Rate of preparedness for crisis in three selected border hospitals

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Abstract

Aims: Always in different parts of the world including Iran, unexpected events happen and there is the possibility of their occurrence in different societies with different violence and intensity. This study was conducted to investigate the level of preparedness of border hospitals of Iran, in confrontation with crisis.

Methods: This descriptive cross-sectional study was conducted in three selected border hospitals in 2009. Data were collected by a researcher-made questionnaire. The reliability of the questionnaire was confirmed by Alpha Cronbach's alpha test (α=90.6). Finally data were analyzed using descriptive statistics (frequency distribution tables, means and etc).

Results: From among the total 11 dimensions studied in the selected hospitals, hospital A with the mean score of 87/1 percent, hospital B with mean score of 77/59 percent and Finally hospital C by mean score of 70/01 percent had the preparedness of confrontation with crisis. In general, the average of preparedness scores in confrontation with crisis in three studied hospitals was 78/23 %.

Conclusion: Preparedness of hospitals is in good status considering most of dimensions (7 of 11 dimensions), and only had moderate ranking in dimensions of responding to injured patients’ needs, maneuvers, admission and transfer and discharge.

Keywords: Preparedness, Border Hospital, Crisis

Introduction

Unexpected events and disasters are often uncontrollable and always occur in different parts of the world including Iran, and their possibility of occurrence is felt in different societies and with different intensities [1]. Moreover, of their consequences is imposition of plenty of financial and life-related damages on human societies. Iran is one of ten disaster-prone countries of the world and according to statistics, from among 40 types of natural disasters recorded in the world, 31 types have occurred in Iran and the possibility of their occurrence in future is high [2]. In fact, whenever man prepares himself for confrontation with events, he can stop the incident at the level of the very “incident”, but if this readiness does exist for any reason, then the “crisis” will happen. Crisis confrontation planning is crucial for any organization with any activity. Health centers are not exempted from planning and according to their function and their position, are the first places of referral for victims and therefore having such programs is more vital for them [3]. Meanwhile, military health centers, having the plan of crisis control and reduction of its effects (in terms of occurrence) should have the necessary provisions [4]. With regard to the small number of studies conducted on military hospitals, especially border hospitals, this study aimed to evaluate the preparedness of three border hospitals in dealing with the crisis and to provide a proper model of better preparedness in necessary conditions for military and armed forces hospitals.

Methods

This descriptive cross-sectional study was conducted in three border hospitals in 2008 to evaluate the rate of preparedness in confrontation with crisis.

Data gathering tool was a researcher-made questionnaire of demographic characteristics and managers’ attitude and the checklist of assessing the hospital preparedness in confronting with crisis in 11 aspects of responding to the needs of injured patients, organizing, training, support, human resources, maneuver designing, maneuver execution, discharging of injured people, admission, transfer and discharge and communication (scoring each case from grades 1 to 3), which were completed by the researcher according to studying and observation of hospital documents. The content validity of the tool was confirmed by 15 experts and professors and its reliability was proved through Chronbach’s alpha test (α=90.6).

The level of readiness in confronting crisis in the given hospitals was estimated on the basis of three following levels: low (zero to 50%), moderate (50-75%) and good (75-100%). Data was analyzed using descriptive statistical methods by SPSS 14 software.
Results

The hospitals evaluated in this study were first-degree hospitals in terms of the last available ranking (Table 1).

<table>
<thead>
<tr>
<th>Hospital</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of establishment</td>
<td>1370</td>
<td>1376</td>
<td>1364</td>
</tr>
<tr>
<td>The number of approved beds</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>The average percentage of occupation</td>
<td>80</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>Total Ambulances</td>
<td>&gt;10</td>
<td>6-10</td>
<td>6-10</td>
</tr>
<tr>
<td>Results of the last evaluation</td>
<td>Degree 1</td>
<td>Degree 1</td>
<td>Degree 1</td>
</tr>
</tbody>
</table>

Evaluating the organizing dimension, the highest score was 91 (89.22%) and belonged to the hospitals "A" and "B" (Table 2). All three hospitals had a complete and comprehensive program in crisis condition considering the following aspects: availability of rules and instructions, clarity of the general policy, organizing based on facilities and staffs, presence of an organizational chart, the presence of the crisis committee members’ list, specification of the way of attracting experts, arrangement of crisis committee members according to the chart, organizing the security members, clarity of the duties of security members, specification of the method of employing the hospital staffs, preparation of supervision unit on resources, Triage team organization, identification of the unified command system, forming of the planning committee for equipping the needed facilities, determination of the director of the command team, specification of the support unit structure, developing a unified organizational structure of admission with comprehensive planning in crisis condition.

In terms of logistics and support, hospital A gained the first rank with 172 points (88.21%) (Table 2). All three hospitals had a comprehensive plan for crisis time in terms of following aspects: presence of information associated with the hospital equipments for giving services, feasibility of using portable devices of radiography and anesthesia and surgery in admission setting, presence of consumable materials in paraclinical units for 24 hours, presence of a water well with an impenetrable and dischargeable lid, presence of adequate emergency power generators, appropriation of budget with a specific title, computation of drug and food supplies, existence of adequate and charged fire capsules with checked expiration date and manuals in appropriate places, readiness for vaccination, water storage for 12 hours in critical conditions, periodic control of equipment performance quality, specification of the support team duties, preparation of materials and equipment list, specifying of the commander of supporting team and fuel supplying director and controller of establishing power and water, automatic operation of emergency power system, determination of the location of stored equipments and prediction of increase in bed capacity in crisis condition. But considering the suitability of cold room capacity and providing proper cover for volunteers, the needed predictions had not been made.

In terms of human resources, hospital A had the first rank with 82 points (94.25%) (Table 2). All three hospitals had a comprehensive plan for the following dimensions: specifying of people for data collection and analysis, having a leader for information center, determining of the heads of various departments by the crisis commander, membership of at least one physician and nurse in headquarters, employees’ familiarity with the commander of the crisis, definition of the alternative director with the minimum personal competency in nobility of work and individuals allowed to call the headquarter, developing of a plan for summoning staffs, preparation of a list for the assessment of hospital capacity considering the employees, availability of full-time staffs for facilities department, prediction of guidelines for staffs’ psychological counseling, distinguishing of the director of human resources’ supply and the structure of human resources and alternative people for key posts and organizing of volunteers, having information about regional hospitals and facilities.

Investigating the dimension of responding to injured and wounded individuals’ needs, hospital A received
the highest score with 25 points (83.33%) (Table2). All three hospitals had complete planning in two parts: presence of facilities for transfer to the surgery ward and preparation of the flowchart of unexpected events by the crisis committee. The overall readiness of the two hospitals "A" and "B" was good and that of hospital "C" was average.

Discussion
According to the results, the mean score was 73.033% for the responding dimension that based on the given criteria this dimension was evaluated to be average. Since hospitals are the most important place for transfer of injured patients to continue the treatment, it is necessary that in addition to therapeutic course of actions, their needs be also attended and measures should be taken in order to secure the lives of victims so that they have a pleasant feeling during their hospital stay. Edbert et al., in their study have also pointed that health and treatment staffs should have the necessary knowledge in responding to disasters, about their communication with victims and control of individuals' turnover [5].

Studying the organization dimension, the average scores in three studied hospitals were 88/88% (in good condition). Due to Mahboubi (mean score in dimension of organization has been estimated to be 61.8%), Mosaddeq Rad (54%) and also Sorouri (4.71%), the status of organization dimension in the three studied hospitals is appropriate. Since having an organization proportionate with high efficiency is essential in hospitals [6], organization should be established in a way that the usual conditions it can be a basis for the time of crisis and war, and the hospital could have a proportionate performance in different and difficult conditions [7].

The mean of scores was 82.46% in the training dimension that was almost consistent with the findings of Mahboubi (approximately 50%), Hojjat (about 66.65%) and Sorouri (55%); while the obtained score was indicator of the superiority of the status in this study compared to others [8, 9, 10] and this could be due to hospitals' position, being military hospitals and being exposed to various kinds of crises. The best, most rapid and inexpensive method for saving the life of humans, especially in crisis is training [1, 11]. Therefore, hospitals should pay particular attention, in addition to other criteria, to their staff training by identifying suitable methods and equipments as an important task, for improving of their performance [12, 13].

Conclusion
Three hospitals "A", "B" and "C", in different dimensions of confrontation with crisis including organizing, training, support, human resources, maneuver design, evacuation of injured patients and communications are in good condition and only in dimensions of responding to injured patients' needs, maneuver execution, admission, transfer and discharge of injured patients are in moderate condition.

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