Short Communication: Discrepancies of Disaster Tasks Performance Amongst Health Sectors in Iran

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ABSTRACT

Background: Due to the unpredictable nature of disasters, it is crucial to anticipate, define and divide tasks as preparedness activities to respond efficiently. This is because the organizations involved in, becoming aware of their own tasks and other organizations' tasks. The aim of this study is to explore disparities in the viewpoints of members of Kerman University of medical sciences and Red Crescent in emergent tasks after Bam Earthquake in Iran.

Materials and Methods: During January and February 2017 a total of 30 members from Kerman Red Crescent and Kerman University of Medical Sciences were recruited through snowball sampling with exploratory interviews and Self-administered questionnaire. The content validity of the questions was tested through obtaining opinion of expert which was acceptable (CVR=0.6, CVI=0.8).

Results: The results of our study showed that there was no predefined agreement about emergent tasks over response phase to the Bam earthquake; buried corpses, and management of received national and international aids from other organizations. Also, involved organizations were not aware the specific tasks of other organizations.

Conclusion: During the disaster response phase in Bam earthquake, there was no agreement about the responsible of organizations for undertaking emergent tasks. This disparity was a barrier for effective response for involved organization.

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1. Introduction

The lack of sufficient preparedness and response activities increase the vulnerability to disasters [1]. One of the key elements for proper preparation in disasters is the organizations' awareness about their own and other involved organizations' tasks. Awareness can help the involved bodies how to react and contact with others [2]. In addition to awareness, organizations need to have specialized knowledge, skills, [3] planning, and coordination in disaster and emergencies [4].

Having guidelines and planning are essential for a good level of awareness. The guideline will make the organizations and community able how to cooperate during the disaster response phase. In addition, the guideline can identify and define which organization undertakes the specific tasks and which one has its own potential, and also it clarify the common goals between the involved bodies. One of the advantages of planning is making the organizations ensure of their common goals [5]. Without disaster plans or when the disaster planning is not announced properly, it can lead to potential confusion about the overall response plan and goals [6].

Owing to the emerging nature of the disaster, sometimes the members' organizations encounter non-routine tasks and they are likely to ask who is really responsible for such tasks? This uncertainty leads to response failure in the disaster situations [7, 8]. In addition, other factors such as lack of coordination of organizations, competition for limited facilities [9], insufficient training of member's organizations, and failure of leadership in response phase contribute to uncertainty in the disaster context [4].

Iran locates in the Middle East region which is exposed to several man-made and natural disasters [10]. Between 1900 to 2014, 353 disasters occurred in Iran caused 161,470 deaths and affected more than 44 million Iranian lives [11]. One of the destructive disasters was the Bam earthquake in Kerman city, which occurred in 2003 resulting in more than 30,000 deaths and injuring over [12]. To the best of our knowledge, there was no clear pre-defined guideline and policy about the tasks in disaster situation in Iran; however, lack of scientific studies to explore the details about it is another of unavailable references.

The aim of this study is to clarify if the disparities and dis-coordination happened in emergent tasks in Bam earthquake from the viewpoints of members of Red organization and Kerman University of medical sciences (two principal actors in response to the Bam earthquake), such studies could help plan future reactions and strategies in case of disasters in developing countries especially in low resource areas.

2. Materials and Methods

Study setting

During any disaster in Iran two major organizations including; Ministry of Health and Medical Education (MOHME) local representative as medical sciences universities and Red Crescent are mainly engaged with treatment and help of victims in charge of providing national and international humanitarian assistance including nutrition, livelihoods security, while MOHME is the main health care delivery service. Bam city is situated in southeastern Iran, which is one of the major cities of Kerman province at the time of the earthquake in 2003, the population was 400000 people before the earthquake and by the last census in 2016 the population was 228241 people [11].

Sampling and data collection

During January and February 2017, we conducted this study through snowball sampling from the members of two key Organizations-Red Crescent and Kerman University of medical Sciences- involving in Bam earthquake. Finally, there were in total 30 members were invited and interviewed. (16 members of Red Crescent organization and 14 members Kerman University of medical sciences). We stopped interviewing after saturation of responses which was satisfied by the 30th person.

At the first phase investigators conducted exploratory interviews in which participants were asked to identify emergent tasks, whether it was responsible organizations for these tasks or not in Bam earthquake. This type of interviews is applied when there is no clear information about the subject of the study [13, 14]. The emergent tasks were defined the tasks emerged during the disaster response phase which were not defined and anticipated beforehand [7].

After recording and transcribing the interviews, the authors extracted emergent tasks which had disparities and dis-coordination about who was the real responsible of them according to the participants' responses. These tasks were burry corpses, and the management of received national and international aids such as medical facilities, heating devices and any other aids which was needed for the victims of the earthquake (management aids). Then a questionnaire was prepared in which these emergent tasks and

the responsible organizations (Appendix 1) in Bam earthquake were mentioned.

At the next phase, firstly interviewer explained the objective of the study and questionnaire guideline. The trained interviewer was available to answer any questions during filling the questionnaire.

The interviewees were asked to fill the Self-administered questionnaire and identified that whether it was a specific organization responsible for emergent tasks or not. For validity of the questions content, validity was tested through obtaining opinion of experts. Then, questions were scored by experts. The value of CVR and CVI was 0.6 and 0.8, respectively, thus the content validity of questions was acceptable [15].

Analysis

The R programming V. 3.1.2 software was used and were employed the package 'network' for social network analysis and plotting which organizations involved in the specific tasks. In these graphs, the organizations which participated in the mentioned tasks were connected with an arrow to mentioned tasks. The organizations which did not involve in any tasks were isolated organizations. Also, the abbreviations of organizations; the complete name of these organizations was listed in the Appendix 1.

3. Results

We found that two major emergent tasks reported by participants including burry corpses and management of aid. They indicated that these tasks were emerging tasks which were a barrier for them for being aware of the responsibilities of the organization. Most of the organizations were involved in mentioned tasks without predefined agreement and guidelines, resulting in an insufficient response.

Bury corpses

Toward the buried corpses, members of Red Crescent mentioned governorship, Kerman University of medical sciences, and themselves as responsible organizations for undertaking this responsibility (Figure 1). From the view point of Kerman university of medical sciences members, six organizations mentioned as the following: governorship, Kerman University of medical sciences, Red Crescent, Military Army, Municipality and other organizations (Figure 2).

Management of the aids

The members of Red Crescent mentioned that all organizations in Bam earthquake involved in the managements of received national and international aids (Figure 3). Similarly, from the view point of Kerman University of Medical Sciences members all organizations cooperated for this responsibility, except one of them (Figure 4).

4. Discussion

The importance of task separation and anticipate the vital ones are obvious in disaster for having effective responses between organizations [1]. We showed that any definite agreement was available among involved organizations, since planning a protocol for urgent tasks is trivial.

In our study, although some organizations involved in the buried the corpses which were an emergent task, there was

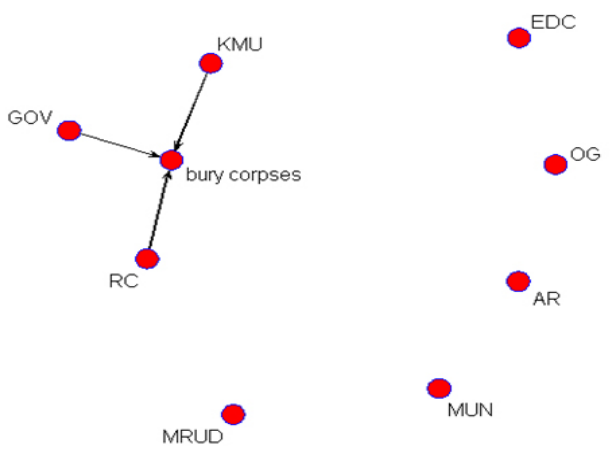

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Figure 1. Cooperative organizations bury corpses from Red Crescent members' viewpoint

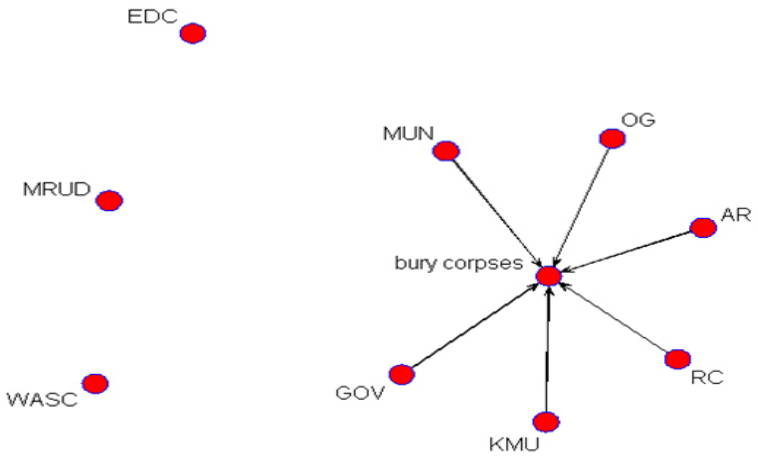

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Figure 2. Cooperative organizations bury corpses from Kerman University of medical sciences members' viewpoint

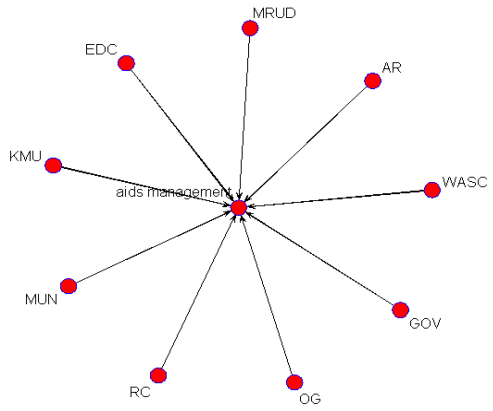

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Figure 3. Cooperative organizations aids management from Red Crescent members' viewpoint

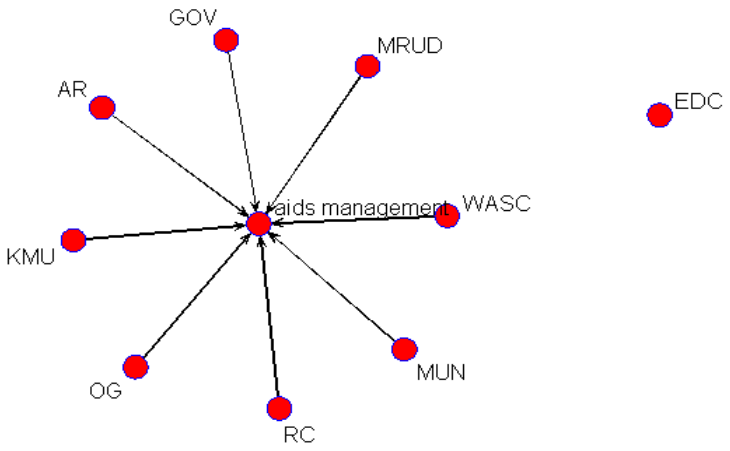

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Figure 4 . Cooperative organizations aids management from Kerman medical University of sciences members' viewpoint

no predefined protocol for it. In disaster context, some tasks emerged during response phase. For instance, After the Ocean Tsunami in India, the emergent task of municipality was burying the dead bodies and was inconsistent with the routine responsibility of municipal authorities. Also, in this disaster fire personnel engaged in the burying and handling dead bodies which were emergent and non-regular tasks [16]. Also, in some disaster situation in Africa a group of non-health care volunteer workers managed the dead bodies which was emergent tasks for them [17].

Another study indicated that in Hurricane Katrina's some paramedics engaged in the filling the vacuum while this task was not predicted before for them as a defined task and they did not have any experience about it [18]. According to pan American Health Organization and World Health Organization Manual, the Emergency Operations Committee of a country should be responsible for the management of dead bodies; otherwise a predefined organization should undertake this task such as health ministry [19].

According to management of received national and international aids, in our study, there was no consistency between involved organizations about the definite responsible and proper response which increased the vulnerability to disasters. Effective management and coordination between different organizations in disaster situations is critical because without these factors different actors would not be able to deliver the aids properly. A good example of this is Haiti earthquake in which organizations had a competition for distributing the facilities and this created disparity about definite responsible about this task [20].

Also, some times the involved organizations in distributing the facilities could not be able to cooperate with each other effectively owing to the sheer number of agencies and feeling that the other organization may jeopardize their freedom [21-23].

In disaster situation for good management of resources organizations must select the members who have the ability for effective cooperation with each other and with the members of other organizations. Lack of coordination between organizations, problems in exchange resources between organizations is the results of lack of standard in plans and guideline [24].

5. Conclusion

In order to effective response to the disaster situation, there should be adequate coordination between organizations involved in disaster response phase. Also, all the organization should be aware of their responsibilities according to the emergent tasks for effective response. In this study, there was not predefined agreement about the responsible organization and the emergent tasks including: bury corpses and management of aids which made proper response to the disaster more difficult.

Limitations

However, our study revealed issues that were not addressed before; we acknowledge there are some limitations with it. The earthquake occurred over a decade ago and recalls bias may be a possible limitation, all the participants claimed that the severity of the disaster makes the involved people ruminate the goings-on, since this disaster was hardly to forget. Also, we failed to contact participants who involved national and international organizations for gaining a more comprehensive understanding of the problem.

Ethical Considerations

Compliance with ethical guidelines

Ethics approval was received from Kerman University of Medical Sciences Ethic Committee. The participants voluntarily took part in the study and their responses were based on informed consent. Participants' responses were not shared with other participants. Also, they could skip any question they felt uncomfortable with or stop the interview whenever they desired. All interviewees consented to the recording of their interview. Data were coded and kept on a password-secured desktop computer, and all audio files were destroyed two weeks after the final analysis.

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Authors' contributions

Designing the study, data analysis: Mina Mahdavian, Farzaneh Zolala; data collection: Maryam Hosseinnejad; Drafting the manuscript: All authors.

Conflict of interest

The authors declared no conflict of interest.

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