

EVALUATION OF HEALTH AND TREATMENT STAFFS' KNOWLEDGE AND ATTITUDE TOWARDS FOOD HYGIENE AND SAFETY IN MAHSHAHR IN 2017Keramat Javdanzadeh¹, Parviz Aghayii Barzabad*² and Abbas Yazdanpanah³¹Department of Healthcare Management, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran.²Assistant Professor, Department of Medical Education Management, Cellular and Molecular Research Center, Yasuj University of Medical Sciences, Yasuj, Iran.³Assistant professor, Department of Healthcare Management, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran.***Corresponding Author: Parviz Aghayii Barzabad**

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ABSTRACT

Introduction: If human being is aware from food health and safety, it can prevent affection to many diseases as well as infection of food and the environment. The present study aims to evaluate health & treatment staffs' attitude towards food health and safety in Mahshahr. **Method:** This is an applied research in terms of objective and it is descriptive-analytical in terms of data collection. Descriptive statistic including frequency, mean and standard deviation was used to analyze data. SPSS was used to display diagrams of variables under evaluation. One-way variance test (ANOVA) and Schaffe and T tests have been used as well. **Results:** 150 staffs of health & treatment system were evaluated in Mahshahr. Based on results, there was no significant relationship between knowledge and age groups (P-value > 0.05) but there was a significant relationship between knowledge level and gender (P-value < 0.05). There was no significant difference between staffs' knowledge level and academic degree but there was a significant difference between staffs' attitude and education. The attitudes of graduate, post-graduate and PhD individuals were higher than others. **Conclusion:** Results of the present research showed that there was a significant difference among staffs' knowledge, attitudes and their gender and education. Therefore, it is expected to train and inform all people in order to promote knowledge level and attitude of public especially staffs of health & treatment system.

KEYWORDS: knowledge, food health and safety, health & treatment system.**INTRODUCTION**

Food health and safety is considered as an important principle in prevention from diseases and protection of the environment from infections.^[1] According to definition of Codex Alimentarius, nutrients mean all rules that should be considered in production, process, protection and distribution of foods in order that healthy and high-quality foods are given to consumers. Healthy foods are very important in terms of being healthy and high quality of the nutrients.

In past decades, the epidemy of microbial diseases transmitted from foods was increased not only in developing countries with poor health but also in developed countries with high standard health. It is while that most often, incidence of food infections and toxicity is not reported, thus it is not possible to determine accurately the rate of affection especially in developing countries. Food can be a carrier of many infectious and non-infectious masses. It can support the growth of

infectious mass in some conditions and act as an active carrier. It may only play the role of inactive carrier; therefore, infectious agent does not grow in the food and it only is conveyed to human being by food. Viruses, parasites and even some pathogenic bacteria of food are placed in the second group.^[2]

Microbes are responsible for incidence of many food toxicities. Many of such microbes were not considered as the agent of food toxicity in the past and they have been recognized recently as emerging foodborne pathogens. Some of such microbes are able to survive or grow in refrigerator as well as in low-oxygen environment. Some others can produce illness and this is a strict alarm for health of consumers. Although, food factories use standard control in production of healthy foods, such control is done until the product is given to the consumer. Therefore, all people who involve in the process of such products as well as consumers are responsible for protection of food in healthy condition and any violation from food's standard control and

change of its identity may cause the growth or production of pathogenic toxin in the food such as time/temperature abuse.^[2]

Nowadays, the role and importance of food health in human being health as well as prevention of diseases are clear for everybody. The main subject is food health and how to consume foods to protect health. Food hygiene and safety is considered as an important principle to prevent from affection to illnesses as well as to protect the environment from infections. Annually, millions of people suffer from diseases transferred by foods throughout the world. This is known as one of common problems in the world. Diseases transferred by food suggest the incidence and extension of problems related to general health either in developing countries or developed countries. However, such problems are mostly effective on the health and economy of developing countries (Jahed, GolestaniFar, Ghodsi, & Mohammadi, 2012). According to WHO, diseases transferred by foods are the most important health problems in modern world.^[3]

In less developed countries, many people suffer from toxicity due to lack of health knowledge as well as food storage under unhealthy condition such that incidence of diseases transferred by food is increasing either in developing or developed countries.^[4] Statistical information indicates that in most cases, diseases transferred by foods are produced by microorganisms. The incidence of such diseases will threat a large number of people leading to socioeconomic problems for them. This is more prevalent in developing countries.^[5]

The main subject is food health and how to consume foods for health protection. Consideration of health standards reduces food infections thus food consumption is ensured. As a result, foods will be consumed freely without any pathogenic microbes. Many people who are responsible for food protection, do not consider hygiene which is one of the most important source of infection.^[6] Epidemiological studies of diseases transferred by food showed that behavior of consumers such as eating raw foods and poor healthy conditions played important role in epidemic of diseases transferred by foods.^[7] If human being is aware from food health and safety, it can prevent from affection to many diseases as well as infection of food and environment.^[1] Many researches have been conducted on evaluation of people knowledge and attitudes towards food health and safety. In present research, staffs of Mahshahr health & treatment system are included in the statistical population to evaluate staffs' knowledge and attitude towards food safety.

METHOD

This is an applied research in terms of objective and it is a descriptive-analytical research in terms of data collection. The research aimed to evaluate staffs' knowledge and attitude towards food health and safety in Mahshahr health & treatment system in 2017. Statistical

population was 248 individuals and according to Cochran formula, 150 staffs were included from health & treatment system of Mahshahr. Information were collected by questionnaire. In present research,^[1] questionnaire was used which they outlined it when studying housewives' knowledge and attitude toward food health and safety in Behshahr. The questionnaire consists of three parts. First, demographic information which was revised by the researcher after studying the research background and it includes three items such as age, sex and education variables. The second part includes 12 items about staffs' knowledge and the third part includes 9 items about staffs' attitude toward food health and safety. The items were measured based on Likert scale. All items were scored directly ranging from one (completely disagreed) to five (completely agreed). The validity of questionnaire was confirmed using opinions of experts and professors and the items were evaluated by 5 professors before distribution of the questionnaire. Cronbach' alpha coefficient was used to measure reliability. Alpha amount of knowledge items as well as attitude items was 0.7 and 0.8 respectively. Descriptive statistic such as frequency, mean and standard deviation was used to analyze data. SPSS was used to display diagrams of variables under evaluation. One-way variance test (ANOVA), Schaffe and T tests were applied too.

RESULTS

In present research, 58.0% of respondents were females and 41.3% were males. 62.7% of respondents were between 20 and 39 years old showing a nearly young statistical population. 65.3% of respondents had B.A degree, 0.7% had middle school degree, 2.7% had diploma, 16.7% had associate degree, 14.0% had M.A and 0.7% had PhD. Table 1 shows the number of responses given to items of knowledge. Based on table 1, 88.7% of staffs paid attention to "what is important for you when buying foods?" and they chose "the expiration date". 86% of staffs believed that all choices (diarrhea, vomit and fever) were the signs of diseases transmitted by foods. 74.7% of staffs chose 1-5 oC as the appropriate temperature for keeping foods. 80% of staffs believed that botulism is the disease of processed foods. 61.3% chose "sterilized milk is not required to be kept in refrigerator". 80.7% believed that milk and meat were more perishable than other foods. Only 22.7% knew that minced meat spoils sooner. 58.7% thought that dry warehouses with normal temperature are proper for keeping cans. 62% believed that meat toughness is not considered as the sign of rotten meat. 88% believed that glass dishes are the best ones for keeping foods. 64.7% were aware from golden staphylococcus and 70% believed that bacteria are the main cause of diseases transmitted by foods.

In present research, table 2 shows staffs' knowledge on foods' health and safety among different age groups. No significant relationship was found between knowledge and age groups (p -value > 0.05). According to table 3,

there was a significant relationship between knowledge and gender (p -value below 0.05). Table 4 shows staffs' knowledge and attitudes toward food's hygiene and safety as well as their academic degrees. There was no

significant difference between knowledge and academic degree but there was a significant difference between staffs' attitude and education. The attitudes of staffs with B.A, M.A and PhD degrees were higher than others.

Table 1: Frequency Distribution of the variable awareness.

Question		Correct	Incorrect	No Answer
1	Frequency	133	17	150
	Percentage	88 / 7	11 / 3	100 / 0
2	Frequency	129	21	150
	Percentage	86 / 0	14 / 0	100 / 0
3	Frequency	112	38	150
	Percentage	74 / 7	25 / 3	100 / 0
4	Frequency	120	30	150
	Percentage	80 / 0	20 / 0	100 / 0
5	Frequency	92	58	150
	Percentage	61 / 3	38 / 7	100 / 0
6	Frequency	121	29	150
	Percentage	80 / 7	19 / 3	100 / 0
7	Frequency	34	116	150
	Percentage	22 / 7	77 / 3	100 / 0
8	Frequency	88	62	150
	Percentage	58 / 7	41 / 3	100 / 0
9	Frequency	93	57	150
	Percentage	62 / 0	38 / 0	100 / 0
10	Frequency	18	132	150
	Percentage	88 / 0	12 / 0	100 / 0
11	Frequency	97	53	150
	Percentage	64 / 7	35 / 3	100 / 0
12	Frequency	105	45	150
	Percentage	70 / 0	30 / 3	100 / 0

Table 2: Comparison of the Level of Awareness Among Age Groups.

Variable	Age Group	Means Difference	Significance Level	For % 95 Confidence Interval Means Difference
1	2	0 / 020	0 / 995	- 0 / 116 و 0 / 156
	3	0 / 006	1 / 000	- 0 / 143 و 0 / 154
	4	0 / 014	1 / 000	- 0 / 210 و 0 / 238
	5	0 / 314	0 / 317	- 0 / 135 و 0 / 762
2	1	-0 / 020	0 / 995	- 0 / 156 و 0 / 116
	3	-0 / 014	0 / 998	- 0 / 138 و 0 / 110
	4	-0 / 006	1 / 000	- 0 / 215 و 0 / 203
	5	-0 / 294	0 / 367	- 0 / 147 و 0 / 735
3	1	-0 / 006	1 / 000	- 0 / 154 و 0 / 143
	2	0 / 014	0 / 998	- 0 / 110 و 0 / 138
	4	0 / 008	1 / 000	- 0 / 209 و 0 / 226
	5	0 / 308	0 / 327	- 0 / 137 و 0 / 753
4	1	-0 / 014	1 / 000	- 0 / 238 و 0 / 210
	2	0 / 006	1 / 000	- 0 / 203 و 0 / 215
	3	-0 / 008	1 / 000	- 0 / 226 و 0 / 209
	5	0 / 300	0 / 427	- 0 / 176 و 0 / 776
5	1	-0 / 314	0 / 317	- 0 / 762 و 0 / 135
	2	-0 / 294	0 / 367	- 0 / 735 و 0 / 147
	3	-0 / 308	0 / 327	- 0 / 753 و 0 / 137
	4	-0 / 300	0 / 427	- 0 / 776 و 0 / 176

Table 3: Comparison of the Level of Awareness among Gender Groups.

Variable	Count	Count	Standard Deviation	Standard Deviation	F	Significance Level
Male	62	62	0 / 216	0 / 216	887	0 / 038
Female	87	87	0 / 177	0 / 177	2 /	

Table 4: Awareness Level and the Attitude of All Those Involved Toward Food Hygiene and Safety (According to Qualification).

Degree	Count	Mean of Awareness Level	SD	Significance Level	Count	Mean of Attitude Level	SD	Significance Level
Middle School	1	0 / 42	---	0 / 064	1	3 / 556	---	0 / 020
High School Diploma	4	0 / 54	0 / 144		4	2 / 722	0 / 113	
Advance Diploma	25	0 / 57	0 / 206		24	3 / 398	0 / 329	
Bachelors	98	0 / 67	0 / 188		96	3 / 427	0 / 360	
Masters	21	0 / 60	0 / 197		19	3 / 328	0 / 302	
Ph.D.	1	0 / 33	---		1	3 / 444	---	
Staff	150	0 / 634	0 / 195		145	3 / 391	0 / 392	

DISCUSSION AND CONCLUSION

The present research aimed to evaluate the knowledge and attitude of health & treatment staffs towards foods hygiene and safety in Mahshahr. Results suggest that 88.7% pay attention to production and expiration dates of foods. The results are in agreement with results of,^[1,8] in Slavonia. But results were not consistent with results of^[9] in India. Their research was done on 90 mothers. 78% of mothers were not aware from food labels. In present research, only 22.7% of staffs believed that minced meat spoils sooner. In fact, there is little knowledge with this regard. Results are in agreement with the research of^[1] There was no significant relationship among different age groups in terms of staffs' knowledge on foods' hygiene and safety but there was a relationship between knowledge and gender. Results of present research are not in agreement with the study of^[10] who evaluated nutrition knowledge & supplement use among army soldiers. Results showed that mean total score of soldiers' knowledge was poor but staffs had good knowledge.^[9] in south India showed good knowledge and attitude of mothers towards food safety and health due to nutritional habits in past generations, thus women had higher knowledge than men. Therefore, the present study is in agreement with the study of Subba Rao. In addition, there was no significant difference between staffs' knowledge and academic degree. The result is in agreement with results of^[1] but is not in agreement with the study of^[11] Staffs' attitude toward food hygiene and safety associated with academic degrees. Individuals with B.A degrees and higher had higher attitude towards food health and safety than others. The results are consistent with the results of^[12] in Ankara who conducted a research on 250 married women. They also are in agreement with results.^[1] If human being is aware

from food hygiene and safety, it can prevent from many diseases as well as infection of food and the environment. Results of present research showed that there was a significant difference among staffs' knowledge and attitude, gender and education. Therefore, due to the increasing growth of diseases transmitted by foods, all governments and organizations should improve foods' safety. In addition, concerning the importance of education related to food hygiene, it is expected to train and inform people (as one of the most important indices of development) that leads to promotion of public knowledge and attitude especially staffs of health and treatment system. Furthermore, some measures such as educational meetings, animations, educational pamphlets should be taken by organizations to increase staffs' knowledge and attitude, to prevent waste of many foods as well as epidemic diseases transmitted by foods, thus, heavy financial and physical losses incurred on public and society are avoided. In this way, the role of mass media can be very effective.

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