IMPROVING THE ROLE OF A SELECTED SKILLED PROFESSION TOWARDS SEISMIC RISK REDUCTION THROUGH TRAINING

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ABSTRACT

Earthquakes are among the most devastating natural disasters which have claimed lots of human lives and loss of properties. In this regard, using the skills of different professions can have an effective role in increasing the preparedness level of community and reducing the vulnerability of people in the society to a substantial level. One of the main reasons for undertaking this study is to identify and explore a selected skilled profession based on its priority and important role during and after disasters such as earthquakes. In this study, an assessment was made in order to select occupations which have more essential role in disaster situations. Then, research tools such as interviews and questionnaires were used. The awareness level, educational methods, extent of education, educational tools, contents and materials, educational skills, and suitable time and place for teaching in disaster management were considered and evaluated for the selected group. Discussion was concluded based on the analysis of the interviews and questionnaires. At the end, applicable suggestions were presented with regard to the findings in order to increase the disaster management capacities of those targeted in a specific skilled profession such as taxi drivers through training. So far, no specific guidelines have been prepared in the country comprising the roles and responsibilities of important jobs in disasters and the way they can act effectively if trained. Additionally, it seems that there are no specific documented sources in many countries in this regard. Therefore, this study can somehow reduce the vulnerability of people in future disasters.

Keywords: Disaster risk reduction; Vulnerability; Selected profession; Emergency situations

1. INTRODUCTION

In community based disaster reduction, appropriate performance of people especially the local and more skillful ones can be effective in reducing the adverse consequences of a disaster. There are professions such as teachers, reporters, taxi drivers, and skilled workers, for example, which can have effective roles in reducing the consequences of disasters, and if responsible people in these occupations get familiar with their roles, the vulnerability of society can be reduced to a great extent. For example, a taxi driver can help to evacuate people quickly from the stricken area or can act as the reporter for informing the situation to the responsible city authorities for emergency response. Also, the owners of supermarkets who are familiar with their neighborhood, the residents and the access roads, can be very effective in helping people to evacuate from or take shelter in specific and designated areas after earthquakes. So far, no recommendations or guidelines have been prepared and reported in Iran comprising the roles and responsibilities of various important jobs in disasters, and it seems that there are no specific documented sources in many countries of the world in this regard. This study therefore can help to increase the level of preparedness and to reduce the vulnerability of people in future disasters.

In this paper, one selected skilled profession is discussed based on its priority and important role during and after disasters such as earthquakes. First a background of related studies is presented. Then, the next section deals with the methodology used in this research. The findings and discussion are also addressed in the next sections of this study. At the end conclusion and further research is suggested.

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2. LITERATURE REVIEW

As one of the first studies in this area, a paper has been published by the authors (Izadkhah and Hosseini 2007), in which the distribution of appropriate information in disaster response has been highlighted. Getting quick information is very important for those who are present in the disaster scene. The taxi drivers can be categorized among those groups who are present after a disaster. Therefore, if they get prepared to act as reporters to the disaster managers or officials, they can be a great help. The provided information by the taxi drivers can assist the disaster management officials and decision makers to act properly and correctly after a chaotic situation. This study has looked at the opportunities and challenges that are involved in teaching to taxi drivers about earthquakes and materials that they need to learn. The time, tools and materials are among the aspects which have been addressed in this study.

Another paper has been written by Lee and Cho in 2010 in Injury Prevention journal entitled “A Study on Taxi Drivers as the First Responders to Emergency Situations in South Korea”. In the study, it has been stated that taxi drivers as one of the first observers after a natural disaster, can be very useful in survival of the affected people in a disaster. In this research, a number of taxi drivers which have been imposed to emergency situations have been assessed and various reasons that make them help the survivors have been identified.

Also, the Effect of first-aid training for taxi drivers on their willingness to perform emergency care is another topic that has been published in the Journal of Trauma and Injury. In that paper, it has been mentioned that after an accident, the taxi drivers are the first who can respond because they can be present in the scene. If the taxi drivers be trained properly about the first aid activities and how to perform them, they can play an important role in helping the survivors before taking them to hospital (Seong et al. 2013).

3. METHODOLOGY

This study employs both qualitative and quantitative aspects. A set of questions were conducted and asked by experts from a group of random audience. The topics that were designed in these questions comprised the personal information including age, sex and level of education as well as the following:

1) Definition of earthquakes;
2) The level of knowledge on earthquakes;
3) What they have done to be prepared for an earthquake;
4) What to do in an earthquake;
5) What to do after an earthquake;
6) What skills to be taught in regard to their professions;
7) What is the most appropriate time for teaching and learning about earthquakes;
8) Which methods are best for teaching about earthquakes;
9) Which tools are most appropriate in teaching about earthquakes;
10) Which group they will choose to be part of in disaster response teams.

The questions were asked in a set of randomly chosen interviews with 35 male taxi drivers in various districts of Tehran Metropolis.

4. FINDINGS

The results of the questions cited in the methodology are shown in Figures 1-10 as follows:

![Figure 1: Definition of earthquakes](image-url)
Figure 2: The level of knowledge on earthquakes

Figure 3: What they have done to be prepared for an earthquake

Figure 4: What to do in an earthquake
Figure 5: What to do after an earthquake

Figure 6: What skills to be taught in regard to their professions

Figure 7: The most appropriate time for teaching and learning about earthquakes
Figure 8: Which methods are best for teaching about earthquakes

Figure 9: The most appropriate tools in teaching about earthquakes

Figure 10: The group taxi drivers chose to be part of in disaster response situations
5. CHALLENGES IN TRAINING SELECTED PROFESSIONS

The opportunities for training professions in disaster risk reduction are discussed in the previous sections of this paper. However, there are some difficulties which can hinder the training process. The issues that need special consideration are:

- Lack of sufficient priority given to training of special occupations in spite of the fact that this is a very important area which needs urgent attention.
- Insufficient time to train teachers mostly due to their daily commitments - They seem far too busy to get involved in these issues and activities. Therefore, there should be a specific time allocated to train them and the intervals for this training should also be identified (Izadkhah and Hosseini 2007; Hosseini and Izadkhah 2008).
- Lack of appropriate and adequate background knowledge, expertise and experience in disaster related issues - It is possible that there might be only few people in any country who have got an academic background or first-hand experience on various natural disasters.
- Lack of appropriate partnership in various regions. The main reason behind this is the lack of enough interest and motivation to use internet as one of the most appropriate tools for knowledge and experience sharing and transfer.
- Lack of enough motivation and incentives due to the fact that the selectees might not have received much benefit from their previous trainings.

The items noted above were the general challenges in training selected professions. However, to be more specific for the selected occupation in this study, following items are recommended which will be stated briefly.

6. DISCUSSION

Telephone taxi drivers should be taught by related people with high expertise and knowledge of the field. They can be trained to act as reporters in the aftermath of earthquakes for the emergency management authorities of the city. Taxi drivers can provide these authorities with real time information in order to help them for timely and appropriate decision-making and action in the disastrous situation. The minimum knowledge which the trainers should have consists of knowing the signs which shows the earthquake occurrence while the person is on the street and driving a car, also to be quite familiar with structural and nonstructural damages of buildings, as well as possible damages to lifeline systems and their interactive effects. Finally, it is necessary to have high abilities for guiding adults in various ages and with different educational background in the time of disasters.

Other factors that need consideration are:

- Identifying ways to increase a strong belief of earthquake occurrence among drivers;
- Classifying the incentive factors according to their interest in increasing the earthquake issues;
- Producing effective methods for teaching earthquakes to this group;
- Using SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis in teaching and using the related issues to earthquakes.

Part of the issues in training taxi drivers that need special considerations include:

- Insufficient time to train taxi drivers, mostly due to their daily commitments as they seem far too busy to get involved in these issues and activities, especially during the daytime.
- Lack of appropriate and adequate background knowledge and experience in emergency related issues. Therefore, it seems that training the representatives is of great importance, since they will be able to train other personnel in sub-groups. Unfortunately, there is unwillingness in many drivers to participate in classes, because they think that this can prevent them from their routine work resulting in earning less income. However, in recent years, due to the establishment of services like Uber, Snapp and TAP30 (Internet based Taxi services), the drivers are more educated and their training can be easier and more effective.

The most appropriate educational tools to teach taxi drivers are radio, television and films. For example, radio is very accessible for drivers as they can listen to it while they are on duty. Teaching taxi drivers through TV and films can also be useful but it should be done in weekends and holidays in a place near their home or work station.
In the following chart, the number of asterisks shows the extent of efficiency of the studied job in various activities related to emergency response. It is worth mentioning that planning to teach various selected jobs can be done by professional experts including fire men, search and rescue teams and specialized related volunteers.

Table 1: Proposed chart for specifying the role of emergency response activities to selected teams

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Public information dissemination and education</th>
<th>Evaluation and support</th>
<th>Search and rescue</th>
<th>First aid</th>
<th>Fire-fighting and safety</th>
<th>Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi Drivers</td>
<td>***</td>
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With regard to the novelty of this research and the necessity to consider various aspects for increasing the role of various groups of the society (especially those who own special professions and skills), it seems that more detailed study from various aspects could be influential.

7. CONCLUSIONS

The importance of disaster training for a selected profession that is taxi drivers, have been highlighted in this paper briefly. There is more to be detailed that is beyond the scope of this paper. As discussed in the previous sections of this paper, training telephone taxi drivers for acting as the emergency reporters seems quite feasible and practical. It should be mentioned that these professions could be encouraged through their main organizations for training. The neighborhood councils and disaster management bodies can act as a link between these professions and trainers. There should be incentive specified for them in order to give them interest in learning about disasters. To conclude, it is hoped that the proposed training scheme can be implemented in near future in disaster-prone developed countries. It is suggested that further similar studies need to be undertaken for other important skills to achieve a more successful disaster response programs.

8. ACKNOWLEDGMENTS

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9. REFERENCES


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