the volunteers was to retain people for volunteer work because in some cases the volunteers got tired after a while and left the volunteer activity.

> "Volunteering was much more complicated during the COVID-19 outbreak, because previously, if an earthquake or a flood occurred, it would cover a city or a province, but COVID-19 covered all of Iran and even the world." (Participant 7).

> "It only took a few days or a month to help the flood or earthquake affected people, but COVID-19 is almost two years old and it can be very tiring for volunteers like us." (Participant 12)

> "Volunteering poses no danger to the volunteer in other voluntary work, but in the face of COVID-19 we were all in danger and under more hardship" (Participant 29)

> "In other problems, when we did something, we saw the result, but in the face of COVID-19, it was not like that. We really did not know how useful our work was, for example, disinfecting the environment, we did not know how much it would affect." (Participant 5)

> "When we called for the first time, many people welcomed, registered and cooperated, but as time passed, the number of people reduced and we could not keep them. Many were tired." (Participant 5)

- **Experience of failure and helplessness**

One of the challenges that the volunteers faced was the experience of failure and helplessness because despite all the efforts they made, the number of hospitalizations and deaths increased day by day, and this made them feel frustrated and helpless.

> "I felt very bad, despite the fact that they worked hard day and night to ensure that the quarantine was observed, but again the deaths increased." (Participant 5)

> "Sometimes I felt like I could not do anything anymore and I was trying in vain because I saw more and more people die every day." (Participant 31)

- **The difficulty of the recruitment and cooperation process**

Due to the different conditions of voluntary work during the COVID-19 outbreak, the process of recruitment and cooperation during this disease was much more difficult than before, and most people in the society were reluctant to volunteer because they were worried about their health. Also, various organizations were reluctant to accept volunteers due to their lack of knowledge about the disease and not knowing how to use these volunteer groups to prevent and control COVID-19.

> "Early days, when we went to any organization and said that we had come to help, they refused us and told that COVID-19 was different from previous crises and that we could not help." (Participant 9).

> "Some organizations thought that our helping would disrupt their work, which is why they did not like that we cooperate." (Participant 4)

> "Previously, in other voluntary works, as soon as we called for assistance, a lot of people volunteered for cooperation, but in the time of COVID-19, this was not the same. Most people were scared and less people were willing to cooperate, so the number was very small." (Participant 21)

> "Sometimes we had to warn people not to enter the city or to camp in places of entertainment, and we did not allow them to rest there, so the people did not treat us well and sometimes they argued with us while we were just worried about their health." (Participant 15)

> "Some people thought we were more likely to have COVID-19, so they mistreated us." (Participant 5).

- **Lack of adequate instruction on how to help**

Because some individuals and groups of volunteers did not receive adequate training on how to help, they engaged in misconduct that could damage public property or even endanger their own health and the health of others.

> "We disinfected a series of ATMs, but then I found out that our work was wrong and caused the machine to break down." (Participant 10)

> "We did not receive any training on how to help, and this made it harder for us to endanger our own health and the health of others" (Participant 32).

> "Many of us did not know how to really protect ourselves because we had not received any training and our knowledge was at the level of ordinary people, so most of us got COVID-19." (Participant 35).

4. Discussion

The aim of this study was to identify the activities and challenges of volunteers in the face of COVID-19 in Tehran with a qualitative approach. The results showed that volunteer individuals and groups perform a range of activities from training to assisting medical staff and experience wide-ranging challenges including rejection, fear, and failure. These are discussed in the following.

Among the activities of the volunteer groups were training and informing in the field of COVID-19 and teaching students who did not have access to virtual education. Similar to this finding, Yoosefi Lebni et al., 2021 reported in their study that celebrities in Iran, as part of the volunteer forces, have provided training and information in the field of COVID-19 using their reputation [27]. Abbas, 2021; Al Siyabi et al., 2021 also emphasized the importance of local volunteer groups in providing accurate information and knowledge about COVID-19 and fighting misinformation and rumors [28,29]. Narine, 2020 also describes the training mission as one of the activities of the volunteers during the outbreak of COVID-19 [30]. Lasby, 2020 also points out that during the COVID-19 outbreak, volunteer groups in Canada turned to support and care for children and school [31]. With the outbreak of COVID-19, the existence of incomplete and incorrect knowledge and information caused confusion among the people, and this issue caused the disease and the health instructions to be ignored. Volunteer groups were involved in preventing and reducing the disease by informing the public. Another aspect of training by volunteer groups is related to teaching the students. In many cases, due to lack of access to online education facilities, they either fall behind in lessons or drop out of school, and the role of these volunteers in their progress and continuation of education is significant.

One of the main activities of the volunteer groups in the present study was the production, purchase and distribution of COVID-19 related hygiene items such as masks and disinfectants. Activities and assistance in the provision of medical equipment, such as setting up and working in workshops to produce protective items in various studies have been shown as areas of activity of volunteer groups during the outbreak of COVID-19 [13–15,32]. With the outbreak of COVID-19 and the surprise of the health system, access to health items was one of the challenges of the people and the health system, and the volunteers took a major step in fighting against COVID-19 by moving towards the production and distribution of health needs.

Economic aid to people in need and the purchase of virtual education equipment for students were other activities of the volunteer groups. In the study of Rezabeigi Davarani et al., 2021, one of the main activities of volunteers was to help vulnerable groups [8]. Also, identifying the weak, collecting public donations, preparing livelihood assistance packages and distributing them among low-income people have been among the activities of volunteers in Iran [13–15]. One of the consequences of COVID-19 has been the damage to the economic aspect of the people's life, especially the vulnerable and low-income groups, and this issue has become one of the main areas of activity of the volunteer groups so that they could reduce the economic pressure on the people.

Volunteer groups offered social, psychological, and counseling to the families of COVID-19 patients, as well as taking part in the burial of the deceased. Similar to results of this study, Amir-Behghadami et al., 2021; Jalali Farahahni et al., 2020 showed that volunteer groups of physicians provided telephone, online and in-person counseling to patients and their families [14,15]. Mao et al., 2021 in a study of voluntary activities in the UK, showed that emotional support was one of the most common activities of volunteer groups during the COVID-19 period [22]. In the Narine, 2020; Ntontis et al., 2021 studies, emotional and psychological support was also among the activities of the volunteer groups [30,33]. Walshe et al., 2021 in their study suggested that volunteers help people in activities such as emotional support and mourning gathering [34]. Getting COVID-19 or losing a loved one because of it can make a person mentally disturbed. One of the actions of the volunteer groups has been to help such people so that the person could cope with the new living conditions. They also assist in funerals and mourning due to restrictions imposed by COVID-19 and alleviate some of the pressure on the affected families.

Cooperation with government organizations to implement quarantine and activities such as screening and taking temperature and helping to close crowded places were other activities of the volunteer groups. In line with the results of this study, volunteer groups in Iran have been involved in providing manpower for cooperation with the official organizations in charge of fighting COVID-19 [8,28] and informing people through mosque loudspeakers and holding informing sessions on the cancellation of congregational prayers and religious gatherings [13,14]. Jalali Farahahni et al., 2020, also pointed out in a study that volunteers in Iran screened 70 million people for COVID-19 disease and its clinical symptoms by phone, online and in person in 20 days [15]. The activities of volunteer groups to provide social services can prevent government organizations from being pressured during critical events such as COVID-19. This is especially important when there is a shortage of manpower to screen or help restrict traffic during peak periods and waves of illness, and the presence of volunteers can be very helpful.

Disinfection of busy and crowded areas of the city was done with the participation of volunteer groups in the present study. Shirzad et al., 2020; Amir-Behghadami et al., 2021 in their research showed that volunteer groups were involved in cleaning and disinfecting busy thoroughfares, bakeries and gas stations that are dangerous places for the transmission of COVID-19 [13,14]. This activity was very common in the early days of the COVID-19 outbreak. Although this activity received less attention due to the scientific rejection of the effectiveness of disinfection of surfaces and its harms, the services of volunteers in this field cannot be ignored.

Cooperating with and supporting the medical staff by taking care of COVID-19 patients and volunteering to be vaccinated during the trial phase was another activity that volunteer groups undertook. The results of various studies in Iran have shown that volunteer groups of specialist physicians volunteered to help hospitals with staff shortages [13,15,35]. In a study by Miao et al., 2021 in China, logistical support for the front-line medical staff was one of the activities of volunteer groups [36]. In the study by Bazan et al., 2021 in Poland, medical students voluntarily undertook a variety of activities, including triage, serving at call centers for patients, and working in reception, hospital clinics, emergency departments, and diagnostic laboratories [37]. It was stated earlier that in the peak periods of COVID-19 disease, the lack of manpower in various fields of health was one of the challenges of the health system which

the presence of volunteers, especially those who were part of the country's health system, was very important and the amount of their help to the medical staff was very significant.

Encouraging and persuading people to participate in voluntary work, donating materials and money, sharing hygiene items such as home oxygen generator, and donating blood were other efforts of this research volunteer groups. In the study of Al Siyabi et al., 2021 in Oman, volunteers encouraged people to participate by organizing fundraising and blood donation campaigns [29]. In the study of Walshe et al., 2021, one of the main activities of volunteers was to raise funds from the people [34]. In the study of Yoosefi Lebni et al., 2021, it was reported that religious clerics, as one of the volunteer groups facing the COVID-19, due to their influence and good position in society, were able to attract many people to volunteer to prevent and control COVID-19 [38]. In addition to helping the health system and other organizations involved in the fight against COVID-19, the volunteer groups also paved the way for people's help, and their efforts were to encourage people to participate.

Attending and cooperating in high-risk centers such as nursing homes, care centers for the disabled and addicts, and COVID-19 burial cemeteries was the last activity of the volunteers. Ohta and Yata, 2021 in a study in Japan showed that social workers volunteered to help rural elderly and reduce their stress and fear [39]. Walshe et al., 2021 in their study showed that volunteers in the COVID-19 period provided services to elder people in nursing homes [34]. The results of another study showed that vulnerable groups are more likely to reach individuals that are marginalized or isolated to communicate important health messages and offer support to groups and individuals in their localities [40]. Given the widespread outbreak and prevalence of COVID-19 virus in crowded centers, servicing these sites was one of the main challenges; volunteers provided service to these centers without any expectations.

Volunteer groups in the COVID-19 field also faced challenges. One of these problems was the fear and worry of getting infected and transmitting the virus to others and family. In various studies, fear of losing health and getting COVID-19 have been among the concerns and reasons for the decrease in the willingness of volunteers to continue providing services [31,41,42]. In the study by Bazan et al., 2021, medical students volunteering to provide services in Poland expressed their fear of transmitting the virus to their families and their negative reactions as among their concerns and reasons for fear [37]. Chan et al., 2021 in a study in China and Mo et al., 2021 in a study in the US and China showed that volunteers experience some symptoms of fear and anxiety while providing services [43,44]. Therefore, the importance of the work and participation of the volunteers is much more prominent considering the possibility of their illness and even death.

Another challenge for volunteer groups was preventing families from participating because of the risk of COVID-19, which led to conflict between families and even the possibility of rejection by family, friends, and relatives because of the possibility of carrying the virus. Consistent with the findings of the present study, volunteers in the study Bazan et al., 2021, faced concerns about their own health from family and friends, and some were discontinued by parents and friends. Also, some of these volunteer students were rejected by family, friends and other students [37]. The families and relatives of the volunteers were the main opponents of the volunteers' activities due to the possibility of infection or the dangers of attending the care centers of COVID-19 patients, but despite being rejected, these forces still did not stop providing services and this multiplies the importance of their efforts.

Another challenge faced by the volunteers was the difference between their work in the field of COVID-19 and their other voluntary activities in the past, which was one of the new and interesting findings in this study. The extent of COVID-19 and not seeing the results of actions and activities were among these new challenges. Lack of treatment for COVID-19 in Lazarus et al., 2021 study was a reason for the lack of continued participation of volunteer groups in COVID-19 field [41]. In Mo et al., 2021 research, severe and uncertain working conditions were among the problems faced by volunteer service providers [44]. Many volunteers had experience in other fields, but the condition of COVID-19 was very different from their experiences and increased their fatigue and mental distress to the extent that, despite many efforts, many of them got disappointed due to failure to help to control the disease and reduce infection and death cases, but they continued to work and participate.

The difficulty of the recruitment and cooperation process due to COVID-19 being an emerging disease and the reluctance of people to participate voluntarily, along with the rejection of volunteers by people and organizations involved in the disease, were other challenges for volunteer groups. Seddighi et al., 2020 in a study showed that cultural issues, especially the rejection of volunteers by the public, have been among the challenges of volunteers in helping to fight COVID-19 [21]. Lasby, 2020 also points out that many organizations involved in the fight against COVID-19 are closing their offices for volunteer groups activities and asking them to work remotely [31]. Due to COVID-19 being an emerging disease and special circumstances, the acceptance of volunteers was hindered by both the people and some organizations, and this reduced the willingness and motivation of volunteers to participate.

The last challenge for the volunteer groups was a lack of training in helping and potentially harming and endangering their own health and the health of others. Numerous studies have identified the need for training as one of the issues that the lack of it disrupts the service provided by volunteers [45,46]. Lack of training on the management of aggressive patients and lack of general information about the characteristics of COVID-19 were identified in a study by Bazan et al., 2021 in Poland [37]. Lazarus et al., 2021 also showed in their research that volunteers' fear of harming patients reduces their willingness to provide services [41]. Volunteers, despite their willingness to participate and help with COVID-19, may need training to put their services in correct direction. This issue was especially prominent due to the rapid prevalence of COVID-19 and the lack of time to train volunteers in line with the basic needs to deal with it, and highlights the need to train and prepare volunteers in critical situations.

5. Strengths and limitations of the study

This study is one of the few studies that qualitatively examines the activities and challenges of volunteers in the face of COVID-19 from their own perspective, which can provide useful information to planners and policy makers to facilitate their participation. An-

other strength of the study was the participation of researchers from various disciplines and scientific fields such as health education, sociology, and psychology, health services management, which made the study of research subject from different aspects possible in the analysis and coding of data. The experience of volunteering of two of the authors of the article during the COVID-19 outbreak was another strength of the study because they were closely acquainted with the challenges faced by volunteers and when analyzing and coding data could have a better understanding of the interviews. This study was also accompanied by some limitations. One of the main limitations was identifying and accessing the participants because there were no official statistics or addresses of these people. The researchers accessed some of these people by referring to volunteer centers in the city, and then identified other people by using the snowball sampling method and overcame this limitation. The reluctance of some participants to interview in person was another limitation that the researchers satisfied them as much as possible by explaining the objectives and how to conduct the research, or if they were not satisfied, they used a telephone interview.

6. Conclusion

The results of the study showed that the volunteers in the face of COVID-19 have played a wide and varied role and in various ways have been able to provide a variety of support for government, health and social organizations as well as the general public, but given the special circumstances that the COVID-19 pandemic had they have experienced many challenges at the same time. Therefore, the ground for expansion of their cooperation can provided by solving their challenges through instructing and training them on how to help various organizations and people, encouraging them to accompany social and health organizations, providing opportunities for their participation by the government and responsible organizations and accepting them as trusted forces.

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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.

Data availability

Data will be made available on request.

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