

Preparation Measures of Volunteers in Disasters in Hospitals of Tehran

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Dear Editor,

In recent years, volunteers as auxiliary forces for human resources have been playing a vital and effective role to mitigate the effects of disasters (1). Volunteers need to be recognized, guided, and prepared by the relevant agencies and organizations. Volunteers are considered a valuable resource for the community, especially when they are trained and given missions properly under the existing management system (2). According to comprehensive theory of volunteers, volunteerism is productive and profitable. Undoubtedly, among the multiple institutions and organizations related to disaster and rescue management, healthcare systems, particularly hospitals, are the main unit of providing services in disasters (3). Hospitals are faced with shortages of nursing and rescue forces in disasters (4). Also, there is the possibility of damage to the hospital and the staff during unexpected events. In such situations, the existence of volunteers' management in hospital is essential for improving the performance of healthcare systems. Previous studies have investigated the volunteers in the red crescent in Iran; however, the innovation of this study is to discuss the activities of the volunteers in hospitals. The weakness in the volunteers' preparation by the healthcare systems causes irreparable damages after the disasters. Hospitals require programs and plans to prepare the volunteers in three phases of the disasters (before, during, and after). For this purpose, it is necessary to identify and prioritize the measures and the activities at each stage. The aim of this study was to examine the preparation measures of the local volunteers in hospitals (before, during, and after) disasters.

This was a cross sectional study in which a researcher-made questionnaire was used to collect the data in September 2014 to May 2015. The population was composed of all relief and rescue managers, emergency nurses, and emergency doctors in the hospitals of Tehran University of

Medical Sciences (governmental hospitals). A total number of 180 participants were selected by random sampling method. The questionnaire consisted of 30 items in 3 domains as it follows: 1) before disaster (9 items); 2) during disaster (10 items); and 3) after disaster (11 items). The items were rated according to a 5-point scale from 1 to 5. Cronbach's alpha was used to assess the reliability. Cronbach's alpha was calculated for the three sections of the questionnaire (0.75, 0.81 and 0.79). Calculated Cronbach's alpha indicated that the questionnaire had acceptable reliability. The data have been analyzed using mean \pm SD, one-sample t-test, and Friedman test. One-sample t-test was used to analyze the significance of the volunteers' preparation measures. Friedman test was used to prioritize the preparation measures.

The results of the t-test showed that all the preparation measures in the three phases of the disasters were significant ($P \leq 0.05$). The priority of the preparation measures before disaster included maneuver (mean rank = 6.61), holding practical tests (6.05), triage and first aid training (5.80), theoretical test (5.58), documentary and educational movies (4.73), periodic evaluation (4.12), coordination with hospital staff (3.37), and division of tasks and specialization (3.16) respectively. The priority of the preparation measures during disaster included triage and first aid (8.43), helping people with calmness (6.35), proper planning (5.61), obeying the orders (5.25), quick transfer of the forces (5.16), monitoring the measures (5.07), and coordination with other units (4.97). The preparation measures after disaster included developing new plans (7.61), preparing the statistics and the information of the disaster (7.35), assessing the forces' status (6.49), transferring the injured to the hospital (6.38), satisfying the needs (6.34), holding review session (5.78), and informing the event aspects (4.23). Cliff et al, Nivolianitou and Synodinou have mentioned holding maneuvers for various disasters (5, 6).

Therefore, it is necessary to hold workshops and training courses for the first aid and rescue techniques in order to prepare the volunteers (7). Nazli has emphasized on the training media and, also, has stated that after the training, it is necessary to measure the knowledge and the expertise of the volunteers periodically (8). Toyokuni has emphasized on the importance of the first aid (9). Meyer et al. has explained that it is necessary to develop further strategies and plans according to the type and the level of the occurred disasters (10). Overall, the comparison of the three phases showed that the preparation measures before disaster has gained the highest priority in the preparation of the volunteers in hospitals. Equipping and empowering the volunteers before the events and disasters could increase efficiency and effectiveness.

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