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# Evaluation of knowledge and attitude of Kermanshah university of medical sciences students in the field of health interventions in emergency situations in 2016.

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**Abstract:** Having access to healthy and hygienic food is one of the main requirements of a healthy life. This is of more importance in the situations that access to food stuff is not easy. It is essential for the countries prone to natural disasters to be prepared for facing crises. Purpose of the present study is to survey awareness of the students in Kermanshah University of Medical Sciencaes about nutrition and storing food stuff in crises. A descriptive-analytical study was conducted on 349 students in Kermanshah University of Medical Science in academic year 2015-2016. The participants were selected randomly and having ascertained validity of the questionnaire by the experts, the questionnaire was distributed among the students. The collected data was analyzed in SPSS (16). The results showed that 38.7% of the participants had a good level of awareness, 35.8% had moderate awareness and 25.4% had low awareness about nutrition and how to store food incrises. No significant difference was found between men and women nor was there a significant difference between different age groups *(a* = 0.05) having enough experience and knowledge about nutrition safety, sampling risky foods by the health experts and authorities in early hours of a crisis and after settlement of the displaced population are essential. Education and experience are essential in improving awareness among experts and authorities who are incharge in crises and disasters. Therefore, holding retraining courses and practicing how to deal with communicable diseases via water and food are some measures to be taken to avoid epidemic of food poisoning and high mortality rate.

**Key words:** Awareness, nutrition, storing food stuff, crisis, Iran

## INTRODUCTION

Food hygiene is an issue inalmost all natural and man-made crises; since people insuch situations tend to leave their homes, food products are lost, transportation system halts and social structure of the society collapses. Emergence of food crises is caused by factors such as bad climate, natural disasters, economic crises, long-term wars, fire, lack of water and mixture of all these factors. Rate of outbreak of such crises has increased since the 1 980s; so that every year after 2000 the world has been faced with 50-80 food crises.

Food stuff hygiene during crises has direct relationship with people's health. Diseases that are transferred by food can lead to destructive outcomes to public health. Using unhygienic food might cause death and illness of millions; therefore, hygiene (safety) of food needs special attention (Amini *et al.,* 2014; Taghavi *et al.,* 2013).

One of the main responsibility of the authorities is to plan, prepare and predict the needs in the case of a crisis and further consequences. Supplying hygienic food and water for the people afflicted by crises is one of the main measures. Such preventive measured are highly effective on nutrition condition of the public after outbreak of a crisis, term and extent of the crisis and food production capacity in the afflicted area. Preventing, preparing for and dealing with crises and also supporting and rebuilding food supplies and empowering the population afflicted by the crisis are part of the responsibilities of state.

Human force and organizational factors determine how well a crisis is prevented or managed. Managing crises entails using health expert indifferent fields who have enough knowledge about working is such situations.

The extent of preparation and awareness of these experts is a determinant factor inreducing the damages

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sustained due improperly distributed food in the areas afflicted by the crisis (Ghafarokhi *et al.*, 2013). To this end, the experts and authorities need to attend training courses on how to deal with crisis.

Given the above introduction, it is imperative to hold training courses to improve awareness level in the experts of different fields of health services. To address this need, students in pertinent fields pass few credits during their education program about managing crises.

The present study is an attempt to survey awareness level of nutrition and how to store food stuff in students of Kermanshah University of Medical Science.

## MATERIALS AND METHODS

The study is a descriptive-analytical work to survey awareness of the students of Kermanshah University of Medical Science about nutrition and storing food stuff in crises. Study population was comprised of all students of the university and 346 students were selected randomly.

The selected students were from Faculty of Medicine (25.1%), Faculty of Paramedicine (7.5%), Faculty of Nursing and Midwifery (19.7%) and Faculty of Health (23.3%), Faculty of Dentistry (18.6%) and Faculty of Pharmacology (5.7%).

To collect the required data, a research designed questionnaire was used. The questionnaire was designed in two sections; a-demographics and b-10 questions about level of awareness. With regard to level of awareness, correct answer would score "1" and wrong answer would score "0".

The collected data was analyzed in SPSS (1 6) and to compare the data, standard deviation, one-sample t-test and Maim Whitney test were used.

## RESULTS AND DISCUSSION

Girl and boy students constituted 68.5 and 31.5% of the population, respectively. The selected students were from Faculty of Medicine (25.1%), Faculty of Paramedicine (7.5%), Faculty of Nursing and Midwifery (19.7%) and Faculty of Health (23.3%), Faculty of Dentistry (18.6%) and Faculty of Pharmacology (5.7%).

Table 1 lists the respondents' answers to the questions about nutrition and how to store food stud in crises. With regard to the questions about level of awareness, Standard Deviation (SD) and rate of the response were calculated. This rate for the questions 5, 5, 7 and 9 was <0.5 and this figure for the rest of the questionnaire was higher than 0.5.

Question No. 7 (food stuff after settlement of the victims) had the lowest rate of response (39.3%) and question No. 11 (the main side-effects of storing food stuff in unhealthy situation) had the highest rate of respondents (80.3) (Table 2).

Table 1: Mean score of awareness level of nutrition and how to store food stuff in crises based on age groups

| | Age group | | |
|---|---|---|---|
| Index | 1 | 2 | Sig. |
| | 19-23 | 24-29 | 0.324 |
| Awareness | 175.48 | 159.58 | |

Table 2: Frequency rate of awareness level of nutrition and how to store food stuff in crises

| Variable | Frequency | Percentage |
|---|---|---|
| Low (0-4) | 88 | 25.4 |
| Moderate (4-6) | 124 | 35.8 |
| High (6-11) | 134 | 38.7 |

Table 3: Mean score of awareness level of nutrition and how to store food stuff in crises based on the faculties

| Faculties | N | Awareness level | Sig. |
|---|---|---|---|
| Medicine | 88 | 172.98 | 0.001 |
| Paramedicine | 86 | 161.69 | |
| Nursing | 56 | 184.23 | |
| Hygiene | 70 | 210.96 | |
| Dentistry | 18 | 143.89 | |
| Pharmacology | 28 | 115.32 | |

Afterward, a specific ratio was compared with a constant number and it was assumed that the ratios were equal with 0.5 (the expected response rate in the case of random answering or an equal ratio of the individuals who were aware or not aware). It was found that this hypothesis is not supported and therefore, the respondents had enough knowledge to answer all the questions.

In addition, the results showed that mean awareness score, SD and variation range in the students about nutrition and storing food stuff in crisis were 5.87, 2.02 and 1-11, respectively. Taking into account that total awareness score was considered as the level of acceptable awareness.

Based on this categorization, awareness of the respondents about nutrition and the way of storing food stuff in critical condition was a little less than this level. Mann Whitney test showed that there was no significant difference between boy and girl students with regard to their awareness ($p = 0.667$).

In addition, with respect to the awareness level, the students were categorized in two groups of above the 4rth year and below the fourth year of the program. Moreover, Kruskal Wallis test indicted that there was a significant difference between the faculties regarding their level of awareness. So that level of awareness was highest in the Faculty of Hygiene and lowest in the Faculty of Pharmacology.

Eventually, level of awareness was examined based on age of the participants and no significant difference was observed ($a = 0.0.5$; $p = 0.324$). It is notable that mean score of awareness in the younger students was higher (Table 3 and 4).



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Table 4: Student's awareness level of nutrition and how to store food stuff in crisis (one-sample t-test)

| Questions | Awareness | No-awareness | | SD | Sig. |
|---|---|---|---|---|---|
| What type of food would you recommend during the early hours of crisis? | 176 | 170 | 50.9 | 0.501 | 0.001 |
| Which one of the following recommendations are not suitable in crisis? | 190 | 156 | 54.9 | 0.498 | 0.001 |
| Which one of the following recommendations are not suitable in crisis? | 205 | 141 | 59.2 | 0.492 | 0.001 |
| Which are the main foods supply the nutritional needs of the survivals in crisis afflicted regions? | 225 | 121 | 65.0 | 0.478 | 0.001 |
| How long (minutes) the food must be boiled to ensure it is safe for eating? | 127 | 219 | 36.7 | 0.683 | 0.001 |
| How long (minutes) vegetables should remain in solution before eating? | 142 | 204 | 41.0 | 0.493 | 0.001 |
| After settling the displaced population which food stuff should be supplied on weekly bases? | 136 | 210 | 39.3 | 0.489 | 0.001 |
| What do we mean by dry food stuff during crises? | 180 | 166 | 46.8 | 0.500 | 0.001 |
| Should the sterilized milk with six months longevity be consumed immediately after opening its package? | 162 | 186 | 46.8 | 0.500 | 0.001 |
| Is sterilize milk a good replacement for pasteurized milk given that it can be stored in ambient temperature? | 211 | 135 | 61.0 | 0.488 | 0.001 |
| Decay of food stuff is a major consequence of storing food in unhygienic situation? | 278 | 68 | 80.3 | 0.398 | 0.001 |

## CONCLUSION

The results showed that less than 40% of the students had good awareness about nutrition and how to store food stuff in crisis. Banaie Ghahfarokhi et al survived awareness of the experts of environment health food hygiene about emergency situations with emphasis on Shahrekord's flood in 2012. Their results showed a significant difference in awareness of the participants before and after the trainings. In addition, there was a significant relationship among education level, place of work and level of awareness about food stuff. However, they found no significant relationship between the level of awareness and age and work experience in clinics (Dargahi *et al.,* 2014).

A study by Dargahi *et al.* (201 4) on awareness and attitudes of the students in Kermanshah about food hygiene and safety reported that 46% of the students had good awareness, 48% had moderate awareness and 4.5% had low awareness.

There was no significant relationship between the students' awareness and attitudes about food hygiene and safety and other parameters such as age, education level, gender and faculty.

A study on high school students in the USA and students in the University of Missouri showed that the participants had acceptable awareness about transferrable disease by food (Unklesbay *et al.,* 1 998)

A descriptive and cross-sectional study by Iman *et al.* (2011) titled "Nurses' Awareness about Crisis Management and the Pertinent Factors" on 250 nurses showed that only 3.2% of the participants had very good awareness of crises management, 16.6 had good awareness, 52.3% had moderate awareness and 27.9% had low level awareness. In addition, the level of awareness had a direct relationship with education level, type of work shift, participation in crisis plays and membership in crisis committee (Iman *et al.,* 2011).

Another descriptive and cross-sectional study by Vosoughi Nazari (201 2) titled "Surveying Readiness of Obligatory Service Soldiers Regarding Health Measures in Crisis in Malek Ashter Military Base-Arak, Iran" on 190 of the soldiers showed that 43% of the participant had good awareness, 46% had moderate awareness, 11 % had low awareness and 50 had neutral attitudes toward health measures in crises.

There was no significant difference among the participants regarding readiness and awareness about crises based education level and age (Sig. = 0.05).

In terms of the questions of the questionnaire, the highest level of awareness (80.3%) was obtained about the side-effects of storing food stuff in unhygienic condition and the lowest level of awareness (36.7%) was obtained about the time needed to boil canned foods. In general, being aware about nutrition and food hygiene matters in crises is a way to preserve one's health and prevent transfer of diseases. In short, 73% of the participants had good-moderate awareness levels which can be construed as a good level of awareness of the population under study.

To improve this level of awareness and provide higher quality services, there is a need to hold educational programs in different forms (pamphlets, formal credits, etc).

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