

Analyzing the Performance of Red Crescent Society of Khorasan Razavi Province in Kermanshah Earthquake

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ARTICLE INFO	ABSTRACT
<p>ORIGINAL ARTICLE</p> <p>Article history: Received: 23 March 2018 Revised: 7 Jun 2018 Accepted: 10 July 2018</p> <p>*Corresponding author: Mohammad Sadegh Tavakoli Sani</p> <p>Address: Red Crescent Society of Khorasan Razavi, Peace building, 1th North Bozorgmehr, Mashhad, Iran</p> <p>Email: Sadeghtva121@gmail.com</p> <p>Tel: 05137669888</p>	<p>Introduction: Kermanshah earthquake with magnitude of 7.3 is one of the largest earthquakes in recent decades in Iran. The incident led to discover the existing gaps in the crisis management system in the country. Studying this event based on documented scientific views might reveal the strengths, weaknesses, opportunities, and threats (SWOT) of crisis-based organizations and provide solutions for solving future problems in similar cases.</p> <p>Methods: In this study, the performance of Red Crescent Society of Khorasan Razavi province as the commander of rescue operations in Sarpol-e Zahab city was investigated. The information and experts' opinions were collected based on SWOT technique and using the AHP method to examine the effective indicators. The effective strategies for the future were also explained and proposed.</p> <p>Results: The average strengths, weaknesses, opportunities and threats and the internal factors identified in the list were presented. Based on the results of this paper, after the expert's opinion about the rescue area, 14 factors were identified as the strength points, 13 factors were considered as weaknesses, 8 factors were identified as opportunities and 15 factors as threats, and then during the process were weighted and prioritized. In the list of external agents, there was some threats. After identifying effective internal and external factors and classifying them based on the Likert spectrum, four groups of weaknesses, strengths, opportunities and threats were used to determine the weight of criteria and indicators of hierarchical analysis. For this purpose, a group of experts was used. Finally, the system growth strategies, maintaining or improving the status of the system, and the weakness of the system were determined.</p> <p>Conclusion: Based on the results and scientific findings obtained from the previous cases, necessary plans should be made in order to carry out the necessary activities at the time of confrontation with any emergency in the country.</p> <p>Keywords: Earthquakes, Crisis Management System, Red Crescent Society</p>

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Introduction

Investigation of the natural disasters occurred in the world indicates a sharp increase in their number over the past century. In the period from 1900 to 2011, the number of reported disasters in the world has been raised ten times(1, 2). Meanwhile, Iran is considered as one of the countries with a high degree of vulnerability to natural disasters. With the development of societies and the complexity of the internal processes of human societies, the numbers of crises caused by natural and man-made disasters and their complexity have increased.

In order to prevent and prepare for this case, accident and disaster management practices, usually referred to as relief and rescue operation, are designed to reduce the adverse consequences of accidents (3).

Iran is a disastrous country in terms of geography and climate, and there are many man-made and natural disasters every year. By looking at the events of accidents and the statistics of medical and relief centers, it is clear that a large number of citizens die from various accidents every day. There are also many injuries, or disabilities. The history of societies suggests that life is always faced with various disasters and accidents and the occurrence of sudden events at any moment in any place of the world is waiting for the mankind. In case of emergence, the rapid development of crisis, illness, poverty and deficiency will be often increased in people's ordinary lives, and their effects may continue to be problematic for a long time(4). The most dangerous and destructive disaster in Iran has been earthquake. Earthquake experts believe that Iran is one of the most susceptible countries to earthquake in the world; therefore, there are a few areas with a negligible risk and a large part of the country is comprised of areas with high damage. These areas are located mainly around important faults in Alborz and Zagros areas(5).

Against these critical situations, crisis management involves a series of continuous and dynamic operations and actions that are generally based on the principles of classical management including planning, organization, leadership, and

control. Crisis management is a set of theoretical concepts and practical measures in the planning dimensions for dealing with disasters before and after the event(6). In addition, crisis management is a set of executive, managerial, and political decision-making processes, which carried out in the form of stages in order to save, reduce losses, prevent interruptions in life, produce, give services and communications, and support the environment and eventually, repair the failures (7).

In this regard, the prediction of relief and rescue status indicates that changes in crisis and lack of accountability will result in large and possibly uncontrollable changes that can have social, economic and, in particular, irresistible political effects (3).

According to the Relief and Rescue Code of the Red Crescent Society of the Islamic Republic of Iran, the mission of the Red Crescent Society in the field of relief and rescue, are the provision of humanitarian aids to affected people in events and the preparation of accountability on the basis of the responsibilities set forth in the statute of the population within the framework of the obligations of the International Red Cross and Red Crescent Movement, at three levels of local and provincial, and national (8).

As a result, the expectation of responding to the first reactionaries of the Red Crescent Society is a legitimate expectation that cannot be ruled out, a problem that was once again faced with a deep challenge in Azgale earthquake crisis, when seismic networks depended on seismic center of geophysics institute at the university of Tehran at 21:48 on Sunday, 21/08/1396 recorded a seismic with a magnitude of 7.3 in the province of Kermanshah. This earthquake led to the destruction of large parts of the city of Sarpol-e Zahab and many cities and villages in Kermanshah province. The earthquake power was so high that tremors were felt hundreds of miles away from the earthquake (even in Tehran). At least eight cities (Ghasrshirin, Azgale, salase Babajani, Gilane Gharb, Sarpol-e Zahab, Dalaho, Islamabad, gharb and Javanrood) were affected by the earthquake of the Sarpol-e Zahab and 1933 villages were damaged. According to statistics

provided by forensic medicine, until the day of 9/12/2017, 179 people were killed by the earthquake and thousands were injured. The city of Sarpol-e Zahab had the highest casualties with 118, followed by Salas Babajani with 13, Kurd (Dalaho) with 19, Qasr Shirin with 16, Islamabad with 1 and Kermanshah with 1 (one of dead people's city was not known due to lack of identity) (9).

The Red Crescent Society of the Islamic Republic of Iran is an organization responsible for conducting search and rescue in the country events. According to the head of the rescue and relief unit of this population, the Provincial Relief and Coordination Center (EOC) was activated immediately after the incident, and by announcing the alert and emergency situation to all of the provincial operational teams, and initial assessment were dispatched to the affected areas. Initiation of search and rescue and emergency evacuation operations, announcement of emergency situation in Kermanshah areas, and video conferencing with central and western areas of Kermanshah; initiation of emergency resettlement operations in the cities of Sarpol-e Zahab, Salas Babajani and Qasr-e-Shirin at 33 minutes early in the morning, coordinating the dispatch of operational teams from designated provinces were the actions taken during the first hours of the earthquake. Relief teams were also dispatched from the provinces of East Azarbaijan, West Azarbaijan, Ardebil, Alborz, Ilam, Isfahan, Khorasan Razavi, Chaharmahal and Bakhtiari, Zanjan, Qazvin, Qom, Kurdistan, Lorestan, Central and Hamedan provinces.

During the first hours of the earthquake, 35 teams were sent by the Red Crescent to Qasr Shirin and Gilane Gharb. The rescue forces in the cities of Kurdistan, Ilam and Hamedan were also ready. Leading teams of the Red Crescent Society were dispatched to the affected areas of the earthquake and a number of Kermanshah towns, and assessment teams from different organizations were also dispatched to the earthquake-affected area.

The 16 relief camps were dispatched in 3 cities of Qasr Shirin, Sarpol-e Zahab and Gilane Gharb to help earthquake-affected people, as some people spent the night in those camps because of being afraid of earthquakes. During the relief efforts,

rescuers also evaluated the affected areas in order to provide relief efforts to earthquake victims. Rescuers set up 1350 tents for 5,200 earthquake-affected people in the shortest possible time.

All rescuers, Basij, the Revolutionary Guards and the army were all ready and some of them were present in the area for security and aid (10).

According to reports from the Red Crescent Society, there were 16 fast reaction teams, 31 teams (live-animal dogs), 11 unloading teams, 11 emergency resettlement teams, 9 emergency teams and a total of 191 operational rescuers in the affected area. Also, 13 ambulances, 11 assisted vehicles and 9 rescue vehicles were used during the first days after the incident. However, after the stabilization of the conditions, there were also rescue and relief needs, and based on these needs, the Red Crescent Society was active in the area (9).

The Red Crescent Society of Khorasan Razavi province, as the past few years, with announcement of the rescue and relief organization was sent to the earthquake-affected area of Kermanshah, and controlled the management of the stabilization process in the area of the event and managed it in the city of Sarpol-e Zahab. With the presence of this province, the relief efforts were planned, standardized and executed. Implementing these principles over time has improved the conditions in the area.

In this regard, after identifying the effective factors and determining the strengths, weaknesses, opportunities and threats (SWOT) existing in this event during the relief efforts of the rescuers of this province, they were identified and analyzed. Subsequently, the appropriate SWOT matrices were determined based on the indicators.

Materials and Methods

Iran as a disastrous country needs crisis-focused and always-ready organizations (National Report of the Islamic Republic of Iran to the Disaster Reduction Summit) (2, 11). Organizations constantly evaluating themselves and their surroundings have strengthened their strengths, controlled their own weaknesses and created opportunities from threats. The main

objective of this study is to develop strategies to improve the performance of the Red Crescent Society of Khorasan Razavi in major disasters and incidents at provincial and national levels.

Several models of decision making and AHP model have been used to identify relationships and determine the weight of the research criteria. The hierarchy analysis process is one of the most well-known multi-dimensional decision-making techniques developed by Thomas Saaty in the 1970s (12). This approach can be useful when decision-making practice has multiple choices and decision indicators. Indicators can be quantitative or qualitative. The basis of this method lies in the paired comparison. The ranking process and prioritization of options in the AHP method include the following steps(13).

In the following, for strategic analysis, one of the key steps in this type of planning is to provide information on the strengths and weaknesses (internal) and the opportunities and external threats to which the crisis management system is facing. Since each strategy utilizes the benefits of strengths and situations, and minimizes or overcomes weaknesses and threats at the same time (14).

Before the organization strives to explain its future, it must determine its current position. The mechanism used to measure the internal and external conditions of the organization and the answer to the question "Where are we now?" is called the evaluation of the internal and external environment of the organization. Assessing the internal and external environment of the organization is an essential management tool which, in addition to strategic planning in policy making and problem solving, is also used. Therefore, future orientations are identified, priorities are determined, basic decisions are made with regard to all levels and actions, organizational performance improves and, and with regard to the rapidly changing circumstances, some useful process are done (15).

The process of evaluating the internal and external environment of the organization is called internal and external analysis, which provides a realistic and reliable scale for evaluating the organization, because it involves identifying the

strengths, weaknesses (improving field) opportunities and threats. The gathered information during the evaluation process often leads to the identification of strategic issues (16). The main message of the organization's internal and external strategic analysis (SWOT analysis) is to move forward based on strengths, minimize weaknesses and provide usable areas, take opportunities and deactivate threats(17, 18). Internal and environmental analysis enables the organization to accurately and objectively identify its specific competencies and its competitive disadvantages. Through this analysis and the obtained information from them, managers can invest in the completion of competitive opportunities and reduce barriers and threats and reduce their effects. Identifying competencies and weaknesses enables the organization to choose strategies for confronting and encountering with environmental forces(19).

In this study, the SWOT technique is also used to formulate strategy, and the Quantitative Strategic Planning Matrix (QSPM) technique is also used to prioritize strategies. To analyze the data obtained from the Excel software and Expert Choice, a multi-criteria technique and a hierarchical analysis process have been used.

The statistical population of this study was experts in the field of assistance and control center of operations and specialists in this field. In the first phase by interviewing experts, 32 questionnaires were designed and completed to identify the factors affecting the performance and provide the initial list.

In the second phase, snowball technique for sampling has been used for multi-criteria decision making. (20). In this study, the hierarchical analysis process technique was used to prioritize the main criteria and select the optimal option. Saaty believes that ten experts are sufficient for comparative studies(12). As a result, 10 experts have been used as a sample to weigh the criteria.

The content validity method was used to check the validity of the Likert spectrum questionnaire. Therefore, the questionnaire was given to a number of experts and specialized out of the city and they were asked about questions and evaluation of

hypotheses. As a result of this review, the questionnaire was approved by consensus.

In the experts' questionnaire, which is based on a paired comparison of all elements with each other, the probability that a variable is not considered is zero. Therefore, since all the criteria in this measure are considered and the designer is not able to specifically orientate on the design of the questions, the questionnaire based on the paired comparison in them is valid (21).

To verify the reliability of the Likert spectrum questionnaire, Cronbach's alpha coefficient was used. Cronbach's alpha was calculated as 0.84 from the expert's questionnaire. Since the Cronbach's alpha coefficient is more than 0.65, questionnaire seems to be reliable.

The reliability of the AHP experts' questionnaire was also compatible by calculating the compatibility index. On the other hand, considering the fact that the questionnaire is based on the hierarchical analysis and the type of hourly scale, an index called the inconsistency index is used to examine the questionnaire. These indices indicate that if the level of incompatibility of the pair comparisons is greater than 0.1, then it is better to revise the comparisons. Because all model factors are considered and compared with each other in the questionnaire, all associated probabilities by not considering one variable will be eliminated. On the other hand, since the questionnaire compares all the criteria two by two, the maximum possible questions are asked with the desired structure of the respondent, and since all the criteria in this assessment are considered and the

designer is not able to orientate the design of the questions, there is no need to measure reliability(22).

Results

Creating a SWOT Model

The average strengths, weaknesses, opportunities and threats have been gained and the factors that have been identified as strengths and weaknesses in the internal list have been considered. In the list of external agents, the opportunity was identified as a threat.

After identifying effective internal and external factors, their categorization based on the Likert spectrum was divided into four groups: weaknesses, strengths, opportunities and threats to determine the weight of criteria and index of decision tree (hierarchical chart).

The obtained numbers show the coefficient of importance of internal factors and external factors. The performed calculations are presented in Table 1. To perform the hierarchical analysis, the internal and external factors are compared in terms of purpose on a paired basis. For this purpose, a group of experts was used. It needs to be explained, because only one comparison has been made; therefore, it is not necessary to calculate the inconsistency rate and the comparisons can be trusted. Then, the values obtained by using the geometric mean technique (G) and normalization. The results are presented in **Tables 1 to 4**.

Consequently, after reviewing and analyzing the results, **Tables 5 and 6** were obtained for the internal and external conditions.

Table 1: Weighting and Prioritizing the Strengths

Evaluation Matrix of Internal Factors (Strengths and Weaknesses)					
Strengths	Weight (0-1)	Adjusted Weight	Priority (1-4)	Scoring	Weighting Scoring Adjusted
Integrated, systemic and strong management in the command headquarters	0.86	0.091	4	3.44	0.36
Transfer of command headquarters from outside the city to the city center (better access to the headquarters)	0.47	0.049	3	1.41	0.15
Appropriate headquarters location in terms of access to passages and...	0.32	0.034	4	1.28	0.13
Properly utilizing the capacity and expertise of rescuers	0.82	0.086	4	3.28	0.35
Regular meetings, inter-departmental coordination and subordination of the sub-offices	0.65	0.068	4	2.6	0.27
Zoning of Sarpol-e Zahab city based on Urban Mapping and Coding the Sheet Distribution	0.55	0.058	4	2.2	0.23
Improvement of the distribution of items and relief goods by changing leadership in the headquarters	0.86	0.091	3	2.58	0.27
Utilizing the potential of women in operational teams	0.71	0.075	3	2.13	0.22
Determining the responsibilities and position of individuals in the team (based on ICS)	0.78	0.082	4	3.12	0.33
Awareness and responsiveness to the injured in terms of duties and service delivery	0.78	0.082	3	2.34	0.25
Targeting activities at the beginning of each day by commander or commander substitute	0.68	0.072	3	2.04	0.21
Proper capacity and desirable support and logistics of the province's expedition team to the region	0.81	0.085	4	3.24	0.34
Using the cultural and religious potential of the victims (co-linguistic, etc.)	0.53	0.056	2	1.06	0.11
Utilization and acceptable use of the wireless communication network in the region	0.68	0.072	3	2.04	0.21

Table 2: Weighting and Prioritizing Weaknesses

Evaluation Matrix of Internal Factors (Strengths and Weaknesses)					
Weaknesses	Weight (0-1)	Adjusted Weight	Priority (1-4)	Scoring	Weighting Scoring Adjusted
Inappropriate accountability of the Red Crescent population in the first days of the incident	0.96	0.112	4	3.84	0.446511628
Absence of standard and identical forms of relief certificate	0.60	0.070	4	2.4	0.279069767
The tastes of some provinces (despite the same relief instructions)	0.45	0.052	3	1.35	0.156976744
Inappropriate distribution of services and relief goods in the early days of the incident	0.67	0.078	3	2.01	0.23372093

The lack of existence of the same protocol to assign the operations to an alternative team in the area	0.68	0.079	3	2.04	0.237209302
The lack of integrated distribution of food items (despite resources such as the Sphere project ...)	0.54	0.063	4	2.16	0.251162791
Inadequate and shortage distribution of 72 hours and one-month packages in the early days of the incident	0.49	0.057	3	1.47	0.170930233
Disparate and unbalanced distribution of items and relief goods to the region	1.00	0.116	2	2	0.23255814
Discontinuance of equipment and facilities of the relief and operational forces of some provinces	0.76	0.088	2	1.52	0.176744186
Lack of attention to the recovery and rehabilitation process of the operational forces	0.58	0.067	3	1.74	0.202325581
The slowdown in the distribution of items and goods due to the lack of separation of items from the source	0.35	0.041	3	1.05	0.122093023
Lack of a manuscript and family aid letters, and a small amount of knowledge of the troops in their completion	0.52	0.060	3	1.56	0.181395349
Failure to inform the warehouse for the process of entering and leaving the goods	1.00	0.116	2	2	0.23255814

Table 3: Weighting and Prioritizing Opportunities

Evaluation Matrix of External Factors (Opportunities and Threats)					
Opportunities	Weight (0-1)	Adjusted Weight	Priority (1-4)	Scoring	Weighting Scoring Adjusted
The proper location of the Red Crescent Society in terms of social status and public trust in it	0.92	0.138	4	3.68	0.55
Good patience for the people of Sarpol-e Zahab (People 's Experience in War)	0.79	0.119	4	3.16	0.48
The volunteer presence of the public forces, the Semans, the social influence and...	0.76	0.114	3	2.28	0.34
The opportunity to coordinate, assess and improve the quality of service of organs in future events	0.63	0.095	2	1.26	0.19
Utilize the capacity of social networking information	0.71	0.107	4	2.84	0.43
Using the cultural and religious capacity of prominent people in the community mental peace	0.84	0.126	3	2.52	0.38
Intellectual equivalence of the concepts of disasters and the resulting crisis at the level of members of the crisis management headquarters	1.00	0.150	3	3	0.45
Scientific documentation of rescue operations process to improve population status	1.00	0.150	2	2	0.3

Table 4: Weighting and Prioritizing Threat

Evaluation Matrix of External Factors (Opportunities and Threats)					
Threats	Weight (0-1)	Adjusted Weight	Priority (1-4)	Scoring	Weighting Scoring Adjusted
Rising the service costs and negative social impact	0.85	0.086	3	2.55	0.26
The inadequate awareness of the people of the Red Crescent Society duties during the incidents	0.78	0.079	3	2.34	0.24
Inappropriate support of the Civil Registration Office from the identification card issued by the Red Crescent Society	0.40	0.040	2	0.8	0.08
Inappropriate communication about individual and public health concepts	0.59	0.060	3	1.77	0.18
Waste of distributed products and inefficient management of waste	0.62	0.063	3	1.86	0.19
Returning the sent gifts by the injured (old items)	0.68	0.069	2	1.36	0.14
Lack of appropriateness of some items and gifts sent to the climate of the region	0.51	0.052	3	1.53	0.15
Lack of attention to the culture and social beliefs of the people of the region	0.76	0.077	4	3.04	0.31
Distributing items and gifts from several different governmental and non-governmental channels (unmatched distribution of items)	0.47	0.048	3	1.41	0.14
The presence and resettlement of other organs and the entry of the irresponsible people into the command headquarters	1.00	0.101	3	3	0.3
Providing the inadequate security and physical protection of the command and security support during the distribution of items	0.46	0.047	3	1.38	0.14
Probability of outbreak of epidemic of diseases caused by water and food pollution	0.48	0.049	4	1.92	0.19
Inappropriate structure of the crisis management cycle (interfere with the duties of the headquarters members)	0.78	0.079	4	3.12	0.32
Not prioritizing the thought of emergence of crisis situations in the eyes of the authorities (governor, etc.)	0.82	0.083	4	3.28	0.33
Insufficient attention to economic indicators, rehabilitation and the restoration of normal living conditions of people	0.68	0.069	4	2.72	0.28

Table 5: Prioritizing Internal Factors

Strength	Prioritizing internal factors	Weakness
<ul style="list-style-type: none"> ✓ Integrated, systemic and strong management in the command headquarters ✓ Appropriate headquarters location in terms of access to passages and... ✓ Properly utilizing the capacity and expertise of rescuers ✓ Zoning of Sarpol-e Zahab City Based on Urban Mapping and Coding the Sheet Distribution ✓ Determining the responsibilities and position of individuals in the team (based on ICS) ✓ Proper capacity and desirable support and logistics of the province expedition team to the region ✓ Regular meetings, inter-departmental coordination and subordination of the sub-offices 	<ul style="list-style-type: none"> ✓ Inappropriate accountability of the Red Crescent population in the first days of the incident ✓ Absence of standard and identical forms of relief certificate ✓ The lack of integrated distribution of food items (despite resources such as the Sphere project ...) 	
<p>Transfer of command headquarters from outside the city to the city center (better access to the headquarters)</p> <p>Utilizing the potential of women in operational teams</p> <p>Awareness and responsiveness to the injured in terms of duties and service delivery</p> <p>Targeting activities at the beginning of each day by commander or commander substitute</p> <p>Improvement of the distribution of items and relief goods by changing leadership in the headquarters</p> <p>Utilizing the potential of women in operational teams</p>		<p>The tastes of some provinces (despite the same relief instructions)</p> <p>Inappropriate distribution of services and relief goods in the early days of the incident</p> <p>The lack of existence of the same protocol to assign the operations to an alternative team in the area</p> <p>Inadequate and shortage distribution of 72 hours and one-month packages in the early days of the incident</p> <p>Lack of attention to the recovery and rehabilitation process of the operational forces</p> <p>The slowdown in the distribution of items and goods due to the lack of separation of items from the source</p> <p>Lack of a manuscript and family aid letters, and a small amount of knowledge of the troops in their completion</p>
<p>Using the cultural and religious potential of the victims (co-linguistic, etc.)</p>		<p>Disparate and unbalanced distribution of items and relief goods to the region</p> <p>Discontinuance of equipment and facilities of the relief and operational forces of some provinces</p> <p>Failure to inform the warehouse for the process of entering and leaving the goods</p>

Table 6: Prioritizing External Factors

Prioritizing External Factors	
Threat	Opportunity
Lack of attention to the culture and social beliefs of the people of the region	The proper location of the Red Crescent Society in terms of social status and public trust in it
Probability of outbreak of epidemic of diseases caused by water and food pollution	Good patience for the People of Sarpol-e Zahab (People 's Experience in War)
Inappropriate structure of the crisis management cycle (interfere with the duties of the headquarters members)	Utilize the capacity of social networking information
Not prioritizing the thought of emergence of crisis situations in the eyes of the authorities (governor, etc.)	
Insufficient attention to economic indicators, rehabilitation and the restoration of normal living conditions of people	
Lack of attention to the culture and social beliefs of people in the region	
Rising the service costs and negative social impact	The volunteer presence of the public forces, the Semans, the social influence and..
The inadequate awareness of the people of the Red Crescent Society duties during the incidents	Using the cultural and religious capacity of prominent people in the community mental peace
Inappropriate communication about individual and public health concepts	
Waste of distributed products and inefficient management of waste	
Lack of appropriateness of some items and gifts sent to the climate of the region	
Distributing items and gifts from several different governmental and non-governmental channels (unmatched distribution of items)	
Providing the inadequate security and physical protection of the command and security support during the distribution of items	
Inappropriate support of the Civil Registration Office from the identification card issued by the Red Crescent Society	Intellectual equivalence of the concepts of disasters and the resulting crisis at the level of members of the crisis management headquarters
Returning the sent gifts by the injured (old items)	The opportunity to coordinate, assess and improve the quality of service of organs in future events
The presence and resettlement of other organs and the entry of the irresponsible people into the command headquarters	Scientific Documentation of the Rescue Operations Process to Improve Population Status

Table 7: The Overall External and Internal Factors with Weighing Final score of internal factors
(excellent (3-4): green color, Moderate (2-2.99): blue color, Weak (1-1.99): red color)

Internal Factors			
External Factors	Integrated, systemic and strong management in the command headquarters	Zoning of Sarpol-e Zahab City Based on Urban Mapping and Coding the Sheet Distribution	Appropriate headquarters location in terms of access to passages and...
	Properly utilizing the capacity and expertise of rescuers	Regular meetings, inter-departmental coordination and subordination of the sub-offices	Probability of outbreak of epidemic of diseases caused by water and food pollution
	Determining the responsibilities and position of individuals in the team (based on ICS)	Absence of standard and identical forms of relief certificate	
	Proper capacity and desirable support and logistics of the province expedition team to the region	The lack of integrated distribution of food items (despite resources such as the Sphere project ...)	
	Inappropriate accountability of the Red Crescent population in the first days of the incident	Utilize the capacity of social networking information	
	The proper location of the Red Crescent Society in terms of social status and public trust in it	Insufficient attention to economic indicators, rehabilitation and the restoration of normal living conditions of people	
	Good patience for the People of Sarpol-e Zahab (People's Experience in War)		
	Lack of attention to the culture and social beliefs of the people of the region		
	Inappropriate structure of the crisis management cycle (interfere with the duties of the headquarters members)		
	Not prioritizing the thought of emergence of crisis situations in the eyes of the authorities (governor, etc.)		

Internal Factors			
External Factors	Intellectual equivalence of the concepts of disasters and the resulting crisis at the level of members of the crisis management headquarters	<p>Utilizing the potential of women in operational teams</p> <p>Awareness and responsiveness to the injured in terms of duties and service delivery</p> <p>Targeting activities at the beginning of each day by commander or commander substitute</p> <p>Utilization and acceptable use of the wireless communication network in the region</p> <p>Improvement of the distribution of items and relief goods by changing leadership in the headquarters</p> <p>Inappropriate distribution of services and relief goods in the early days of the incident</p> <p>The lack of existence of the same protocol to assign the operations to an alternative team in the area</p> <p>The volunteer presence of the public forces, the Semans, the social influence and...</p> <p>Using the cultural and religious capacity of prominent people in the community's mental peace</p> <p>Rising the service costs and negative social impact</p> <p>The inadequate awareness of the people of the Red Crescent Society duties during the incidents</p>	<p>Transfer of command headquarters from outside the city to the city center (better access to the headquarters)</p> <p>The tastes of some provinces (despite the same relief instructions)</p> <p>Inadequate and shortage distribution of 72 hours and one-month packages in the early days of the incident</p> <p>Lack of attention to the recovery and rehabilitation process of the operational forces</p> <p>The slowdown in the distribution of items and goods due to the lack of separation of items from the source</p> <p>Lack of a manuscript and family aid letters, and a small amount of knowledge of the troops in their completion</p> <p>Inappropriate communication about individual and public health concepts</p> <p>waste of distributed products and inefficient management of waste</p> <p>Lack of appropriateness of some items and gifts sent to the climate of the region</p> <p>Distributing items and gifts from several different governmental and non-governmental channels (unmatched distribution of items)</p> <p>Providing the Inadequate security and physical protection of the command and security support during the distribution of items</p>
	The presence and resettlement of other organs and the entry of the irresponsible people into the command headquarters	<p>Disparate and unbalanced distribution of items and relief goods to the region</p> <p>Scientific documentation of rescue operations process to improve population status</p>	<p>Using the cultural and religious potential of the victims (co-linguistic, etc.)</p> <p>Discontinuance of equipment and facilities of the relief and operational forces of some provinces</p> <p>The opportunity to coordinate, assess and improve the quality of service of organs in future events</p> <p>Inappropriate support of the Civil Registration Office from the identification card issued by the Red Crescent Society</p> <p>Returning the sent gifts by the injured (old items)</p>

Conclusion

To determine strategies, the following should be considered:

- Indicators that are located in greenhouses indicate the perfect position of the system for the positive indicators and the complete weakness of the system for negative indicators. (System boost or growth).
- Indicators in blue houses indicate the desired system status for positive indicators and relative weakness toward negative indicators (maintaining or upgrading the status system).
- Indicators in red houses indicate the status of the average system in positive indicators and less importance than other indicators for negative indicators (weak system)

As a result, according to the tables and by combining the factors, we can find the matrix of **Table 7**, which wrote all the parameters in comparison with each other and in a combination of positive and negative.

Systems Growth and Growth Strategies:

* Determining and maintaining the status of crisis management in disasters in a focused, unit-driven manner with full authority, in order to speed up the process of operations.

* Developing the Red Crescent Emergency Operational Program (EOP) for appropriate, timely, and operational accountability in events.

* Maintaining and upgrading of logistics capacity and support through increased equipment and fleet of transport, the importance of the position and expertise of human resources and...

* Improving the position of the country crisis management organization at the level of the vice presidential in terms of empowerment, centralization, and belief in emergencies in the authorities' viewpoint, and increasing the penetration of incident-related activities.

* Increasing society resilience by institutionalizing public education, sensitizing the community to the country risk, implementing community-based and rural relief communities in an academic and scientific manner.

* Maintaining the social status of the Red Crescent Society by restoring community confidence in the identity of the Red Crescent Society, the pathology of past activities and operations, and ...

* Attention to cultural beliefs and values of the affected community through developing various operational scenarios and psychological support in accordance with different cultures in the country.

* Giving enough attention to economic and social indicators, rehabilitating and restoring normal conditions to life of people.

* Implementation of relief operations in accordance with the standards, directives and circulars of the Resource Organization through the evaluation and monitoring of the process of implementation of the instructions, revising and institutionalizing the operational indicators in the view and beliefs of the executive directors and ...

* using the capacity of social networks and cyberspace to transfer and extend educational concepts, relaxation and inform appropriate at times of events and...

Strategies to maintain and improve system status:

• Using cultural and religious capacity of prominent people, public forces, social influence in order to develop the identity of volunteers at the community level, preserve the relative tranquility of people in the event and...

• Using women's potential in operational teams to exploit their ability in operational processes and psychological support due to the special status and needs of women and children at the time of events.

• Clear and complete awareness of the community about the duties and manner of serving the Red Crescent Society to them during events through using the potential of national media, social networks, newspapers and ...

• Attention to vulnerability indicators, level of access to passages, adequate space, environmental risk, adequate distance from main streets or highways, standard distance to emergency

accommodation camps and ... to determine the location of the headquarters.

- Forecasting wireless networks, portable telephony, and ... at times of incidents due to the destruction of communications infrastructure.

- Attention to negative social impact during incidents and rising costs of services due to lack of awareness of local authorities and media.

- Attention to the concepts of individual and environmental health in order to prevent the spread of epidemics of diseases caused by water and food pollution.

Relative Release or Partial Qualification Strategies:

Avoiding system from sending the unbalanced and heterogeneous items of cultural, climatic conditions in order to maintain dignity and human dignity.

Avoiding personal acting and interfering with personal decisions in the relief and rescue activity in order to reduce the negative social effects, distributing the harmonious distribution of items and goods, maintaining justice in the benefit of the victims of the services, and ...

Sensitization of institutions and organizations related to waste management in order to prevent the spread of diseases caused by waste products.

Avoiding distributing items and gifts from several different governmental and non-governmental channels and sensitizing security, military, and decision makers to integrate distribution of items to prevent chaos and injustice in distribution of services.

Conclusion

Based on the results of this study, after the expert's survey, 14 factors were selected as the strength point, 13 factors were identified as weaknesses, 8 factors were identified as opportunities and 15 factors as threats, and then they were weighed and prioritized. According to the results, the main strengths of the team is integrated, systemic and strong management in the Rescue Command headquarters in the region, with the management of the Red Crescent of Khorasan Razavi, and the proper utilization of the

capacity and expertise of rescuers in the relief and rehabilitation process. This has ultimately led to the involvement of other factors to improve the process of distribution of items and relief goods by changing the management after the establishment of the team in the region, which, according to the conditions, is an important achievement. In contrast, the most important functional weaknesses based on expert opinions is inappropriate accountability of the Red Crescent population in the first days of the incident and the lack of standard forms and uniforms for the relief.

On the other hand, in the external factors about the opportunities, the proper position of the Red Crescent Society in terms of social status and public trust, and the proper rehabilitation of the people of Sarpol-e Zahab (the experience of the imposed war on people) in the circumstances are the most important opportunities for the Management of Emergency Situations in Kermanshah earthquake. Moreover, the major threats to these critical circumstances are the inadequate structure of the crisis management cycle (interference with the duties of the headquarters of each other), as well as the lack of prioritization of emergency and crisis-oriented thinking in the eyes of the authorities (Governor, etc.).

As a result, based on the information, three strategies for these conditions are proposed. In line with the system strengthening and development strategies, determining and maintaining the status of crisis management in disasters in a centralized, unit-driven manner, with speeding up the operations process, as well as developing an emergency operational program (EOP) of the Red Crescent Society in line with the appropriate accountability and operation in disasters are the most important strategies that should be the basis of all future plans of the Red Crescent Society. Regarding the strategies for maintaining and improving the status of the system, the use of the cultural and religious capacity of prominent individuals, people's support, the Semans, the social influence to develop the identity of the volunteers at the community level, maintaining the

relative tranquility of the people in the event of accidents, and ... using empowerment and potential of women in operational teams to utilize their ability in operational processes and psychological support due to the special status and needs of women and children at the time of disasters are considered as the most important strategies. In the third category, in line with the strategy of release or relative qualitative system, the system is prevented from sending unbalanced and heterogeneous items with cultural, climatic conditions in order to maintain human dignity, as well as to avoid acting in tastes and interfering personal decisions in the activity of rescue to reduce negative social effects, and the homogeneous distribution of items and goods, the maintenance of justice in the benefit of the victims from services, and etc. are the most important strategies.

Finally, it should be noted with sympathy with the dear compatriots in the province of Kermanshah that this event can happen at any time

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