Disaster Medicine and Public Health Preparedness

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Challenges and Barriers of Humanitarian Hygiene Items Management in Recent Disasters in Iran

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Original Research

Cite this article: Adibi Larijani H, Moslehi S, Barghi Shirazi F, Pashaee Asl Y, Alikhani A, Fatemi F. Challenges and barriers of humanitarian hygiene items management in recent disasters in Iran. *Disaster Med Public Health Prep*. **17**(e150), 1–6. doi: https://doi.org/10.1017/dmp.2022.62.

Keywords:
disasters; health management; humanitarian assistance; hygiene items; supply management

Abbreviations:
EMT, emergency medical team; NGO, non-governmental organization; STI, sexually transmitted infection; UNFPA, United Nations Population Fund

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Abstract

Objective: The provision and continuation of the basic needs of affected communities, including water, food, and shelter remain the most important priorities in responding to disasters. In this regard, this study sought to investigate the management challenges of humanitarian hygiene items in recent disasters in Iran.

Methods: This qualitative study was conducted through a semi-structured interview. Nineteen participants with different experiences, roles, and responsibilities in the recent disaster of Iran and experiences of various events in the national and international arenas were included in the study. A thematic analysis was used, and an initial conceptual framework was defined based on the study aim. The relationship between the components was compared and interpreted in this framework and the main and subthemes were extracted accordingly.

Results: Six main themes and 21 subthemes were extracted based on the results. The main challenges in recent disasters were the lack of protocols and standard guidelines, inappropriate selection of items in each hygiene kit, the lack of standard distribution of hygiene kits, and the lack of attention to the affected population's culture.

Conclusions: Overall, it is necessary to define a system for preparation, supply, storage, and timely distribution of hygiene. Finally, it is suggested that an organization should be appointed for this purpose.

Disasters in vulnerable communities can have negative direct and indirect consequences with the destruction of vital infrastructures leading to a disruption of the supply chain and the transfer of essential items.[1] According to the standards of the SPHERE project, the beneficiary of welfare facilities, hygiene kits, and dignity are the rights of all refugees and displaced and injured individuals.[2]

Sanitation kits can include soap, combs, mirrors, shampoo, sanitary pads, razors, towels, nail clippers, and underwear for men, women, and children, as well as scarves, socks, and long-sleeved shirts for women in Muslim countries.[3] Health kits should be provided based on the culture and needs of the region and the needs of both genders and different ages.[4] Health items are especially important for women because in some cultures, it is difficult to distribute a sanitary pad because it is taboo, and men do not feel comfortable getting it for their wives, sisters, or daughters. Therefore, access to sanitary pads is a challenge in disasters. In addition, immigration and relocation make it harder for people to access health items[4,5]; based on a UNHCR report, the number of global forced displacement likely exceeded 84 million by mid-2021.[6] Gender inequality intensifies in critical situations. Women and girls face many difficulties in obtaining health items in low-income countries. Governments should strive to provide women with shame-free access to health items such as sanitary pads in times of disasters.[7] In humanitarian settings, refugee camps such as the Rohingya refugee camps of Cox's Bazar, women and adolescent girls have insufficient access to hygiene items.[8] To ensure the health, well-being, and dignity for all women, children, and men, health items should be provided and distributed in culturally appropriate ways. Moreover, training should be provided for their use if necessary.[9]

The hygiene kit has a significant effect on preventing infectious diseases,[10] improving mental health, developing human dignity, and ensuring the security of women and girls. For example, the unavailability of sanitary pads affects the participation of women and girls in society, economic activities, school attendance, and education in normal circumstances and disasters. Accordingly, distributing a hygiene and dignity kit as a right of the community is of importance.[11] Due to coronavirus disease (COVID-19), the distribution of hygiene kits in camps is felt necessary more than ever.[12] One of the best experiences in the world to perform

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humanitarian activities was during the 2015 Nepal earthquake, during which the Ministry of Women's Affairs launched the "Dignity First" campaign and distributed health packages among the woman and adolescent girls affected by the Nepal earthquake.[13] Additionally, the United Nations (2014) issued a hygiene kit to Somali refugees in Yemen.[14] Based on the evidence, access to hygiene kits such as shampoos, women's health items, and detergents was the main challenge of the affected population in Southern Syria.[15]

There are various experiences in this regard in Iran. In a study conducted after the earthquake on December 26, 2003, in Bam, people pointed to problems such as lack of access to sanitary items in the early hours after the earthquake and improper distribution of sanitary items, especially sanitary pads. Women in Bam used broken mirrors in the rubble, which was highly effective for them psychologically.[16] During the Varzaqan and Ahar earthquakes that occurred in East Azerbaijan Province in 2012, even after years of the Bam earthquake, some people, especially women, still considered the distribution of the hygiene kits inappropriate.[17] In the recent disasters (eg, the 2019 Lorestan and Mazandaran floods and the 2017 Kermanshah earthquake), studies demonstrated that the distribution system of hygiene kits and essential health items among the affected population was one of the responses that could be improved in disaster management in Iran,[18] confirming the need to inform authorities and take measures in this regard. The lack of proper planning in the selection, distribution, and monitoring of distribution can lead to parallel work, inequality in access, waste of time, and waste of financial resources.[19]

This study aimed to evaluate the challenges and barriers in the supply chain, and distribution and access to essential hygiene kits in recent disasters in Iran. The findings of this study are expected to improve the level of awareness and attention of the authorities to the real needs of the affected population from the early hours of the response phase.

Methods

The purpose of a qualitative study is to identify the challenges and barriers of managing humanitarian hygiene items in recent disasters in Iran.

The inclusion criteria were having 5 years of experience in the field of disasters and being present in at least one of the response operations of the Varzaqan earthquake,[20] Bushehr earthquake,[21] Kermanshah earthquake,[22] Golestan flood,[23] Lorestan flood,[24] and Khuzestan flood,[25] or having responsibility in participating organizations. On the other hand, the exclusion criteria were the person's unwillingness to participate in this study and insufficient information on the supply and distribution of required hygiene items in disaster-affected areas. Participants included 19 people, including 3, 1, 5, 1, 7, and 2 cases from reproductive health non-governmental organizations (NGOs), the United Nations Population Fund (UNFPA), medical universities, the Ministry of Health, Red Crescent volunteers, and the Red Crescent Society, respectively. Purposeful sampling based on the snowball method was used in this study. To consider the maximum diversity in the samples, it was attempted to sample people with different genders, age ranges, education levels, experiences, and roles in disasters. Sampling continued until complete data saturation. The semi-structured interview was conducted for data gathering. The guide was applied in 2 experimental interviews, and the results were confirmed by the research team.

After the interviews, each taking approximately 90 minutes, all their contents were transcribed, and then a code was assigned to each of the texts. Graneheim and Lundman's thematic analysis method was used.[26] Further, a basic conceptual framework was defined according to the interview guides, and then the codes were extracted from the interview texts. This guide was written by the researchers, and 3 interviews were conducted as a pilot evaluation to improve the guide. First, the researcher explained the purpose of the research to the participants, and an interview was conducted after obtaining an informed written consent upon each participant's acceptance. The interviews were performed using a tape recorder, and data saturation occurred from the 15th interview.

Participants were asked the question, "What were the challenges and problems with household hygiene needs in the disaster in which you were involved?" Each interview also included follow-up questions such as, "Can you explain more about this?" and "What did you mean by that . . . ?" Finally, the participants were asked to state their final remarks. Several questions were designed based on the participants' answers and the interview process, followed by comparing and interpreting the relationship between the components. MAXQDA software (version 10)[27] was used to analyze the obtained data. According to the objectives of the study, a theme bank was created and the main and secondary themes were extracted accordingly. The final report was completed, and, finally, testimonies were quoted directly from the interviewees inside the quotations based on the obtained data for each subtheme related to its main theme. For assessing the quality of the current qualitative study, 4 trustworthiness criteria were used, including credibility, transferability, dependability, and conformability according to the Lincoln and Guba framework.[28] The constant comparison, active listening, prolonged engagement with data, and immersion in data were employed to increase credibility. Furthermore, researcher triangulation techniques were used, followed by striving to recruit a sample with the maximum variation of findings for improving transferability. Documentation and record-keeping of analytic activities were used for the dependability of the findings. The confirmability of the study findings was ensured using peer-checking and member-checking techniques.[26]

Results

Participants of the study were 19 people with experience in one of the recent disasters in Iran (Table 1).

According to the analysis of interviews, 6 main themes and 21 subthemes were extracted, which are described in Table 2.

The main themes included problems and challenges detected in the selection of hygiene items, provision, packaging and storage, and distribution of the hygiene kit, cultural challenges, and the 1-dimensional nature of these packages.

Based on the study findings, no organization(s) have been assigned to be responsible for the supply and distribution of health items needed by people in disasters. In this regard, 1 participant stated: *In the field of supply and distribution of health equipment and supplies, there is no organization in the country that is responsible for this issue.*

Some women suffer from increased abortion rates[29] and vaginal bleeding disorder[30] due to trauma and stress, and need the sanitary pads. These items were unavailable for distribution in the early hours. According to 1 participant: *Some of the victims told us not to give me water or food, please pay attention to our hygiene needs.* In the early days, after the 2017 Kermanshah earthquake, some hygiene kits were distributed as ready-made packages by

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Table 1. Characteristics of participants in the study

Participant number	Education	Age	Gender	Service location
Participant 1	Master of Midwifery	35	Female	Reproductive health NGO
Participant 2	Master in Psychology	41	Female	Reproductive health NGO
Participant 3	Gynecologist	58	Female	Reproductive health NGO
Participant 4	PhD in IT	63	Female	UNFPA
Participant 5	BS of Nursing	35	Male	Medical University of Lorestan
Participant 6	BS of Midwifery	33	Female	Medical University of Kermanshah
Participant 7	BS of Midwifery	41	Female	Medical University of Golestan
Participant 8	BS of Nursing	38	Female	Medical University of Esfahan
Participant 9	General Practitioner	44	Male	Medical University of Yazd
Participant 10	BS of Nursing	46	Female	Ministry of Health
Participant 11	Master in Psychology	45	Male	Staff of Red Crescent Society of Khuzestan
Participant 12	Master of Midwifery	37	Female	Staff of Red Crescent Society of Qazvin
Participant 13	General Practitioner	45	Male	Volunteer of Red Crescent Society of Hamedan
Participant 14	Master of Midwifery	48	Female	Volunteer of Red Crescent Society of Kermanshah
Participant 15	BS of Midwifery	45	Female	Volunteer of Red Crescent Society of Lorestan
Participant 16	General Practitioner	54	Male	Volunteer of Red Crescent Society of Mazandaran
Participant 17	BS of Nursing	42	Male	Volunteer of Red Crescent Society of Kermanshah
Participant 18	BS of Nursing	35	Female	Volunteer of Red Crescent Society of Bushehr
Participant 19	Master of Midwifery	46	Female	Volunteer of Red Crescent Society of Tehran

Table 2. Challenges and barriers related to hygiene items management

N	Number of interviewees	Subtheme	Main theme
1	3	Shortage of specific national standard for distributed hygiene kit weight	Selection of hygiene items
2	6	Insufficient number of hygiene kits inside distribution packages	
3	4	Failure to select items correctly based on household needs	
4	10	Not priority in preparing and providing hygiene items in the eyes of responsible organizations	Providing hygiene items
5	6	Lack of needs assessment to provide hygiene items	
6	7	Uncertainty of the trustee for the supply of health packages	
7	7	Not preparation of hygiene items before the accident	
8	2	Shortage of comprehensive guidelines for structuring hygiene items	
9	8	Shortage of comprehensive instructions for storing standard hygiene items	Packaging and storage of hygiene items
10	4	Uncertainty of the custodian of the hygiene items	
11	6	Lack of standard template for packaging items (open distribution)	
12	4	Shortage of comprehensive guidelines	Distribution of hygiene items
13	5	No specific trustee	
14	5	Distribution of women's health packages in the public	
15	13	Shortage of distributed hygiene items	
16	11	Not timely distribution of the hygiene items	
17	7	Spontaneous distribution by the people	
18	16	Women's shyness in asking for their hygiene needs	Cultural and religious
19	12	Shortage of public awareness about access to hygiene items	
20	10	Lack of hygiene kit due to religious beliefs of the victims	
21	7	Ignoring men's hygiene needs by responsible organizations	One-dimensionality hygiene kit

the UNFPA and the Iranian Red Crescent Society's health teams (EMT1). Moreover, these voluntary and spontaneous actions of the people and NGOs can be helpful and better managed. Another noted challenge was the inappropriate number and type of included items in the package so that some items were completely ignored or the predicted number for those cases was more or less. According to the authorities and their preferences, the provision and distribution of the relief items such as tents, heating equipment, food, and water were considered priorities over the hygiene kit.

Based on religious beliefs, the distribution of certain items, which may not be hygienic in nature but are urgently needed by the family, especially women, is of great importance.[4] Additionally, some of these items are effective and subsequently prevent the spread of sexually transmitted diseases, reducing the burden of visits to the health care system and staff workload while

https://doi.org/10.1017/dmp.2022.62 Published online by Cambridge University Press

saving limited resource consumption. The hygiene kit had not been assessed or prepared prior to the disaster, and there was a need for instructions on how to prepare, distribute, and store these items. In some recent disasters, the hygiene kit was distributed without packaging, and in public view, making it difficult for women to receive these items due to shyness and cultural issues, thus they hid them under their clothes when carrying them home. One participant added: *People had difficulty delivering hygiene items and some of them refused to receive the required supplies because some items were distributed openly and in bulk.*

According to research findings, another posed challenge by the participants was the lack of attention to men's hygiene needs by organizations. The men were responsible for providing security and livelihood for the family, thus they paid less attention to meeting their health needs. Further, the responsible organizations paid less attention to providing hygiene needs for affected people. One participant commented: *Due to the lack of hygiene items such as soap, underwear, and sanitary pads, the rate of sexually transmitted infections had increased and we had to send medicine to treat affected people for STIs. Men, like women, needed underwear and felt the shortage of it.*

Discussion

In the occurrence of disasters, the vulnerability of the community endangers the health of individuals and poses serious problems in providing health services.[31] In addition, the health and well-being of the community become extremely poor due to violence and insecurity, population displacement, and the collapse of the health care system. In particular, women's hygiene and cosmetic needs are felt in a more highlighted way.[32] Unfortunately, the lack of access to hygiene kits can have a greater impact on people's health in poor areas, along with having more consequences that require special attention in these areas.[33]

According to the study findings, the organization with specialized responsibility in the supply chain of hygiene items has not been determined in the structure of response to the disasters of the country, and there is a lack of national protocols and standards for choosing the items of a hygiene kit. Similarly, NGOs and the private sector have good capacities in the supply chain of the required items by the affected people that can be used in the best way by organizing and concluding a memorandum of understanding in advance.[34]

Accordingly, choosing the right hygiene items based on household needs and their timely distribution plays an important role in community health, including disease prevention, ultimately leading to reduced harm and risk in the affected community, especially vulnerable groups. It is necessary to pay attention to meeting these needs in the disaster response program.[35] The results of another study showed that policy-makers, health planners, and health care providers should meet women's hygiene needs as a priority.[36] After a disaster, untimely bleeding is expected due to severe stress on women, and most of them declare that pad and underwear are one of the essential items in the early hours.[16] Another study reported that some of the problems women experienced in the post-disaster context were due to the lack of access to health resources, including the lack of access to adequate water for sanitation, lack of sanitary napkins, and reduced access to detergents.[7] It has also been linked to the spread of genital infections. Insufficiency of the distributed hygienic items was another challenge noted in the study. In addition to the shortage of resources, in general, the specified items to each person were inappropriate in type and number in a way that some items were ignored or their predicted number was inefficient.

Another challenge expressed in the study results has been the provision of disaster-affected health items. According to officials,[37] relief items such as tents, heating equipment, food, and water were prioritized over the hygiene kit. Regarding the provision of the necessary hygiene items for the households, the results of a study[38] demonstrated a correlation between the formation of assessment teams, training of these teams, rapid assessment of needs, and strengthening of the position of management knowledge with improving the level of on-time accountability in a disaster. Most countries provided dignity and hygiene kits through water and sanitation kits and some countries considered these items as a separate kit.[39]

The 1-dimensionality of the hygiene kit was another challenge, and this is one of the lesser-known issues in the disasters. During disasters, women's health is more at risk compared to men, and as a vulnerable group, suffer more severe injuries due to personal and social factors. Further, their vulnerability in emergencies such as natural disasters is highlighted for a variety of reasons, including inequality in access to resources.[35,40]

It is noteworthy that ignoring men's hygiene needs, which was also mentioned in the findings of the present study, can be highly effective in relation to health needs at the time of disasters. As a half of the community's active population, men pay less attention to their own needs because they are responsible for providing facilities for the family and thus do not seek hygiene items for satisfying their requirements.[41] Despite all of these interpretations, men's health status, which is one of the most vital health issues in society, has received less attention.[42]

There were also problems with the packaging and storage of the hygiene kit, indicating the need to take steps in providing the supply chain of the kit before the crisis and in the preparation phase. Thus, the environmental and safety standards of the warehouses of the required hygiene kit in the disaster for a certain period of time should be considered, especially according to the climatic conditions of each region, the conditions and location of the warehouse, and the type of items. In this regard, establishing some standards is extremely crucial for the packaging and storage of hygiene kits, and the existence of evaluation checklists in the responsible organizations is a necessity.[43]

The distribution of the hygiene kit was another feature of the study findings. For an appropriate and effective response, the selection of the hygiene kit distribution method should be based on the needs of the affected people and should be performed in consultation with this group. In the distribution of dignity and hygiene kit timing, safe location and the engagement of female personnel are extensively essential for the mitigation of gender-based violence.[9] The lesson learned from the 2017 Kermanshah earthquake in relation to the hygiene kit has shown that having enough information about how and where to distribute essential items to affected people was of high importance, which is possible to achieve by training responsible personnel before and early after the disasters.[22]

In another study, people's dispersal, the lack of knowledge about the time and place of hygiene kits distribution, and women's shyness are among the factors that prevent people from access to hygienic items.[44] The findings of another study related to hygiene kits revealed that the disaster relief and management in the affected area are often conducted regardless of the culture, beliefs, and special needs of the victims while the choice and method of distributing the required hygiene kit by the affected people should be

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planned based on full knowledge and attention to social and gender differences. In the face of a crisis, ignoring the differences between different ethnic groups and communities can challenge society in some way.[45] To distribute hygiene kits, recognizing different needs of societies is critical for planning and managing disasters.[46]

Hygiene items should also be prepared and distributed according to the religious and cultural beliefs of the victims. Furthermore, in selecting, packing, and distributing hygiene items, paying attention to the culture and ethnicity of women in each region is of great importance to provide basic needs such as sanitary pads, underwear, and other items to the victims in case of a crisis, based on the culture of the region.[47] Hence, responding to the health needs of affected people by disasters requires defining a specific process with trained personnel.[48,49]

Given the importance and necessity of providing the health needs of the family, especially women at the time of disasters, it is necessary to consider responsive organizations to meet these needs in the structure of disaster responses.[50]

Limitations

In this study, only the experts' opinions were evaluated for identifying the challenges. Thus, it is recommended to assess the opinions of the affected population in future studies.

Conclusions

Overall, providing affected people with the hygiene kits and distributing them are among the priorities of a successful disaster response program, which reduce the health problems of affected people, prevent some health-related diseases, and save rare resources. It is recommended that the preparation, storage, and distribution of health packages be managed in an integrated manner. Additionally, the standard guidelines for each of the above-mentioned steps regarding hygiene packages should be provided by the responsible organization.

Desirable coordination between the responsible organizations is one of the basic steps prior to and during disaster circumstances. Moreover, hygiene kits should be prepared in terms of quality, quantity, and type of items and according to the cultural and religious sensitivities of each region. Packages should be made waterproof, shockproof, standard, and portable as possible by a woman, and a suitable place should be considered for easier access for women at the time of distribution. In addition to the required hygiene kit, it is possible to pay attention to men's hygiene needs. Distribution in stages and based on continuous evaluations is also suggested as one of the appropriate solutions. Further, due to the necessity of continuing meeting people's hygiene needs, it is possible to properly organize large capacities of public donations and funds. Due to the impassability and remoteness of some areas or the insecurity of access roads, it is recommended that health packages be distributed on a mobile basis in these areas.

Acknowledgment. The authors thank the Semnan University of Medical Sciences and Health Services.

Ethical standards. The ethical approval of this study was obtained from the Ethics Committees of the Semnan University of Medical Sciences and Health Services in Semnan, Iran (IR.SEMUMS.REC.1400.093).

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https://doi.org/10.1017/dmp.2022.62 Published online by Cambridge University Press