

## A Study of the Change in Housewives' Knowledge and Attitude toward Household Emergency Kit in Yazd, 2015-2016

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ARTICLE INFO	ABSTRACT
<p><b>ORIGINAL ARTICLE</b></p> <p><b>Article history:</b> Received: 23 Des 2017 Revised: 7 Jan 2018 Accepted: 10 Feb 2018</p> <p><b>*Corresponding author:</b> Azadeh Fatehpanah</p> <p><b>Address:</b> Department of Emergency &amp; Disasters Health, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran</p> <p><b>Email:</b> fatehpanah@gmail.com</p> <p><b>Tel:</b> +98-9132735160</p>	<p><b>Introduction:</b> The occurrence of natural disasters and their consequences cannot be eliminated. The earthquake is one of the characteristics of our planet, which alone has killed thousands of people, worldwide.</p> <p>Considering the seismicity of Iran and the necessity of preparedness and education of people about the appropriate and timely approach to this event, this study was conducted with the aim of investigating the changes in housewives' knowledge and attitude toward household emergency kit in Yazd in 2015-2016.</p> <p><b>Methods:</b> To achieve the purpose of this study, a valid and reliable questionnaire which asked about the demographics, knowledge, and attitude, was delivered. After completion of the questionnaire by the individuals, a training pamphlet that covered information about the earthquake, the importance of earthquake protection, and the items, provision, and maintenance of emergency kit was provided to each participant. After that, the participants were asked to fill out a similar questionnaire to the one that she had already completed.</p> <p><b>Results:</b> According to the findings the mean scores of knowledge before and after education were significantly different (<math>P &lt; 0.05</math>), that is, education increased knowledge of the women. In all age populations, the mean attitude score increased but the increase was not significant (<math>P &gt; 0.05</math>). There was no significant difference among different education levels (<math>P &gt; 0.05</math>), in other words, people from the baseline had a high positive attitude toward learning and gaining information about earthquake and emergency kit. No significant difference was observed in the attitude change with respect to the type of house ownership (<math>P &gt; 0.05</math>). In overall, the mean scores of attitude before and after education were not significantly different. In other words, people from the first had a high positive attitude toward education and learning about earthquake and emergency kit.</p> <p><b>Conclusion:</b> The present study confirms that the people of the community have understood the importance of obtaining necessary information and earthquake preparedness. Therefore, they need education and should learn and use the materials about earthquake preparedness. It is thus recommended that training programs be provided in the form of booklets, pamphlets, or short media programs to raise knowledge of the people.</p> <p><b>Keywords:</b> Attitude, Earthquake, Emergency kit, Knowledge.</p>

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## Introduction

The occurrence of natural disasters and their consequences in the world cannot be eliminated, and they are always likely to occur. Natural disasters have been an inescapable part of human life throughout history (1).

One quarter of the world's population is currently exposed to natural disasters. According to a study conducted in 1994, Asia faces different types of disasters more than three times as much as Africa, almost twice as much as the Americas and Europe, and four times as much as Oceania (2).

According to a study conducted in 2010, out of every ten metropolis across the globe, eight are located in developing or less developed countries, and the incidence of disasters in them causes much damage and much more losses (2).

According to international statistics provided, between 1900 and 2015, 13,564 natural disasters occurred, due to which 32,578,839 people were killed, 7,804,599 wounded and 7,035,392,365 affected (2).

Iran is exposed to many natural disasters for various reasons such as geographical, climatic, and geological conditions and being located in the ring of Fire so that, according to international statistics on the number of deaths and damage caused by natural disasters in Iran, during years 1900-2015, 155,849 people were killed and 44,618,990 people were affected by three natural disasters, i.e. flood, drought, and earthquakes. These official statistics highlight the necessity and importance of protecting people's lives, health, and property against natural disasters (2).

The earthquake is one of the characteristics of our planet, which alone has killed thousands of people and caused a lot of financial losses across the world, and is one of the most known natural disasters in the world due to the wide extent of the territory it affects and the extent and severity of the damage it brings (3).

The earthquake is one of the natural disasters that has harmful physical, economical, and life-threatening effects. Due to earthquake unpredictability, planning for its risk reduction and preparedness is very important (4).

Because of being located in the Alpine-Himalayan orogenic belt, Iran's land is one of the world's most seismic zones, which has been frequently struck by devastating earthquakes. A number of these earthquakes have caused many casualties and financial losses (5).

According to the statistics during years 2000 and 2014, 37 earthquakes occurred in Iran that caused more than 31,896 people to be injured, 28,125 to be killed, and 71260 to become houseless, and a total of 918,233 people were affected by the earthquakes. These earthquakes have cost the country an estimate of 2,252,928 dollars (6).

For people who live in seismic regions, the question of what to do in the event of an earthquake or when an earthquake occurs remains to be definitely answered?

Since human science has not been able to accurately predict the time of the earthquake, people need to develop preparedness plans for the time of the occurrence of this event so that at the time of the earthquake, they can at least minimize financial losses and casualties by having earthquake preparedness and planning for it beforehand (7).

One of the things that can be effective in surviving and reducing mortality after disasters is the availability of a relief and rescue kit in the house. In fact, a relief and rescue kit comprises the items that are effective in saving you time in case of an incident (8). Maintaining and ensuring the proper working of the emergency kit items for the time when they are needed is as important and helpful as the supply of the kit for the survival of family survivors in the crisis (9).

Considering the importance of having an emergency kit in reducing the time and increasing the likelihood of survival of people after disasters until the relief forces arrive, and also the importance of training and knowledge of the community about how to prepare and maintain this kit, we decided to investigate the changes in housewives' knowledge and attitude toward household emergency kit in Yazd in 2015-2016.

## Materials and Methods

The present study was conducted in housewives living in Yazd, Iran. A total of 90 participants were selected by clustered method with new, moderate, and old urban textures of Yazd serving as the clusters and 30 women included in each cluster.

To achieve the purpose of the study, a questionnaire which its validity and reliability was confirmed by relevant experts (Cronbach's  $\alpha=0.8$ ), and consisted of three sections, the demographic information, knowledge-related information, and attitude-related information, was developed. The questionnaire was then given to participants. After completion of the questionnaire by the participants, a training pamphlet that contained information about the earthquake, the importance of earthquake protection, and the provision and maintenance of emergency kit was provided to each participant.

Then, after studying the pamphlet, the participants were asked to fill out a similar questionnaire to the one that she had already completed. Data were analyzed by statistical package for social sciences (SPSS) software version 19 using Kruskal-Wallis, Mann-Whitney, t-test, and ANOVA where appropriate.

## Results

In the present study, 36.6% of participants were less than 30 years old, 26.7% were 30-40 years, and 36.6% were aged over 40 years.

Regarding education level, 43.3% of the participants had high school diploma, 10% had associate's degree, 40% had bachelor's degree, and 6.6% had master's degree.

In terms of house ownership, 80% had a personal house and 20% lived in a rental house

According to the results, the mean scores of knowledge before and after education in all age groups were significantly different. This means that after the study of pamphlet, the mean score of knowledge increased in all age groups (**Table 1**).

Table 1 shows that the mean scores of knowledge before and after education in participants with high school diploma and bachelor's degree holders. Table 1 also shows the mean scores of knowledge before and after education according to the type of house ownership, that is, knowledge increased in both those who had a personal house and those who lived in rental house, but the mean knowledge before education was lower in the women who lived in a rental house than in those who lived in their personal home.

In general, the mean scores of knowledge before and after education was significantly different, that is, the education caused an increase in the women's knowledge.

The analyses revealed that in all age groups, the mean scores of attitude increased from  $34.3 \pm 3.2$  to  $35 \pm 2.9$  but the increase was not statistically significant. In other words, the women from the first had a high positive attitude toward learning and gaining information about earthquake and emergency kit.

There was not any significant difference between the women with different education levels ( $P>0.05$ ), in other words, the women from the first had a high positive attitude toward learning and gaining information about the earthquake and emergency kit.

Furthermore, there was not any significant difference in the increase or decrease of attitude according to the type of house ownership, in other words, the women from the first had a high positive attitude toward learning and gaining information about the earthquake and emergency kit.

In overall, the mean scores of attitude before and after education was not significantly different. In other words, people from the first had a high positive attitude toward learning and gaining information about earthquake and emergency kit..

**Table 1:** Comparison of the mean scores of knowledge and attitude before and after education

		Pre-education	Post-education	P value
		Mean ± standard deviation	Mean ± standard deviation	
<b>Knowledge</b>				
Age	Under 30 years	12.4 ± 6.4	25 ± 1.4	0.01
	30-40 years	9.7 ± 2.3	25.3 ± 0.9	0.01
	Over 40 years	11.5 ± 7.3	25.2 ± 0.09	0.003
Education level	High school diploma	9.2 ± 4	25.5 ± 0.6	0.001
	Associate's degree	9 ± 1	25 ± 1.1	0.1
	Bachelor's degree	13.5 ± 7.7	24.7 ± 1.3	0.005
	Master's degree	13.5 ± 0.7	26 ± 0	0.1
Type of house ownership	Private	11.9 ± 6.3	25.1 ± 1.1	0.000
	Rental	8.3 ± 1.8	25.5 ± 0.8	0.02
Knowledge	Total	11.2 ± 5.8	25.2 ± 1.07	0.000
<b>Attitude</b>				
Age	Under 30 years	34.5 ± 1.8	35.1 ± 3	0.509
	30-40 years	34 ± 3.5	35 ± 3.2	0.19
	Over 40 years	34.7 ± 4.2	35 ± 3	0.8
Education level	High school diploma	34.1 ± 3.6	34.8 ± 2.8	0.48
	Associate's degree	32.3 ± 1.5	36.6 ± 2	0.16
	Bachelor's degree	35.2 ± 3.3	34.7 ± 3.3	0.521
	Master's degree	33.5 ± 0.7	35 ± 4.2	0.7
Type of ownership	Private	34.5 ± 3.4	35.5 ± 3	0.44
	Rental	33.6 ± 2.7	34.5 ± 2.9	0.31
Attitude	Total	34.3 ± 3.2	35 ± 2.9	0.310

**Discussion**

In the present study, it was also observed that the participants had little knowledge about the earthquake preparedness and the importance of emergency kit, as well as how to prepare and maintain the kit, but after providing the necessary information in the form of a pamphlet, the level of their knowledge about these issues significantly increased.

The positive attitude of the participants toward the importance of earthquake preparedness, as well as the provision of a tool called emergency kit in order to protect themselves or their family members after the earthquake, indicates that the people of the community have understood the importance of obtaining the relevant information and earthquake preparedness.

In a study Hajizadeh et al. (10) investigated the effect of relief kits on the knowledge and attitude of military personnel's wives in facing earthquake, the women were randomly divided into two groups of intervention and control, and 30 wives of military personnel residing in institutional homes were studied.

The primary test was carried out by using a researcher-developed knowledge and attitude questionnaire in two groups and then the intervention group received educational content (educational booklet and video), but the control group received no intervention.

After two weeks, the post-test was taken in two groups. The results of the study showed that relief education could enhance the knowledge of assisting people in crises, but other educational methods should be used to change their attitudes.

In a study to investigate knowledge, attitude, and practice of high school students about earthquake in Jam County, Morovati (11) achieved the following results: The mean scores of knowledge and attitude of students were  $27.5 \pm 1.30$  (of 42) and  $69.2 \pm 2.22$  (of 27), respectively.

He also argued that knowledge, attitude, and practice of students regarding the earthquake were not optimal and ideal, and in this regard, interventional and especially educational measures based on the study results are necessary.

### Conclusion

The community need education and then should be learnt using the materials about earthquake preparedness. Therefore, it is recommended that training programs be provided in the form of

booklets, pamphlets, or short media programs to raise knowledge of the people.

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### Conflict of interest

The author does not have any conflict of interest.

### Authors' contribution

The author conceived and conducted the study alone.

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