

Investigating the Readiness of Red Crescent Society Staff Against Risks in Khorasan Razavi Province

Maryam Yosofi Sigari¹, Mohammad Sadegh Tavakoli Sani² , Sayed Mojtaba Ahmadi³

¹ CEO, vice chancellor, Deputy of Training and Research, Red Crescent Society, Mashhad, Iran

² Expert in public training, Deputy of Training, Red Crescent Society, Mashhad, Iran

³ CEO, Red Crescent Society, Mashhad, Iran

ARTICLE INFO

ORIGINAL ARTICLE

Article history:

Received: 16 July 2018

Revised: 20 Nov. 2018

Accepted: 10 Dec 2018

*Corresponding author:

Mohammad Sadegh Tavakoli Sani

Address:

Red Crescent Society of Khorasan Razavi, Peace building, 1th North Bozorgmehr, Mashhad, Iran

Email:

Sadeghtva121@gmail.com

Tel:

+985137669888

ABSTRACT

Introduction: Recent experiences with disasters have shown that warnings must be taken seriously and people in different groups should have necessary preparations to deal with the hazards in Iran as a natural disaster waiting country. The readiness of the relief agencies as one of the first responding organizations involved in crises as well as the readiness of their families as an effective parameter in the response of the relief agencies should be addressed. The purpose of this study was to determine the state of readiness for hazards among the staff of the Red Crescent Society of Khorasan Razavi, Iran.

Methods: This cross-sectional, descriptive study was conducted in 2018. The study population consisted of all personnel of the Red Crescent Society of Khorasan Razavi province (n: 146). Sampling was done by census. The level of preparedness was assessed and evaluated by the indicators determined by the Ministry of Health and Medical Education for assessment of the level of household readiness (HDPI) using descriptive statistics.

Results: The results showed that the lowest readiness index (2.75) was observed among the staff of the Relief and Rescue Deputy. The most qualified staff of the society were in the Education Deputy who attained the highest score (5.25).

Conclusion: Although relief the staff are expected to be present at crises immediately and conveniently, the low score in this index, that is, the lack of readiness of staff's families, might be very effective on staff performance and could even reduce their attending the department at crisis. Therefore, special attention should be paid to promoting their readiness

Keywords: Readiness, Red Crescent Society, Dangers, HDPI

Introduction

Iran has a variety of climates and different environmental conditions that are the source of several known hazards of natural origin. In other words, Iran is one of the natural disaster-waiting countries in the world (1); as out of 42 known types of disasters, at least 31 types have occurred in the country (2).

Although the types and causes of disasters are different, their consequences, such as physical and financial damage, and damage to infrastructure are often similar (3).

The casualties of natural disasters have been declining over time, but they cause many damages around the world, and the number of the people affected by disasters is increasing each year (4).



Naturally, the first human action in dealing with a crisis and disaster is to save and reduce its consequences, which, despite the short time, requires a quick response. Suitable responses include accurate identification, correct assessment, quick decision making with the least difficulty and timely emergency actions. Therefore, readiness and understanding of the crisis are very important (5).

To reduce the impact of crises, it is also essential to take into account the preparation process to reduce vulnerability and improve flexibility (6.).

Preparedness which is very helpful, refers to measures taken to deal with threats (7), is one of the important steps in the disaster management cycle. Preparedness is a set of activities that empower the government, organizations, and communities to respond promptly and effectively to adverse conditions that occur after disasters.

It is shown that the role of people as the most important and largest group of stakeholders is often neglected in planning for disaster preparedness and response (8), and the lack of adhering to the safety and readiness guidelines of organizations that are directly responsible for rapid responses to emergencies (9).

Crisis preparedness often depends on the collaboration of various organizations; therefore, at least several organizations should make efforts to promote the community's capacity to take preventive measures and to respond promptly and effectively to disasters (10).

Research on the readiness of these organizations and their vulnerability to earthquakes has shown that factors, other than organizations' efforts to this end, are also effective and ultimately responsible for judging their readiness to respond to the crisis (11, 12).

In other words, recent experiences with disasters in the country have shown that disasters do not inform of their occurrence but warn; warnings must be taken seriously and the necessary readiness should always be maintained. Experience has shown acceptance of readiness as a principle and one way to reduce the extent of the damage caused by the dangers.(6)

Here, the most important pillar is also community readiness. Community readiness can be very effective in increasing the coping ability and resilience to the dangers and limit their extent.

According to the definition of the United Nations Program (UNISDR): Public awareness is the development of public knowledge about disaster risk, the factors that cause disasters; and actions that can be individually and collectively taken to reduce exposure and vulnerability to risks (13). Therefore, the public education is highly needed in this field.

Besides, according to the Red Crescent Society Charter, public education in readiness for disaster management is one of the missions and duties of the Red Crescent Society, that has drawn extensive attention and has been widely planned for, with many programs being implemented in this regard (14).

Therefore, the purpose of family planning is to prepare a comprehensive family readiness plan with respect to disaster impacts (3) and to meet the minimum needs of the families after occurrence of disaster, because when circumstances change, survival is the top priority (15).

Bradley presented a model that includes eight basic needs that must be fulfilled during or after disasters for the survival of the injured, in addition to six secondary needs that are directly or indirectly related to the survival of the survivors. In his model, the basic needs are food, water, shelter, light, heating/cooling, air, sleep and health/environmental improvements. Secondary needs include medication, primary care, communication, electricity, money (donation) and protection. Bradley believes that all of these 14 should be integrated into a comprehensive family readiness plan (15).

The American Red Cross (ARC) and the FEMA have offered a three-stage model for family readiness, in which families are guided to complete this comprehensive program. This model has three stages, including *acquiring awareness*, *preparing a package of readiness* and *preparing the plan* (16).

Accordingly to the concept and the reported steps of preparedness, an instrument, namely, the Public Readiness Indicator (PRI), is used to measure

family (and also individual and community) readiness. PRI has 10 components or indicators, the three of which measure the level of readiness awareness and the remaining ones address preparedness-related behaviors (17).

The Ministry of Health and Medical Education of Iran has also introduced a tool called Households Disaster Preparedness Index (HDPI), which has 15 indicators (18).

This index is being used and implemented as a national indicator of the household preparedness for disasters and hazards in two national projects by the Ministry of Health and the Red Crescent Society, named *Dart* and *Khadem* (19, 20).

It is clear that the readiness persons of the relief organizations and agencies and their dependent families, in emergencies and Disasters with minimal damage can be one of the effective factors for the performance of these organizations in crises. However, what is certain is that the readiness of individuals from relief agencies and their dependent families in emergencies with minimal damage might be one of the factors that can influence the performance of these organizations in critical situations.

In other words, with increasing the readiness of these people in their workplace and place of residence, their performance at emergency can be more effective if accomplished more confidently and in a more focused manner.

Although the relief agencies themselves, and in particular the various health and medical sectors, have indicators such as the Hospital Safety Index (HSI) (21, 22), no index has yet been provided for their personnel, and particularly relief organizations such as the Red Crescent Society. Therefore, in this study, the readiness of the relief staff and the staff of the various deputies of the Red Crescent Society was investigated by using the HDPI (Household Disaster Preparedness Index).

Materials and Methods

This research is a descriptive cross-sectional study that was conducted in 2018. The study population consists of 146 employees of the Red Crescent Society of Khorasan Razavi province. Sampling was done by census. The HDPI was used to study the readiness of Red Crescent staff in Khorasan Razavi province. The HDPI, developed by the Ministry of Health and Medical Education of Iran, has 15 indicators (**Table 1**) (20).

The index, which has been recognized and is being used by the health system of the country, has also been incorporated into the National Household Preparedness Plan (*Khadem*), conducted by the Red Crescent Society, to assess the readiness and education of families across the country.

In this index, families (or individuals) attain the score of 1 or 0 for each of the 15 questions depending on whether they answer *Yes* or *No* to that question (**Table 1**).

Table 1. Households Disaster Preparedness Index (20)

Question number	Indicator
1	Holding meeting to plan for dealing with disasters in families over the past year
2	Drawing a hazard map for main disasters by the family
3	Assessing the resistance of a building to an earthquake by an expert over the past year
4	Taking action to rehabilitate the building, if it is not resistant
5	Assessing the vulnerability of non-structural factors to earthquakes over the past year
6	Taking action to reduce the vulnerability of the house non-structural factors over the past year
7	Availability of emergencies and disasters kit in the family
8	Having a communication program for emergencies and disasters in the family
9	Having a household evacuation plan for emergencies and disasters
10	Having a plan to help vulnerable groups in the family for emergencies and disasters
11	Familiarity with early warnings of major regional hazards such as floods, storms, etc.
12	Availability of ready-to-use fire extinguishing equipment at home
13	First aid education for at least one family member over the past year
14	Family participation in disaster management programs in the neighborhood
15	Training emergencies and disasters in the family over the past year

The completion of this questionnaire was conducted with assistance of one trained instructor to avoid different interpretations of the indicators.

The scores assigned to questions were drawn from interviews with participants. Besides, each of the mentioned items was explained to the participants by the interpreter, and several meetings were held with them; and after filling out the form of initial interpretation, they also received necessary training. The questionnaires consisted of two sections, each serving one objective, to assess the level of staff readiness for the occurrence of the disaster at their workplace and their readiness for occurrence of disasters at home.

Statistical analyses

All analyses were conducted using SPSS version 20. Descriptive statistics were used to demonstrated the study results.

Results

Based on the previously introduced indicators and the completed interviews with the staff according to the HDPI questionnaire, the data in Tables 2 and 3 were perceived as being in accordance with the division of the organizational sectors and the questions, respectively.

The staff's scores based on different deputies are provided in **Table 2**. In this table, the lowest attained score was 15, and the average score was calculated according to the number of staff in each area. In this assessment, the educational organizational unit both in the workplace (5.25) and at home (9.25) had the highest average.

The average response to the index by each deputy's staff is shown in **Table 3**.

Table 2: The average scores of preparedness at home and at workplace (*Khadem*) in the staff of headquarters and deputies

Organizational Unit	Number	Average readiness index at workplace	Average readiness index at home
Managing Director	14	3.75	5.15
Relief and Rescue	30	2.75	2.43
Administrative and Logistic	31	4.63	5.18
Treatment and Rehabilitation	41	4.048	2.71
Treasury	12	5.17	6.97
The Youth	7	3.67	2.83
Volunteers	3	4.67	5.67
Education	8	5.25	9.25
Total	146	4.24	5.02

Table 3: Average risks readiness scores of different deputies for different indicators

Households Disasters Preparedness Index	Organizational Unit (Number of staff)								
	Administrative and Logistic (n=31)	Relief (n=30)	Treatment (n=41)	Education (n=8)	Youth (n=7)	Managing Director (n=14)	Volunteers (n=3)	Treasury (n=12)	Organization's average (n=146)
Indicator 1	0.19	0	0	0.13	0.57	0.29	0.33	0.83	0.20
Indicator 2	0	0	0	0.13	0	0.07	0.07	0.83	0.04
Indicator 3	0.03	0	0	0.13	0	0	0.04	0	0.02
Indicator 4	0	0	0	0.13	0	0	0.04	0	0.02
Indicator 5	0.06	0	0	0.13	0	0.07	0.07	0	0.04
Indicator 6	0.06	0	0	0.13	0	0	0.04	0	0.03
Indicator 7	0	0	0	0	0	0	0	0	0
Indicator 8	0	0	0	0	0	0	0	0	0
Indicator 9	0.74	0.07	0.12	0.38	0.57	0.48	0.46	1	0.47
Indicator 10	0.03	0	0	0	0	0	0	0	0
Indicator 11	0.97	0.93	0.95	0.63	0.86	0.58	0.68	0.92	0.81
Indicator 12	0.90	0.87	1	1	0.86	0.93	0.93	1	0.94
Indicator 13	0.74	0.83	1	0.88	0.86	1	0.91	1	0.90
Indicator 14	0.03	0	0	0.25	0	0	0.08	0	0.05
Indicator 15	0.90	0.13	0.95	0.63	0.57	0.64	0.61	1	0.68

Discussion

This study was conducted with the aim of investigating the readiness of the staff of Red Crescent Society of Khorasan Razavi province and their families for the effective presence in emergencies, by using one of the well-known domestic indicators, because the readiness of these staff for the most general disasters *per se* is one of the factors for response readiness.

A limited number of research has been conducted on the current state of readiness in different classes and families in Iran using the Ministry of Health's index, and perhaps the only national study to assess the preparedness of families for disasters is a study commissioned by the Ministry of Health, the treatment and medical education through the health system network in the country.(23)

According to this study, the readiness of Iranian families in 2012-2013 was 8.5%, which reached 9.3% with the intervention and implementation of the program for assessment and education of households in disasters readiness.(23) Nevertheless, studies have shown that the lack of continuous educational programs makes people return to the previous readiness levels, and in other words, causes their readiness level to decline. According to studies conducted on these indicators, the average HDPI in the country in 2015-2016 was estimated to be 9.3%. Converting this to a score of 15-point scale yields a numerical value of 1.275 for 2012-2013 and 1.395 for 2015-2016 (23).

Rakhshani et al. also in a similar study found that readiness of Households against earthquake was low (5). Compared to our study, the obtained average HDPI of 4.63 indicates a higher level of readiness in the relief and rescue system. In other words, the average data obtained for the staff of a relief and crisis-oriented organization are, as expected, higher than the level specified for the national average. However, despite the knowledge about the risks, the performance scores remain far from acceptable levels.

Although the relief staff are expected to be present at crises immediately and conveniently, the low score in this index, that is, the unpreparedness of the staff's families, might be very effective on staff performance and could even reduce their attending the department at crisis (24).

A more detailed analysis of the data indicates that the scores attained in this section are mostly due to the familiarity of the personnel with relief issues; thus, with a greater emphasis on the training of rescue, crisis management and non-structural sectors in emergencies, the readiness index scores of non-relief sector could also be increased.(24)

The lack of training is also tangible among the high-ranking staff of headquarters, and their performance at crisis further threatens the system. In this regard, Jourvand *et al.* also in a similar study found that despite the positive attitudes of respondents to the need to prepare for coping with disasters, their levels of knowledge and practice were not desirable (10); In addition, Rezaei *et al.* (6)

concluded that the levels of mental readiness and attitudes of Kerman households against natural disasters were very low. Ghadiri and Nasabi reported that the level of readiness of citizens of Shiraz against earthquake was low (7).

Jahangiri *et al.* (25) also concluded that the readiness of citizens of Tehran for the earthquake was low and that mere information did not change people's attitudes, but they should be encouraged to adopt preventive behaviors, in addition to improving their understanding, by using appropriate methods.

It can also be concluded that as staff (in particular, relief staff) experience and deal with issues and accidents is more frequently, they are more likely to adopt simplification along with refusal.

This clearly highlights the importance of psychological attention in dealing with employees, and at a later stage, the rescue staff of the Red Crescent Society.

According to Article of the decree of the cabinet of ministers on the comprehensive plan for national relief and rescue, the owners or those in charge of any complex or building where at least one of the conditions below applies are required to form a crisis management group according to the standards set by the headquarters in order to follow up all the issues related to the crisis management process of that location:

- 1- including at least 25 people living or working;
- 2- over 25 people referring at least during certain hours of the day;
- 3- having at least six floors; and
- 4- if damage to the structure or function of the site poses a threat to residents of the adjacent areas (26).

As a result, planning for special training for managers should also be investigated and accomplished to promote safety culture in the workplace.

Conclusion

The findings of the current study are somehow a presentation of the level of knowledge and awareness of people involved in disasters and emergencies.

The low level of staff's readiness in the workplace is definitely due to lack of paying attention and the inadequacies related to safety in the workplace, and directly contributes to decline in their performance, increasing time needed to be present in the scene of the accident, and ultimately reducing the effectiveness of the relief operation.

The readiness of staff's families, prevention, and their proper response at the time of disaster can affect their mental readiness and indirectly affect their performance.

Based on these results, paying more attention to developing thinking of disaster management and safety at emergencies can be very efficacious and include aspects of disaster management.

Further training of staff until safety will become a culture can be a major step to take in this regard. Creating an organization's safety infrastructure can also be effective. Providing the necessary training for the families of the staff, along with the staff, will be very effective.

Participation in these training programs should be voluntarily, and be accomplished in the form of collaborative activities and within the framework of an integrated plan.

Planning for non-relief training for non-headquarters staff, and relief and non-relief training for headquarters staff should be given priority in in-service staff training.

The existence of regular personality psychology and occupational psychology programs is imperative for staff and critical for operational

forces, and similar recommendations should also be included in organizational programs. It is therefore recommended that the internal crisis committee be formed in each of the departments of the Society in counties;

These committees are responsible for planning, and within the framework of the internal policymaking of each building, for taking the necessary measures, such as planning for emergencies, training and implementation of prepared plans and evaluating implemented plans to reduce the vulnerability of staff in the workplace in crises.

Acknowledgements

We should thank and appreciate the indispensable efforts of the Red Crescent Relief volunteers who are playing their role in all hard conditions voluntarily.

The study was conducted in accordance with the ethical guidelines of the declaration of Helsinki.

Funding source

This article had no financial involvement for the conduct of the research.

Conflict of interest

The authors of this study declare that they had no conflict of interest.

Authors' contribution

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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