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Some nutritional habits of elderlies in Tehran

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ABSTRACT

Since the promotion of healthy nutrition behaviors can have a significant effect on disease prevention, this study examines some nutritional habits of the elderly in Tehran, the capital of Iran. This was a cross-sectional study with a sample of 400 elderly people over 60 years of age who were randomly selected by cluster sampling from 5 areas of Tehran (north, south, center, east, and west) in 2016. The data collection tool was a questionnaire including demographic information and nutritional section of the "Healthy lifestyle questionnaire in Iranian elderly" which questions people's eating habits, completed by the elderly. The nutrition part has 14 questions, in which the possible score range is 14- 64 and a higher score indicates a more favorable nutrition status. The mean score of healthy nutrition behaviors in males and females was 32.9±4.7 and 31.6±5.8 respectively, in which the difference was statistically significant ($p<0.05$) and there was not a significant difference by education, marital status, and type of coexistence ($p>0.05$). Less than half of the elderly, in both male (%42) and female (%46) groups, used boiled food and most of them did not use oil (%95), and %59 used both white and red meat. Sixty percent reported medium (6 to 8 glasses) consumption of water per day and 40% reported medium (two pieces of bread) daily intake of bread. About half of both groups reported low consumption of milk and beans and only 11% of Women and %25 of men reported a high level of fruit and vegetable consumption. There were some unhealthy eating habits such as low water consumption and low daily intake of fruits & vegetables and milk that were observed in the majority of elderlies and elderly women suffer poorer nutritional status than men. Suitable interventional programs regarding the findings are recommended.

1. Introduction

One of the most important dimensions of lifestyle is nutrition which has a direct relationship with disease or health (1, 2). Food is one of the basic human needs and determines the importance of health and human dignity. Nutrition is a set of interactions that makes the living creature's nutrients available and consumes them for growth and development (3). The nutritional status in aging is an important issue in developing countries. Little attention has been paid. Also, the results of large-scale studies in the world have shown that nutritional status plays a prominent role in the health and well-being of people aged 65 and above. For many elderly people, the status of this case is the most important factor for health (4, 5). Several studies have shown that poor nutritional status not only increases the hospitalization rate of the elderly but also increases morbidity, mortality and increases the length of hospitalization in the elderly (5, 6). Healthy eating is an important part of the health of the elderly, which plays a special role in preventing disease, managing chronic disease, and promoting health. This includes a healthy diet, the use of supplements, and adequate fluid intake (6 to 8 glasses per day).

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Experts also recommend a low-fat diet with at least 5 servings of fruits and vegetables and 2 to 4 servings of low-fat dairy products per day for the elderly (7). The proper understanding of the nutritional needs of the elderly is of paramount importance; therefore, aging experts in research centers around the world are trying to identify habit changes in aging such as nutrition. Of course, what is certain is that there is no general guide to this since there are significant individual differences in the elderly, including men and women (7). Generally, a shortage of nutrition in old age is more common than in other periods of life (8). This has been confirmed in studies on the nutrition of the elderly in Iran, although studies on the nutritional status and pattern of consumption of the elderly of our country mostly have often been carried out in old-age nursing homes (9). Eshaghi, et al. (5) reported that 40% of the community-dwelling elderlies in Isfahan did not have a good nutritional status and in the research of Zar and Noorshhi (9) that was done on the elderly of Shiraz, 34.6% of the elderly had appropriate nutritional status, 38.8% had a moderate risk for nutritional problems and 27.5% had a high risk of nutritional problems, and the nutritional status of the active elderly was better than the disabled-elderly. Regarding the importance of the issue and the lack of studies that focused on nutritional habits in aging people especially among community-dwelling elderlies, this study aimed to examine some nutritional habits of community-dwelling old peoples in Tehran.

2. Materials and methods

2.1. Procedures

The cross-sectional study was carried out on 400 community-dwelling elderlies of Tehran who did not have cognitive impairments. A clustered random sampling was used to recruit the participants. First, the whole city of Tehran was divided geographically into 5 areas (north, south, east, west, and center of Tehran). From each of the aforementioned areas, according to the map, a randomly selected area was selected based on the population of the elderly of each region in the existing municipal statistics and according to the ratio of the total population of Tehran's elderly population, the sample size was determined in each region. After that, required clusters were identified in each selected region. Eligible persons to enter the study in each cluster were asked to enter the study. The questionnaires were completed by private interviews with participants in their homes. If there was more than one eligible person in a household, all were included in the study.

2.2. Measures

Data were collected using demographic information questionnaire and nutrition part of "Healthy lifestyle questionnaire in Iranian elderly" questionnaire, designed and validated by Eshaghi et al. (5). The nutrition part has 14 questions, in which the possible score range is 14-64 and a

higher score indicates more favorable nutrition status.

2.3. Ethical considerations

This study was approved by the ethics committee of the University of Social Welfare and Rehabilitation Sciences of Tehran with number IR.USWR.REC.1392.125. In order to comply with ethical principles, the subjects were assured that the information collected was unsigned and confidential. Written informed consent was obtained from all participants after explaining the purpose of the research and they were informed that participation in the study is voluntary.

2.4. Data analysis

The data were entered into SPSS v24 and analyzed by suitable statistical methods. An independent t-test was used to determine the relationship between nutritional status and gender. Descriptive statistic was used for showing the distribution of nutritional habits by gender.

3. Results

Totally 176 (44%) men and 224 (56%) women participated in the study. The age of the participants was distributed in a way that most of the elderly (62%) were in the range of 60-70 (young-old). Other demographic variables and mean healthy nutrition scores for each of them are shown in Table 1. The results shown the mean score of healthy nutrition in women was higher than that of men ($p<0.05$). There was not a significant difference in healthy nutrition scores by education levels, marital status, and type of coexistence ($p>0.05$). The distribution of dietary habits of the participants by gender is shown in Table 2.

Table 1. Distribution of mean scores of healthy nutrition by demographic characteristics of participants.

Demographic characteristics	Total (%)	Mean scores	P-value
Age group			
60-70	248 (62)	34.08	
71-80	82 (20)	31.02	0.693
>81	70 (18)	32.01	
Gender			
Male	174 (44)	32.9±4.7	0.020
Female	224 (56)	31.6±5.8	
Marital status			
Married	228 (57)	32.39	
Not married	16 (4)	31.20	0.249
Widow	156 (39)	31.33	
Education level			
Illiterate	61 (15)	31.76	
Elementary	55 (14)	31.23	0.131
High school	196 (49)	30.77	
University level	88 (22)	33/56	
Living condition			
Alone	56 (14)	30.79	
Only couple	179 (45)	32.74	0.102
Couple and children	79 (20)	32.42	
With son/ daughter	85 (21)	30.89	

Table 2. Frequency Distribution of dietary intakes and habits among participants by gender.

Dietary intakes and habits	Variable levels	Total No. (%)	Male No. (%)	Female No. (%)	P-value
1. Type of food cooking	Boiled	166 (44)	68 (42)	98 (46)	
	Steamed	40 (11)	23 (14)	17 (8)	0.041
	Barbecue	72 (19)	48 (29)	24 (11)	
	Fried with oil	96 (26)	24 (15)	72 (35)	
	Solid vegetable	42 (10)	18 (11)	24 (11)	
2. Oils consumed	Liquid vegetable	198 (46)	92 (54)	106 (50)	
	Frying oil	104 (23)	43 (25)	61 (29)	0.662
	animal oil	35 (8)	16 (10)	19 (10)	
	No use	379 (95)	169 (96)	210 (94)	
3. Most used meat	Chicken or Fish	114 (30)	65 (38)	49 (23)	
	Red Meat	41 (11)	9 (5)	32 (15)	0.019
	Both	224 (59)	95 (57)	129 (62)	
4. Observe the appropriate food distance with tea	Always	74 (20)	38 (23)	36 (18)	
	Mostly	117 (32)	49(29)	68 (33)	
	Sometimes	88 (24)	37 (22)	51 (25)	0.394
	Rarely	74 (20)	32 (20)	42 (21)	
	Never	18 (4)	11 (6)	7 (3)	
5. Stir nourishing or eating if you cannot chew	Always	41 (12)	20 (12)	21 (10)	
	Mostly	77 (21)	40 (24)	37 (18)	
	Sometimes	114 (31)	50 (30)	64 (32)	0.550
	Rarely	73 (20)	34 (20)	39 (20)	
	Never	62 (16)	22 (14)	40 (20)	
6. Sugar (sugar, cake, sweets, sweet syrups, soft drinks, etc.)	Always	16 (4)	5 (3)	11 (5)	
	Mostly	45 (12)	20 (12)	25 (12)	
	Sometimes	146 (40)	54 (33)	92 (45)	0.027
	Rarely	106 (28)	53 (32)	53 (26)	
	Never	56 (16)	33 (20)	23 (12)	
7. Fat content (cream, cream cheese, high-fat dairy, and ...)	Always	25 (6)	21 (12)	4 (2)	
	Mostly	40 (10)	20 (11)	20 (10)	
	Sometimes	91 (24)	28 (16)	63 (30)	0.520
	Rarely	150 (39)	60 (34)	90 (43)	
	Never	81 (21)	49 (27)	32 (15)	
8. Daily water consumption	Low (up to 5 glasses)	41 (12)	27 (17)	14 (7)	
	Medium (6 to 8 glasses)	211 (60)	79 (51)	132 (66)	0.001
	Too much (9 glasses and more)	103 (28)	50 (32)	53 (27)	
9. Daily intake of bread and cereals	Low (up to 1 bread)	150 (48)	73 (53)	77 (44)	
	Medium (2 breads)	123 (40)	49 (35)	74 (43)	0.482
	High (3 pieces of bread and more)	39(12)	16(12)	23 (13)	
10. Daily milk and dairy consumption	Low (up to 1 glass)	171 (55)	85 (62)	86 (49)	
	Medium (2 glasses)	123 (40)	51 (37)	72 (41)	0.018
	High (3 glasses and more)	16 (5)	2 (1)	17 (10)	
11. Consumption of beans	Low	179 (58)	88 (68)	91 (51)	
	Medium	114 (37)	36 (28)	78 (44)	0.540
	High	16 (5)	6 (4)	10 (5)	
12. Daily intake of fruits and vegetables	Low	105 (34)	33 (24)	72 (42)	
	Medium	144 (47)	88 (65)	56 (33)	0.110
	High	59 (19)	15 (11)	44 (25)	
13. Whole meal bread	Always	50 (13)	32 (19)	18 (9)	
	Mostly	120 (32)	61 (37)	59 (28)	
	Sometimes	134 (36)	44 (26)	90 (44)	0.046
	Rarely	30 (8)	3 (2)	27 (13)	
	Never	39 (10)	27 (16)	12 (6)	
14. Exposure to direct sunlight	Alweys	47(12)	28 (17)	19 (9)	
	Mostly	78 (21)	40 (24)	38 (19)	
	Sometimes	169 (45)	72 (43)	97 (47)	0.170
	Rarely	59 (16)	21 (13)	38 (19)	
	Never	18 (6)	4 (3)	14 (7)	

4. Discussion

This study showed that elderly women at the community level have a significantly better nutritional status than men (p<0.05). This finding was consistent with Masomy's study in Rasht (11), but in the study of Eshaghi et al. (5), there was no statistical difference in age-matched gender differences and even conflicts with the results of the study by Castel et al. (12). Considering the impact of nutritional status on factors such as chronic diseases, teeth, digestive problems, depression and loneliness, income, and facilities (7), it seems that this difference in the results of studies should be sought in the

factors mentioned. In other words, differences in results can be due to differences in geographical and cultural status (5, 11, 12). As the elderly become older, their bodies need to adhere to proper eating habits to maintain the desired health that one of the basic and important parts of these habits is the maintenance of body water (9). Fortunately, this habit exists in the elderly in Tehran, where more than 85% of them use more than 6 glasses of water per day. The benefits of drinking 6 glasses a day are to increase energy, reduce the amount of chewing problems, adjust body temperature, and reduce constipation (9). Other study results show that nearly half of the elderly have a low milk consumption of up to one glass per day. In the food pyramid, older people need more milk and milk groups. These materials play a major role in maintaining bone health (9, 13). The results also indicate that the consumption of vegetables and fruits in the elderly, especially women, is relatively low. It is very essential to consume fresh vegetables for the elderly. The results of prospective cancer research in 10 European countries suggest that up to 50% of colorectal cancers can be prevented by increasing milk, dairy, fruit and vegetable consumption, fiber, and reducing processed meat (14). One of the most important findings of the study by Salehi et al. was the positive effect of raw vegetable consumption on fasting blood glucose and Glycosylated hemoglobin (13). Also, Rebuffe et al. (15) on the effect of potato on fasting blood glucose, has stated that potato starch is a branched starch, which has an easy digestive enzyme. That is why the potato glycemic index is relatively high. According to studies, high-glycemic foods in diabetic patients increase blood glucose (16). In support of this, Kasaeeian et al. (17) argue that the consumption of fruits and vegetables and the lower consumption of fat play an important role in preventing stroke. According to Fallah Moshkani et al. (18) study, how to prepare meals, the size of the meals, and nutritional behaviors such as eating rate and the distance from other foods, should be considered too. Another important factor influencing people's nutritional dysfunction is the impact of mass media. The mass media sends special messages for large and heterogeneous nameless messengers, aiming to increase profits. Given that in the world today, nutrition is a social phenomenon, so different people do not make their food choices, they are influenced by factors such as the level of religion, family peers, and the media to perform social comparisons. The factors influencing their nutritional habits have been confirmed (19). Therefore, the importance of proper education to optimize the nutritional behaviors of the citizens is emphasized, because education is a key to changing the patterns of food. Therefore, it is suggested that using group media such as radio and television, as well as the provision of booklets and brochures, increased the awareness of people about proper nutrition. It is also necessary that the authorities in the governmental and non-governmental organizations coordinate nutritionists, provide proper nutrition education programs, and provide them with their responsibilities. In this regard, community health nurses can also play an important role in educating people (14).

5. Conclusion

There are some unhealthy or less healthy eating habits such as low water consumption and low daily intake of fruits and vegetables that were observed in the majority of elderly women and men and elderly women suffer poorer nutritional status than men. Suitable interventional programs regarding the findings are recommended.

Study limitations

The non-generalizability of the results is more favorable than the limitations of the present study, which makes it clearer the importance of a similar study throughout the country, to make the differences more apparent than the generalizability. Therefore, the researcher suggests that the present study is conducted in different cities and cultures of the country with different ethnicities. Also, data about variables were self-reported which might lower its accuracy. One of the strengths of the study is the good sample size. However, although the lack of correlation between the age groups of the elderly and the gender may be attributed to the inadequacy of the number of samples in any age group, this age difference may indicate the generalizability of comparative findings between men and women of the elderly in this study.

Acknowledgments

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