A Study of the Effects of Factors Related to Food Consumption in Health Workers of Najaf Abad-based Healthcare Centers, Isfahan, Iran

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Abstract

Introduction & Objective: The present study aimed to investigate the effects of factors related to food consumption (demographic, culture and customs, awareness, and attitudes) in health workers of Najaf Abad-based healthcare centers, Isfahan, Iran, in 2012.

Methodology: In this cross-sectional study, 167 health workers participated. The sampling method was simple random sampling, which was conducted through tables of random numbers. The acceptable inclusion and exclusion criteria were the interest of all healthcare personnel working in Najaf Abad-based healthcare centers to participate in the study, and there were no other criteria. For data analysis, the descriptive statistics and regression analysis were used. Additionally, the SPSS Statistics Software Version 18.0 was utilized.

Findings: The results of the present study revealed that the bread and ce real group had the highest mean of consumption in employees (4.4±9.1). Moreover, it was demonstrated that the factors affecting the consumption of bread and cereals were as follows: attitudes, and customs, spouse employment, monthly income, head of the household, age, marital status, and family size ($p<0.05$).

Conclusion: Nowadays, multiple data sources publish and educate on nutrition in which unscientific and contradictory nature of the sources causes confusion, thereby leading to making wrong decisions. Education was also a factor influencing food choices in employees. Therefore, coordinating training with the level of education is a major factor that should be considered for proper planning. Therefore, it is suggested that the underlying factors be recognized before education in advance to improve nutrition and prevent diseases caused by malnutrition.

Key words: Food Consumption, Health Workers, Health Network.

Introduction

In today's world, people's lifestyles have undergone massive changes, from traditional to industrial modes of living. In addition, due to various developments in food supply, people's access to a variety of industrial and processed foods has increased. These foods are usually high in calories and low in nutritional value, not to mention, a significant percentage of women and men are employed, and this situation has not allowed them enough time to prepare their own food at home, thereby having a propensity for fast foods and processed foods.

On the other hand, the statistics reported in nutritional studies indicate that obesity, overweight and their related diseases, such as cardiovascular diseases and diabetes, are highly prevalent in societies. For example, the results of a study conducted by Tadayon (2008) revealed that 40% of the population under study had obesity and overweight problems in Najaf Abad County, Isfahan, Iran. The results also demonstrated that 45-50% of workers and employees were overweight or fat (1).

Overweight and obesity-related illnesses are prevalent, too. According to the statistics collected in 2011, the cardiovascular, cancerous and metabolic diseases were the first, second and fourth causes of death in Najaf Abad County, Isfahan, Iran (2).

According to the reports presented by the department of non-communicable diseases of Najaf Abad-based healthcare centers in 2011, there were 418 and 915 patients with diabetes and blood pressure, respectively (3).

Additionally, the results of a study done by Dastanpour et al. (2006) revealed that 30% of the inhabitants of Isfahan Province, Iran, were overweight, 10.4% were fat, and 3.1% were obese. According to the same survey, 5.5% of the population under study had high blood pressure and 17% had a history of diabetes. The results of this study also demonstrated that the average cholesterol measured 190, and 62.7% of the population

under study had cholesterol levels equal to or greater than 200 (4), which were caused by obesity, overweight and related diseases (e.g., diabetes, high blood pressure, increased blood fat, cardiovascular diseases, and cancer), sedentary lifestyle and poor intake of food groups.

Therefore, many factors play efficacious roles in food choices. More to the point, the results of various studies in this respect are indicative of the fact that people do not follow suitable patterns in food consumption, and employees are among the groups in which the prevalence of malnutrition is significantly high and their food patterns are not suitable.

In a study performed by Afrouzian et al. (2006), the knowledge of cardiovascular patients and the employees of Arak-based healthcare centers, Markazi, Iran, about healthy nutrition was investigated, and the results revealed that doctors and nurses' knowledge about the oil consumption measured 86.7% as opposed to 74.2% in health experts. Further, the results indicated that the percentage of the consumption of protein sources and oilseeds, fruits and vegetables were as follows respectively: doctors (81%, 48%, and 98%), nurses (73%, 30%, and 75%), and health experts (83%, 45%, and 98%) (22).

In another study on the knowledge and performance of female health workers in Flaverjan County, Isfahan, Iran, the results showed that 61% of the employees did not know how much they had to eat, and 27%, 33% and 65% of them did not eat breakfast, dinner and snacks, respectively. Furthermore, the results revealed that 44.4% and 59% of the participants in the study did not eat main courses and snacks, respectively (23).

In a study conducted about the food consumption patterns of employees at Tabriz University of Medical Sciences, Rastibrojeni et al. (2008) found out that the patterns were not appropriate, and there were significant differences between the male and female employees in terms of the consumption of grains, liver, biscuits, pasta, ice cream, milk, walnuts, pepper, pomegranate, and peach. In this study, it was suggested that necessary measures be employed to improve the eating habits of the male population (24).

Compared to other groups in society, health workers had better nutritional information because they took training courses on this issue every year. Thus, according to the observations and interviews that I had with health workers and given the prevalence of problems and concerns for nutrition in this group and the role of nutrition in the development of chronic diseases, we decided to study food groups in health care workers because employees are the custodians of public health. Therefore, the present study aimed to investigate the effects of factors related to food consumption (demographic, culture and customs, knowledge, and attitude) in health workers of Najaf Abad-based healthcare centers, Isfahan, Iran, in 2012.

Methodology

In this cross-sectional study, 167 health workers participated. The sampling method was simple random sampling, which was conducted through tables of random numbers. The acceptable inclusion and exclusion criteria were the interest of all healthcare personnel working in Najaf Abad-based healthcare centers to participate in the study, and there were no other criteria. The sample size was calculated through the following formula, in which the confidence coefficient measured s=1.96=96%, and s=0.18=d.

The data collection tool was a self-made questionnaire that included the following sections: 1) demographic characteristics, 2) culture and customs, 3) awareness, 4) attitudes), and 5) information on food intake. To assess the validity of the questionnaire, a group of five nutrition experts was consulted. Moreover, to assess the reliability of the questionnaire, it was distributed among 30 members of the target population and their information was collected. Further, the reliability of the questionnaire was confirmed using the Cronbach's alpha coefficient (α=0.75). For data analysis, the descriptive statistics and regression analysis were used. Additionally, the SPSS Statistics Software Version 18.0 was utilized.

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Findings

Table 1: Consumption of Food Groups by the Health Workers of Najaf Abad-based Healthcare Center in 2012 Based on the Consumed Units per Day

Row	Food groups	Maximum Consumption by Employees	The Maximum Recommended Intake	Mean ± STDEV	Confidence Interval of 95%	Number of Participants
1	Bread and cereals	28.8	12	9.1± 4.4	8¼ – 9⅛	167
2	Milk and dairy	15.1	3	1.8± 1.6	1.6– 2	167
3	Fruit	20.8	3	3± 3.4	3– 3.7	167
4	Vegetable	6.1	5	0.9± 1	0.9– 1	167
5	Meat	38.9	3	6.2± 4.7	5.5– 6.9	167
6	Oil	61.7	10	7.3± 7.6	6.3– 8.5	167
7	Sugar	114.6	5	9.0± 14	7.4– 11.4	167
8	Fast Foods (Consumption per Month)	28.6	1	4.6± 5.6	3.9– 4.7	167
9	Restaurant Foods (Consumption per Month)	4	1– 4	0.6± 0.7	0.6– 0.69	167

Table 2: The Major Factors Influencing the Consumption of Bread and Cereals in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.1	0.24	0.049
2	Gender	0.2	0.02	0.9
3	Marital status	1.5	0.20	0.08
4	Place of residence	1.5	0.08	0.47
5	Family size	0.3	0.03	0.002
6	The head of the household	0.2	0.12	0.57
7	Monthly income	0.4	0.04	0.68
8	Education	0.3	0.09	0.43
9	Spouse Employment	0.2	0.04	0.73
10	Ranking of nutrition in household budget	0.3	0.10	0.33
11	Nutrition budget	0.1	0.06	0.55
12	Source of nutritional information	1.2	0.09	0.34
13	Employment of the person in charge of cooking	0.2	0.11	0.45
14	Culture	1.2	0.03	0.049
15	Awareness	5	0.11	0.9
16	Attitude	0.3	0.003	0.08

The five primary factors that were effective in the consumption of bread and cereals were as follows: attitudes, culture, spouse employment, monthly income, head of the household, age, marital status and family size. These factors significantly correlated with the consumption of bread and cereals.

Table 3: The Major Factors Influencing the Consumption of Milk and Dairy in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.018	0.49	0.084
2	Gender	0.60	0.43	0.16
3	Marital status	0.040	0.72	0.04
4	Place of residence	0.11	0.89	0.01
5	Family size	0.27	0.16	0.16
6	The head of the household	0.03	0.91	0.02
7	Monthly income	0.13	0.57	0.06
8	Education	0.34	0.16	0.17
9	Employment of the wife	0.12	0.78	0.03
10	Ranking of nutrition in household budget	0.01	0.90	0.01
11	Nutrition budget	0.12	0.54	0.07
12	Source of nutritional information	0.06	0.25	0.11
13	Employment of the person in charge of cooking	0.78	0.21	0.18
14	Culture	0.25	0.47	0.07
15	Awareness	0.20	0.64	0.05
16	Attitude	0.91	0.81	0.02

The five primary factors that were effective in the consumption of milk and dairy were as follows: employment of the person in charge of cooking, education, gender, family size, and source of nutritional information. These factors significantly correlated with the consumption of milk and dairy.

Table 4: The Major Factors Influencing the Consumption of Sugar in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.079	0.65	0.05
2	Gender	4.6	0.36	0.19
3	Marital status	12.7	0.12	0.19
4	Place of residence	7.1	0.20	0.14
5	Family size	0.54	0.68	0.04
6	The head of the household	1.11	0.52	0.14
7	Monthly income	0.30	0.85	0.02
8	Education	1.45	0.37	0.109
9	Employment of the wife	0.52	0.86	0.023
10	Ranking of nutrition in household budget	0.19	0.73	0.037
11	Nutrition budget	1.26	0.34	0.11
12	Source of nutritional information	0.39	0.27	0.11
13	Employment of the person in charge of cooking	1.06	0.80	0.038
14	Culture	0.18	0.93	0.008
15	Awareness	2.22	0.44	0.82
16	Attitude	2.33	0.37	0.97

The five primary factors that were effective in the consumption of sugar were as follows: attitudes, awareness, marital status, gender, place of residence, and the head of the household. These factors significantly correlated with the consumption of sugar.

Table 5: The Major Factors Influencing the Consumption of Fruits in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.10	0.009	0.30
2	Gender	1.66	0.16	0.27
3	Marital status	0.80	0.67	0.04
4	Place of residence	0.73	0.57	0.06
5	Family size	0.83	0.007	0.29
6	The head of the household	0.40	0.31	0.20
7	Monthly income	0.46	0.90	0.01
8	Education	0.67	0.86	0.02
9	Employment of the wife	0.03	0.96	0.006
10	Ranking of nutrition in household budget	0.17	0.18	0.13
11	Nutrition budget	0.39	0.20	0.13
12	Source of nutritional information	0.08	0.29	0.09
13	Employment of the person in charge of cooking	0.80	0.41	0.11
14	Culture	0.41	0.45	0.07
15	Awareness	1.13	0.09	0.16
16	Attitude	0.31	0.59	0.05

The five primary factors that were effective in the consumption of fruits were as follows: age, family size, gender, the head of the household, and awareness. These factors significantly correlated with the consumption of fruits.

Table 6: The Major Factors Influencing the Consumption of Vegetables in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.024	0.122	0.18
2	Gender	0.29	0.52	0.13
3	Marital status	0.41	0.56	0.06
4	Place of residence	0.007	0.98	0.002
5	Family size	0.16	0.16	0.16
6	The head of the household	0.09	0.56	0.12
7	Monthly income	0.25	0.07	0.20
8	Education	0.20	0.16	0.16
9	Employment of the wife	0.13	0.61	0.06
10	Ranking of nutrition in household budget	0.11	0.82	0.02
11	Nutrition budget	0.24	0.04	0.23
12	Source of nutritional information	0.004	0.90	0.01
13	Employment of the person in charge of cooking	0.07	0.84	0.02
14	Culture	0.14	0.49	0.06
15	Awareness	0.15	0.56	0.06
16	Attitude	0.056	0.81	0.02

The five primary factors that were effective in the consumption of vegetables were as follows: nutrition budget, monthly income, age, family size, and education. These factors significantly correlated with the consumption of vegetables.

Table 7: The Major Factors Influencing the Consumption of Fast Foods in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.07	0.42	0.09
2	Gender	2.61	0.33	0.20
3	Marital status	6.19	0.15	0.17
4	Place of residence	2.32	0.43	0.09
5	Family size	0.38	0.57	0.06
6	The head of the household	0.29	0.75	0.07
7	Monthly income	0.86	0.30	0.12
8	Education	0.15	0.85	0.023
9	Employment of the wife	0.53	0.73	0.04
10	Ranking of nutrition in household budget	0.05	0.85	0.02
11	Nutrition budget	0.41	0.55	0.07
12	Source of nutritional information	0.04	0.83	0.02
13	Employment of the person in charge of cooking	0.42	0.84	0.029
14	Culture	0.82	0.94	0.007
15	Awareness	1.72	0.26	0.12
16	Attitude	1.63	0.23	0.13

The five primary factors that were effective in the consumption of fast foods were as follows: education, gender, marital status, monthly income, and awareness. These factors significantly correlated with the consumption of fast foods.

Table 8: The Major Factors Influencing the Consumption of Restaurant Foods in Health Workers of Najaf Abad-based Healthcare Center in 2012.

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.009	0.39	0.09
2	Gender	0.33	0.26	0.22
3	Marital status	0.08	0.86	0.02
4	Place of residence	0.28	0.38	0.09
5	Family size	0.06	0.38	0.09
6	The head of the household	0.08	0.40	0.17
7	Monthly income	0.12	0.18	0.14
8	Education	0.02	0.82	0.02
9	Employment of the wife	0.12	0.50	0.08
10	Ranking of nutrition in household budget	0.03	0.25	0.11
11	Nutrition budget	0.11	0.12	0.17
12	Source of nutritional information	0.027	0.20	0.12
13	Employment of the person in charge of cooking	1.21	0.22	0.17
14	Culture	1.32	0.18	0.13
15	Awareness	1.60	0.11	0.16
16	Attitude	0.42	0.67	0.04

The five primary factors that were effective in the consumption of restaurant foods were as follows: gender, the head of the household, nutrition budget, employment of the person in charge of cooking, and awareness. These factors significantly correlated with the consumption of restaurant foods.

Table 9: The Major Factors Influencing the Consumption of Meat in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.10	0.009	0.30
2	Gender	1.66	0.16	0.27
3	Marital status	0.80	0.67	0.04
4	Place of residence	0.73	0.57	0.06
5	Family size	0.83	0.007	0.29
6	The head of the household	0.40	0.31	0.20
7	Monthly income	0.46	0.90	0.01
8	Education	0.67	0.86	0.02
9	Employment of the wife	0.03	0.96	0.006
10	Ranking of nutrition in household budget	0.17	0.18	0.13
11	Nutrition budget	0.39	0.20	0.13
12	Source of nutritional information	0.08	0.29	0.09
13	Employment of the person in charge of cooking	0.80	0.41	0.11
14	Culture	0.41	0.45	0.07
15	Awareness	1.13	0.09	0.16
16	Attitude	0.31	0.59	0.05

The five primary factors that were effective in the consumption of meat were as follows: family size, age, culture, awareness, and education. These factors significantly correlated with the consumption of meat.

Table 10: The Major Factors Influencing the Consumption of Oil in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	0.02	0.83	0.024
2	Gender	2.6	0.41	0.16
3	Marital status	2.4	0.63	0.05
4	Place of residence	2.8	0.42	0.08
5	Family size	1.4	0.08	0.19
6	The head of the household	0.69	0.53	0.13
7	Monthly income	0.81	0.41	0.09
8	Education	1.80	0.83	0.20
9	Employment of the wife	1.42	0.45	0.09
10	Ranking of nutrition in household budget	0.16	0.63	0.04
11	Nutrition budget	1.77	0.03	0.23
12	Source of nutritional information	0.49	0.03	0/21
13	Employment of the person in charge of cooking	4.46	0.09	0.23
14	Culture	2.17	0.15	0.14
15	Awareness	1.86	0.31	0.10
16	Attitude	0.73	0.65	0.04

The five primary factors that were effective in the consumption of oil were as follows: employment of the person in charge of cooking, nutrition budget, source of nutritional information, education, and family size. These factors significantly correlated with the consumption of oil.

Table 11: The Major Factors Influencing the Consumption of Foods (Total Calorie) in Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Factors	Non-standard Regression Coefficient	Sig.	Standardized Regression Coefficients
1	Age	23.2	0.096	0.20
2	Gender	45.2	0.913	0.023
3	Marital status	746.06	0.325	0.11
4	Place of residence	123.59	0.785	0.029
5	Family size	347.48	0.002	0.371
6	The head of the household	25.7	0.856	0.04
7	Monthly income	47.10	0.711	0.04
8	Education	52.76	0.688	0.048
9	Employment of the wife	89.8	0.711	0.049
10	Ranking of nutrition in household budget	7.07	0.875	0.016
11	Nutrition budget	7.00	0.488	0.08
12	Source of nutritional information	29.3	0.312	0.103
13	Employment of the person in charge of cooking	183.22	0.599	0.078
14	Culture	215.31	0.266	0.116
15	Awareness	132.76	0.571	0.06
16	Attitude	16.91	0.936	0.009

The five primary factors that were effective in the consumption of foods (total calorie) were as follows: family size, age, marital status, culture, and source of nutritional information. These factors significantly correlated with the consumption of foods (total calorie).

Table 12: The Role of Culture and Customs in Food Choice by Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Influence	Frequency	Percentage
1	Very much	85	50.9
2	Much	70	41.9
3	Average	2	1.2
4	Little	-	-

Table 13: Awareness of the Amount of Food Groups Consumed by Health Workers of Najaf Abad-based Healthcare Center in 2012

Row	Food Groups	True		False	
		Frequency	Percentage	Frequency	Percentage
1	Vegetables	104	61.2	63	38.8
2	Fruits	14	8.2	153	91.8
3	Meat	90	52.9	77	47.1
4	Bread And Cereals	64	37.6	103	62.4
5	Milk and Dairy	115	67.6	52	32.4
6	Fat and Oil	28	16.5	139	83.5

Discussion and Conclusion

The statistics announced by Iran's Institute of Industrial Research, Food and Nutrition have shown that the intake of fruits, vegetables, milk and meat in Iranian families is lower than the recommended limits, while the consumption of bread and cereals exceeds the recommended limits. For example, the intake of the following items exceeds the recommended amounts by the mentioned values: vegetables (2.8 units), fruits (one unit), milk and dairy (0.7 units), meat (1.8 units), bread and celeries (14 units), and other items (40%) (5).

Studying the risk factors of non-communicable diseases across Isfahan Province, Iran, in 2006 showed that the residents of this province ate one unit of fruit and 1.2 units of vegetables on average, and 90% of the population ate lower than five units of fruits and vegetables per day, while the minimum recommended intakes of fruits and vegetables were two and three units, respectively.

The results also indicated that 68.2% of the inhabitants of this province ate fish fewer than once per month. The results also revealed that 56.4% used vegetable oil as opposed to liquid oil consumed by 42% of the participants in the study (6). In another study, the relationships between awareness, attitudes and performance with fields of study and academic terms of students staying at the dormitories of Shahid Beheshti University of Medical Sciences were investigated. The results of this study demonstrated that all medical students had appropriate awareness about milk and dairy products, but their attitudes and other factors affected their consumption (9).

The availability of food can play effective roles in food choices. For example, in a study done by Jafari et al. (2008), the results indicated that the availability of dairy products at home could be effective in their consumption (10). Rasti et al. (2008) showed that having enough time to prepare and consume foods was a major factor in choosing foods. In addition, it was shown that 44% and 59% of the health workers under study did not eat main courses and snacks, respectively (11).

In another study conducted by Rezazadeh et al. (2006), the results showed that unhealthy food patterns correlated with place of residence (North or South), ethnicity, age, education, monthly income, and the area of the house (12). In a study conducted by Shakerinejad et al. (2006), the results revealed that the food consumption patterns of students were dependent on family budget (13). In another study done by Peneauus et al. (2009), the effects of environmental factors on food intake and choice of beverage during meals were investigated in teenagers. The results of this study indicated that the monthly income, gender, parents' employment and men's participation in preparing meals played effective roles in this regard (14). The results of a study performed by Jilcott et al. (2009) revealed that watching T.V., listening to music when one is hungry and thirsty and eating alone or in a group were effective in food choices (15). In a study performed by Delvaj et al. (2007), it was shown that the availability of healthy and unhealthy foods in American schools and their economic, social and ethnic status played major roles in their food choices (16). Moreover, the social customs were reported as a major factor in food choices by the London Department of Health (17).

In a study done by Mckie et al. (1998), it was found out that food choices were different in urban and rural areas because there were more fast food restaurants and supermarkets in cities, and the circle of friends and colleagues as well as environmental factors were among

the effective factors (18). Additionally, lack of coordination between the nutritional education and available foods was also an important factor affecting food choices (19). The results of a study done by Waq & Mavoa (2006) revealed that lack of time management and friends and family members were among the most important factors influencing food choices (20). Afrouzian et al. (2006) found out that 60% of the population under study had adequate information about the consumption of fish, but due to lack of suitable groundwork to use their information, they did not have a desirable performance (21).

The results of the present study indicated that family size, age, marital status, culture and customs and sources of nutritional information were among the most important factors in choosing foods.

Awareness and attitudes have been reported as effective factors in food consumption in many studies. However, these two factors had trifling effects on food consumption because this group had better awareness and attitudes compared with other groups.

Rezazadeh et al. (2006) showed that unhealthy food patterns correlated with place of residence, ethnicity, age, education, monthly income and the area of the house (12). The results of the present study were consistent with this study in terms of the correlations between unhealthy food patterns and each of age, education, and culture and customs.

In many studies, it has been shown that social and ethnic status correlates with food intake. This finding is consistent with the results of the present study in which culture and customs correlated with food consumption. Moreover, the results of the present study showed that sources of nutritional information, marital status, employment of the person in charge of cooking and nutrition budget were among the factors that correlated with the consumption of certain food groups.

In households where both husband and wife work outside the home, access to healthy and fresh food items, such as vegetables and dairy products, become difficult. As the results of the present study indicates dairy and vegetable consumption in this group is lower than what is recommended because they do not have enough time to prepare their own healthy meals. Hence, the forgoing items should be taken into consideration to improve the food consumption pattern in this group, and appropriate planning should be made in this respect.

Culture and ethnic and local customs and inadequate financial and economic conditions in crowded and densely populated families, poorly planned and insufficient household budgets are some of the factors that should be taken into account in interventions and improving the nutritional patterns. Increasing age and declining physical and financial power are other major factors that affect the food consumption of health workers.

The results of the present study showed that the consumption of meat, fast foods, sugar and oil was higher than the recommended limits. The results of the present study was consistent with the results of other studies in terms of the consumption of fast foods, sugar and oil, while these results were inconsistent with the results of other studies in terms of the consumption of meat because those who do not have the opportunity to cook food and do not have access to healthy food are forced to eat fatty and sugary foods which are easy to make. These foods usually have better appearance, tastes and shapes, and that is why they are chosen first. In this regard, the results of the present study demonstrated that one's culture and customs are major factors involved in choosing foods.

The source of nutritional information was another factor that was felt to be associated with food choices. In addition, the circle of friends and colleagues and rumors were other important factors in choosing foods. Nowadays, multiple data sources publish and educate nutrition whose unscientific and contradictory nature of the sources cause confusion, thereby leading to making wrong decisions. Education was also a factor influencing food choices in employees. Therefore, coordinating training with the level of education is a major factor that should be considered for proper planning. Therefore, it is recommended that the underlying factors be recognized before education in advance to improve nutrition and prevent diseases caused by malnutrition.

To improve the feeding pattern of Employees, the problems and issues that lead to the wrong selection of foods should be taken into consideration. To do so, careful planning is important, and the required interventions can be put into action based on the presented plans and solutions, thereby laying the groundwork for honing their performance in this respect. Further, it is suggested that similar studies be performed in other populations in order to avoid parallel work that causes confusion and discourages officials. If the foregoing items are considered in planning and interventions, achieving the ultimate goal, i.e., reforming the patterns of food consumption and reducing diseases caused by malnutrition, will be easier and faster.

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