

## Original Research

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





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### Corresponding author:

Katayoun Jahangiri,  
Email: [k.jahangiri@sbmu.ac.ir](mailto:k.jahangiri@sbmu.ac.ir)

# Challenges and Barriers to the Participation of Non-Governmental Organizations (NGOs) in Flood Management: A Qualitative Study from Iran

Sanaz Sohrabzadeh<sup>1,2</sup> , Parvin Shafiei Moghaddam<sup>3</sup> , Bayram Nejati-Zarnaqi<sup>1</sup> , Shiva Yousefian<sup>4</sup> , Davoud Pirani<sup>1</sup> , Ali Sahebi<sup>5</sup> , Iman Farrahi-Ashtiani<sup>1</sup>  and Katayoun Jahangiri<sup>1,6</sup> 

<sup>1</sup>Department of Health in Disasters and Emergencies, School of Public Health and Safety, Shahid Beheshti University of Medical Sciences, Tehran, Iran; <sup>2</sup>Air Quality and Climate Change Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran; <sup>3</sup>Rescue and Relief and Disaster Management Department, Iran Helal Institute of Applied Science and Technology, Tehran, Iran; <sup>4</sup>National Medical Emergency Organization, Ministry of Health and Medical Education, Tehran, Iran; <sup>5</sup>Non-Communicable Diseases Research Center, Ilam University of Medical Sciences, Ilam, Iran and <sup>6</sup>Safety Promotion and Injury Prevention Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

## Abstract

**Objective:** Floods are one of Iran's most important natural hazards, which cause a lot of damage every year. Various organizations, including non-governmental organizations (NGOs), participate in flood management. The present study aimed to explore the challenges and barriers of NGOs' participation in the management of the flooding in Iran based on stakeholders' experiences.

**Methods:** This qualitative study is a case study that was conducted using the content analysis approach. Fifteen participants, including 3 national managers, 2 volunteers active in responding to recent floods, and 10 NGO managers/secretaries who had the knowledge or operational experience of participating in disaster management, were approached for interviews. Data were collected using a purposeful sampling method and continued until reaching data saturation.

**Results:** Challenges and barriers to NGOs' participation in flood management were categorized into 4 main categories and 14 subcategories, including policy-making challenges, managerial challenges, executive challenges, and socio-cultural challenges.

**Conclusions:** As multiple NGOs take part in responding to disasters and performing relief operations, establishing a unified command and supervision system for effective coordination and collaborations among NGOs and other stakeholders is highly suggested. Further research is needed to develop a measurement tool for assessing the effectiveness of NGOs' activities during disasters.

Flood is the most common type of natural hazard worldwide and is expected to increase in their impacts in the future due to climate changes and demographic transition changes. In addition, to immediate threats to human health, floods are also associated with long-term consequences due to the displacement of people and the deterioration of their living conditions.<sup>1,2</sup> Floods are one of Iran's most important natural hazards, and the increase in the frequency and severity of floods has caused great human, financial, and economic losses in recent years.<sup>3</sup> Along with the responsible organizations, non-governmental organizations (NGOs) usually start their efforts to help the affected population immediately after the occurrence of natural disasters.<sup>4</sup> Although disasters lead to loss of resources and disruption in economic, social, and cultural activities, the public and charitable play an effective role in such situations, and managers can benefit from this capacity to improve the disaster condition.<sup>5</sup> Successful disaster management needs the community's active participation and cooperation.<sup>6</sup> NGOs are involved in the phase of disasters responses by delivering humanitarian aid.<sup>7</sup> These organizations can play important roles in 4 phases (ie, mitigation, preparedness, response, and recovery), and their participation in disaster planning is inevitable.<sup>8</sup>

NGOs support affected communities through delivering emergency relief services, shelter, and livelihood assistance.<sup>9</sup> According to the evidence, NGOs can actively participate in relief measures during disasters along with their governmental counterparts.<sup>10</sup> One of the most important problems in disasters is the distribution management of humanitarian aid and financial support to the affected people.<sup>11</sup> Considering the increase in the occurrence of disasters and the subsequent reduction in aid resources, humanitarian organizations face many coordination and collaboration challenges during their humanitarian measures.<sup>12</sup> For example, following 2

devastating earthquakes in Nepal, 3 NGOs faced many challenges due to inadequate relief planning, including the lack of access to information, the lack of coordination, and inaccessibility.<sup>13</sup> Cooperation among NGOs, government, and volunteers is necessary during the disaster response process. Since NGOs usually had little formal experience or training for activity in disasters, cooperation and interaction between them and also with government agencies have been weak. Thus, there is a possible increase in challenges.<sup>14</sup> The literature review showed the lack of studies on the challenges and barriers of the participation of NGOs in the management of natural disasters, especially floods, in Iran. Therefore, the present study aimed to explore the challenges and barriers of NGOs' participation in the management of the flooding in Iran based on stakeholders' experiences in 2019.

## Methods

### Design

The present research was a qualitative study using the content analysis approach which is the strategy of choice when existing theories or scientific literature on a phenomenon are limited. In this approach, data are directly collected without any presumption, and then codes, categories, and subcategories are extracted through an inductive process.<sup>15</sup>

### Setting

The present study was conducted in Iran between November 2019 and November 2020. Many regions in Iran are annually at risk of floods due to the country's climatic, topographic, and geomorphologic situation. Due to the increasing frequency of floods, the progressive urbanization and the settlement of people in areas at risk, the population affected by flooding has grown in Iran. It is estimated that the number of people living in areas at risk of this kind of hazard may reach 1.3 billion by 2050.<sup>16</sup> Heavy rainfalls and flash floods in late March and April 2019 in Iran affected about 10 million people in more than 2000 cities and towns across the country. More than half a million were displaced and evacuated from their homes. Among the affected provinces in Iran, 200 towns and 4304 villages and more than 75 000 urban and rural housing units were damaged, and also 6000 urban and rural housing units were destroyed completely. These floods killed 82 people and injured 2193 people in the affected provinces.<sup>17</sup>

### Participants

The participants were experts and key informants who had scientific knowledge or operational experience regarding NGOs' participation during disasters. Inclusion criteria were having at least 1 experience regarding NGOs' activities after disasters. The participants who were unwilling to take part in the study were excluded. The youngest participant was 26 years old, and all of them had the experience of playing roles in crises. Fifteen people were selected by purposive sampling method, which included managers and experts of the Red Crescent Society, the Public Participation Unit of the Ministry of Health, as well as managers and volunteers of NGOs active in disasters.

### Data Collection

Data were collected using in-depth semi-structured interviews with participants. A total of 15 interviews were conducted. Three in-depth unstructured interviews were initially conducted

to extract primary concepts, and then, 12 in-depth semi-structured face-to-face interviews were conducted using an interview guide. The interviews took place in a quiet environment where the participants felt comfortable. The participants were asked about their experiences in flood management. All interviews were recorded with a voice recorder. Data saturation was achieved after conducting 14 interviews, and an additional interview was also conducted to ensure that no new concepts emerge. The interviews were conducted from November 10, 2019, to July 23, 2020, and each interview lasted between 25 and 60 minutes (an average of 42 minutes).

### Data Analysis

Data collection and data analysis were simultaneously conducted. Data analysis was done using the Landmann and Granheim content analysis approach.<sup>18</sup> To achieve an overall perception of the interview, the main researcher listened to the interviews several times. After transcribing, the final texts of the interviews were frequently read and checked according to the recorded files. Then all the extracted material was gathered and integrated as a single text (ie, the unit of analysis). In the next step, the text was divided into meaningful units, and then the meaning units were summarized and labeled with codes. Afterward, the codes were compared based on their similarities and differences to put similar codes in the same categories and subcategories. The data analysis process was done several times, and emerging concepts were assessed by the research team.<sup>18,19</sup>

### Trustworthiness

The trustworthiness of this study was assessed using 4 indicators of credibility, dependability, confirmability, and transferability.<sup>20</sup> Credibility was approved via the triangulation strategy. In addition to interviews, prolonged engagement with the subject provided credibility. Moreover, peer checks were conducted in research team meetings and member checks were done by providing a summary of the analyzed interviews and extracted codes to the participants. Confirmability of the data was accomplished by the lead researcher. Transferability of data was confirmed by offering a comprehensive description of the subject, participants, data gathering, and analysis. Dependency was assured through the current article, which offers detailed information for other researchers to replicate and extend the study.

### Ethical Consideration

This study was approved by the Research Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran (ethical code: IR.SBMU.PHNS.REC.1399.114). Accordingly, all participants were requested to confirm informed consent for conducting the interview, voice recording, and transcribing. Then, the participants have explained the research purpose and interview method. In addition, they were assured about the confidentiality of their personal information and their right to stay or decline their participation in the study.

## Results

The participants' ages ranged from 26 to 48 years. Of these, 54% had work experience between 8 and 13 years (Table 1). Preliminary data analysis revealed 904 initial codes that were reduced to 576 codes after removing duplicates. Finally, the

**Table 1.** Demographic information of participants

No	Variable		N	%
1	Gender	Female	5	33
		Male	10	67
2	Age groups (year)	26-34	5	33
		35-43	7	47.3
		44-52	3	20
3	Work experience (year)	2-7	5	33
		8-13	8	54
		14-19	2	13
4	Job position	NGOs' manager	10	67
		NGOs' volunteer	1	7
		NGOs' expert	2	13
		health policy-maker	2	13

challenges and barriers to NGOs' participation in flood management were categorized into 4 main categories and 14 subcategories, including policy-making challenges with 2 subcategories of legal barriers and insufficient use of the experiences and lessons learned; management challenges with 4 subcategories of management commitment and approach, unified command, planning, and communication and information; executive challenges with 5 subcategories of safety and security, financial and logistical support, aid delivery, and distribution chain, supervision and evaluation, and education and awareness; and socio-cultural challenges with 2 subcategories of cultural barriers and social barriers (Table 2).

### Policy-Making Challenges

#### Legal barriers

Active and structured participation of NGOs in disasters requires appropriate policy-making and enacting binding laws in this area. The participants repeatedly described that policy-making and enacting laws for the participation rules of civil society organizations, along with reward and punishment rules, could facilitate the active presence of NGOs during disasters. Another important issue was to reconsider the legal barriers to receiving international aid and donations during disasters:

"... One of our gaps in the country is that we do not have the right policy-making and law enactment approaches for NGOs' participation, and of course, I should say that there are several laws on this issue, but they are not implemented, which creates challenges during crises..." (P3).

#### Insufficient use of the experiences and lessons learned

Another important NGOs' challenge was the lack of documentation of their information, experiences, and lessons learned. The existence of a system for recording experiences and information and using the lessons learned and failures or successes during a disaster can enhance preparedness against disasters. The documentation of this information and data mining can provide NGOs with comprehensive information, facilitating decision-making for the managers of these organizations at the time of disasters:

"... If we come together and review successful experiences and failures after each crisis, we surely would not make our mistakes again. We do not have a good documentation system for NGOs. Each organization takes pictures to document its work, but no data sharing is taking place..." (P7).

### Management Challenges

#### Management commitment and approach

The management team should have a strong commitment to the participation of NGOs during disasters. If the disaster managers are not committed and do not give priority to these issues, nothing happens. When NGOs' problems and challenges are not the priority of disaster managers, the participation of these organizations in disasters faces many challenges:

"... As long as the manager does not have a practical commitment to the issue of the participation of NGOs and civil society organizations, he/she would not give priority to this issue. This approach is a big challenge, and I think that our managers do not have a correct understanding of what are NGOs..." (P12).

#### Unified Command

Considering the position of NGOs in the ICS chart can be effective in improving their performance. In the affected area, everyone acted on their judgment and created barriers to the functioning of NGOs, as there was no unified command structure. The participant pointed out that the most important issue is the multiple decisions of crisis managers during disasters:

"... We have a major problem in the area on the field, and that is the lack of a unified command. Each manager works on his/her discretion and issues an order that makes NGOs many problems..." (P11).

#### Planning

The other important challenge of NGOs in flood management was the lack of planning for empowering NGOs to play their roles during disasters. The lack of short, mid, and long-term plans for NGOs' participation during disasters was another challenge mentioned by the participants:

"... Having a plan is the start point, the NGO's manager must have a plan on what to do and what measures to implement in the affected region. On the other hand, managers and commanders should also have plans to use NGOs' capacities during floods, so that they can benefit from their help..." (P15).

#### Communication and Information

Communication was extracted as an important factor for NGOs' participation in flood management to transfer accurate information to NGOs during floods. An information management system should be designed to rapidly communicate information (warnings, announcements, and so on) to NGOs at the time of floods. Designing a coordination structure for managers and NGOs, as well as NGOs with similar activities, can play an important role in enhancing NGOs' participation during disasters. Communication and information are vital for strengthening NGOs' capacities and networks, which result in promoting NGOs' participation:

"... , during the crisis, we see no communication and information management. Everyone at the scene is confused, and this is where one would understand the importance of communication. First of all, at least a coordination committee should be formed..." (P13).

#### Executive Challenges

##### Financial and logistical support

The challenge of local organizations' support from NGOs (special logistical items) was one of the other barriers to the NGOs'

**Table 2.** Categories, subcategories, and selected codes

Category	Subcategory	Selected codes
Policy-making challenges	Legal barriers	<ul style="list-style-type: none"> <li>■ Insufficient codified law</li> <li>■ Inadequacy of transparent rules for NGOs' participation</li> <li>■ Legal problems with the clearance of donations</li> </ul>
	Insufficient use of experiences and lessons learned	<ul style="list-style-type: none"> <li>■ Lack of a documentation system for NGOs' activities during disasters</li> <li>■ Inadequate documentation of NGOs' successful experiences in disasters</li> <li>■ Inadequate documentation of NGOs' failure during disasters</li> </ul>
Management challenges	Management commitment and approach	<ul style="list-style-type: none"> <li>■ Disaster managers' inappropriate attitudes toward NGOs' activities during disasters</li> <li>■ Lack of disaster managers' prioritization of NGOs' issues during disasters</li> </ul>
	Unified command	<ul style="list-style-type: none"> <li>■ Various decision-making centers for NGOs' activities during disasters</li> <li>■ The necessity of representatives for NGOs in the affected area</li> </ul>
	Planning	<ul style="list-style-type: none"> <li>■ Inappropriate planning for empowering NGOs during disasters</li> <li>■ Lack of long-term plans for NGOs' participation in disasters</li> <li>■ Lack of future research plans for NGOs' participation in disasters</li> </ul>
	Communication and information	<ul style="list-style-type: none"> <li>■ Insufficient organizational communication</li> <li>■ Poor communication among NGOs</li> <li>■ NGOs' inadequate communication with involved organizations during disasters</li> <li>■ Ambiguous and inadequate information</li> <li>■ The multiplicity of information resources</li> </ul>
Executive challenges	Safety and security	<ul style="list-style-type: none"> <li>■ Lack of accident insurance for NGOs' volunteers participating in disasters</li> <li>■ Lack of suitable PPE for NGOs' volunteers</li> <li>■ Security threats related to the presence of NGOs in the region</li> </ul>
	Financial and logistical support	<ul style="list-style-type: none"> <li>■ The necessity of support from NGOs by local organizations</li> <li>■ The necessity to supply NGOs with their minimum requirements in the affected area</li> </ul>
	Aid delivery and distribution chain	<ul style="list-style-type: none"> <li>■ Lack of possibility to provide aid for all affected areas</li> <li>■ Lack of coherent aid distribution mechanisms for NGOs</li> <li>■ Lack of proper transportation systems</li> </ul>
	Supervision and evaluation	<ul style="list-style-type: none"> <li>■ Lack of supervisory regulations on the NGOs' performance</li> <li>■ Insufficient supervision of the funds gathered by NGOs during disasters</li> <li>■ Disaster managers' meddling in NGOs' activities in the field</li> </ul>
	Training and awareness	<ul style="list-style-type: none"> <li>■ Lack of training for NGOs in disaster fields</li> <li>■ Lack of providing NGOs' volunteers with disaster-related training and exercise</li> </ul>
Socio-cultural challenges	Cultural barriers	<ul style="list-style-type: none"> <li>■ Ethnic pluralism and bias in the affected area</li> <li>■ High irrational expectations in vulnerable groups</li> <li>■ Lack of NGOs' awareness about customs in the region.</li> </ul>
	Social barriers	<ul style="list-style-type: none"> <li>■ Lack of NGOs' awareness about social issues in the affected region</li> <li>■ Insufficient public trust in government organizations</li> <li>■ Insufficient public trust in NGOs</li> <li>■ People's tendency to the activities of celebrities and influencers during disasters</li> </ul>

participation during floods. The necessity to supply NGOs with their minimum requirements in the affected area leads to their effective performance. So:

"... When we were in the area, they did not fulfill our basic needs. We had employed specialized forces ourselves and brought them to the area... But when we asked for some equipment from the municipality, even though they had them in their depots, they refused to give us..." (P8).

#### *Safety and security*

Providing the safety and security of NGOs in the disaster-affected fields was described as an important challenge by participants. For instance, the lack of incident insurance for volunteers despite the risks of providing relief services in the affected regions was a safety challenge. Based on the participants' experiences, some disaster managers had a security approach toward some NGOs' actions, especially those with international activities:

"... Volunteers forget about themselves in the area and ignore safety instructions. Another issue that is a great challenge is the insurance for

NGOs' volunteers and the fact that if anything happens to them, no one would take the responsibility. Another issue is a security approach toward the activity of NGOs..." (P7).

#### *Aid delivery and distribution chain*

Based on participants' experiences, the high prices of transportation, lack of relief aids for the affected area, heavy traffic on the first days after the flood, unfair distribution of aid, local authorities' meddling with the distribution process, and lack of a coherent mechanism for distributing livelihood packages were the most important challenges of aid and distribution chain:

"... One of our great problems was that we could not transport many packages and items that we had to take to the affected area. Besides, the items reaching the area had not been distributed fairly..." (P6).

#### *Training and awareness*

Participants acknowledged that disaster-related training was necessary for NGOs' volunteers. They believed that spending money

in this area is an investment for NGOs. Participants highlighted the need for special disaster training to be held for disaster managers and NGOs volunteers. In addition, volunteers should become aware of their duties and capacities as well as use PPE appropriately at the time of floods:

"... Education and training are very important, and training should be continuous for the managers of NGOs, and their volunteers. I here confess that if we had been trained, we would have done and managed much better in the flood incident..." (P5).

### *Supervision and evaluation*

Supervision and evaluation of NGOs' activities during disasters are important factors to improve their services. In addition, launching a supervision and evaluation system based on feedback along with the regular monitoring of software and hardware systems can lead to effective participation of NGOs. On the other hand, the unprofessional and intrusive supervision of NGOs' activities by some disaster managers was mentioned by participants:

"... Due to the presence of numerous trustees and the lack of appropriate systems, there is no monitoring of the performance of NGOs during disasters, and when there is no assessment or a system for punishment and rewards, each NGO proceeds with its actions..." (P14).

### *Socio-Cultural Challenges*

#### *Cultural barriers*

Our findings indicated an ineffective link between NGOs and the local people living in the affected area. Lack of knowledge and awareness about the customs and culture of people in the region as well as insufficient interactions between NGOs and local people were challenges described by participants:

"... The culture and customs of a region are very important. As we are from Tehran, when we arrived in the region, we faced many challenges on the first days because we were unfamiliar with these issues. A number of our actions had made the local people angry..." (P1).

#### *Social barriers*

Extreme expectations from NGOs at various levels, people's inadequate confidence in the capabilities and roles of NGOs, insufficient trust in governmental organizations, and people's tendency to the activities of celebrities and influencers were the most important challenges of NGOs during disasters:

"... During a disaster, what is most important is trust. People did not trust us, and sometimes they themselves hindered our work. People did not trust us even as much as an influencer..." (P2).

## **Discussion**

According to the findings, policy-making, management, executive, and socio-cultural challenges were the main challenges of NGOs' participation in floods including legal barriers, inadequate use of experiences and lessons learned, some improper management approach, lack of unified command and planning, poor communication and information, poor financial and logistical support, training issues, an incomplete chain of aid supply and distribution, lack of supervision and evaluation, and social and cultural barriers.

One of our findings was the lack of planning for the effective use of NGOs' capabilities and experiences as well as determining NGOs' roles in disasters. The results of a study by Tingsanchali (2012) that analyzed urban flood management showed that in most developing countries, government agencies were responsible for flood management and that NGOs and private organizations

had very limited involvement.<sup>21</sup> Another study highlighted the lack of proper planning to utilize NGOs' capacities in flood management. Because NGOs can play an important role in the 4 stages of disaster management, using their capabilities requires the development of a comprehensive strategic plan at the national level. Due to their actions in various disasters and their voluntary nature, NGOs have valuable experiences that can be considered by governments to develop appropriate programs.<sup>22</sup> Similarly, a study of the roles and functions of governments and NGOs in the 2010 Pakistan earthquake showed that in the affected areas, NGOs were more successful in coordinating with government agencies.<sup>23</sup> Therefore, it seems that the elimination of administrative bureaucracy and government support for the activities of NGOs can be effective in the optimal use of NGO capacities.

The results of the present study showed the lack of an appropriate management approach toward the contribution of NGOs in the flooded area. A study on flood management in Thailand implied that the cooperation of the government with NGOs in flood risk assessment and implementation is the most important factor for the successful implementation of flood management strategies.<sup>21</sup> The results of Peters' study (2011) on the contribution and performance of NGOs following a natural disaster revealed that the barriers made by governments as well as the governments' refusal to accept NGOs reduced NGOs' contribution and performance.<sup>4</sup> The managers of disaster management organizations are advised to review the activities of NGOs in different phases of previous flood management, as well as align the activities of NGOs with the missions of their organizations. This action can reduce dissatisfaction and avoid wasting NGOs' resources.

Based on the findings, many NGOs participated in the management of recent floods in Iran, but each of them acted based on their own decisions. In the study of Johan et al. (2019), it was described that poor coordination, more especially inter-organizational coordination was a major challenge for humanitarian organizations.<sup>24</sup> This issue contributed to the increase in casualties, costs, loss of resources, and inadequate aid distribution.<sup>24</sup> Similarly, the findings of Yi Lu (2021) showed that NGOs' effective performance in disaster management required inter and intra-organizational coordination and the establishment of effective relationships with governmental agencies.<sup>25</sup> Therefore, it can be concluded that inter-organizational coordination and establishing a unified command among NGOs are necessary to improve the effectiveness of relief activities during disasters.

Based on the findings, communication and information management were the important challenges of NGOs' participation in the recent floods in Iran. Poor communication with other organizations and institutions involved in flood response hampered the possibility of effective communication with NGOs. The study of Azmat (2019) showed that implementing a complete and successful supply chain required not only excellent and strong coordination and collaboration, but also the sharing of information and resources among local and international NGOs (26). Accordingly, utilizing advanced satellite-based communication and information methods during disasters can be very effective.<sup>27</sup> In addition, it seems that launching a specific and effective information and communication system for NGOs can empower them to effectively communicate with other organizations during the response phase.<sup>28</sup>

Cultural barriers were considerable challenges for NGOs to participate in the management of recent floods. The participants stated that the unfamiliarity of NGOs' volunteers with the local customs, language, and religious and social beliefs hindered the

establishment of mutual communication and trust between NGOs and affected people. In accordance, Perilla (2002) reported the ignoring of cultural differences during the response to natural disasters as a weakness of service provision to affected people.<sup>29</sup> Furthermore, Baytieh (2017) emphasized the impact of socio-cultural factors on response to disasters and the role of religious organizations in reducing risks during crises.<sup>30</sup> The study of Senimoli (2020) revealed that indigenous attitudes and cultures and kinship networks can play a significant role in response to disasters and improve the public trust and indigenous participation.<sup>31</sup> Regarding the ethnic, cultural, and religious diversity in Iran, NGOs should familiarize themselves with different cultural factors in the community and recruit members from the affected community to effectively accomplish relief operations and maximize their capacities during disasters.

## Conclusion

Based on our findings, NGOs faced various challenges and barriers during the flood in Iran. Different NGOs are involved in all phases of disaster management, especially the relief and response stages. Thus, NGOs activities should be strengthened because they can improve mitigation, preparedness, response, and recovery actions and finally save more lives in disasters. To improve NGOs' activities, establishing a unified command and supervision system for effective coordination and collaborations among NGOs and other stakeholders is highly suggested. In addition, designing and implementing education and training programs for NGO staff can improve their disaster-related knowledge and skills. Strengthening the information and communication infrastructure and resources, as well as financial support for NGOs, is suggested to increase NGOs' motivations for more humanitarian actions in future disasters. The future national plans and strategies of disaster management need to consider the supportive rules and reform inappropriate legal barriers to NGOs' participation in disaster management activities. In addition, the lessons learned from previous disasters in Iran and other countries should be gathered and applied for the effective actions of NGOs in future disasters. Further research is needed to develop a measurement tool for assessing the effectiveness of NGOs' activities during disasters.

**Data availability statement.** The data sets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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**Conflict(s) of interest.** None

**Ethical standards.** This study was approved by the Research Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran (ethical code: IR.SBMU.PHNS.REC.1399.114). Informed consent was obtained from all of the participants.

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