Assessment of Lifestyle and Its Components in Elderly People Living in Tehran

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ABSTRACT

Background: Healthy lifestyle is effective on preventing common elderly diseases. This study was conducted to evaluate the elderlies' lifestyle and its components in Tehran in 2017. **Methods:** This cross-sectional study was carried out with a descriptive-analytical design. The research population consisted of 200 elderly people from elderly care centers in Tehran City, Iran. A questionnaire, designed and validated by Babak et al., was used for lifestyle assessment. It dealt with dimensions of prevention, physical activity, exercise and entertainment, nutrition, stress management, as well as social and interpersonal relationships. **Results:** Results showed that the total score of lifestyle was 167.83 and 164.18 in men and women, respectively. Findings indicated that both genders were in good level of lifestyle and was no significant difference was observed between males and females ($P < 0.05$). A significant difference was observed between men and women in terms of stress and prevention components. The highest mean score of lifestyle was observed in prevention component of the participants who had associate degree (64.99 ± 5.89) and were single (60.75 ± 5.50). The lowest mean score of lifestyle was found in the field of exercise and entertainment in people who had elementary education degree (12.94 ± 4.12) and were divorced (13.00 ± 3.00). A significant relationship was found between age and nutritional area ($P < 0.05$). **Conclusion:** Considering the low scores of exercise and entertainment in the elderly people, an educational program should be designed to improve lifestyle among the elderly.

Keywords: *Lifestyle; Elderly; Components; Assessment*

Introduction

Aging is a natural process beginning from the embryonic age that continues till death. It is accompanied by gradual decrement of many tissue functions till the end of life. In psychological and mental view, aging is defined as a gradual psychological process that decreases freshness and happiness, will and decisiveness, self-esteem, risking power, as well as senses of usefulness and belonging. Incidence of aging and its disorders do not have a definite time. Psychological exhaustion begins when

a person becomes depended to others. When a person's social role decreases, different degrees of psychological exhaustion and problems begin to appear (Saberian *et al.*, 2004).

In developing countries, medical development leads to longer life and increases the elderly population (Najimi and Moazemi Goudarzi, 2012). Nowadays, 600 million of the world's population are older than 60 years, this rate is expected to increase to 1.2 billion till 2025 and to 2 billion people till 2050, which is 21% of the world's population (Ghahraman Mahmudi *et al.*, 2013). Iranian census data in 2016 showed that population older than 65 years increased from 5.7 in 2000 to 6.1 in 2016. This increase is also obvious in the middle-age group of 30 -64 years; they are 44.8% of the Iran's population. It was shown that more than half of the current population of Iran (51%) are within the middle age and old people (Center, 2016). Elderlies are the main consumers of the public health services because they have many different health problems such as salivary secretion decrease, dysphagia, as well as esophagus and stomach dysfunction. Decreased gastrointestinal movement, chronic diseases, hospitalization, different drug use, loneliness, depression, low dental hygiene, and low quality of life are the causes of malnutrition and its risk in old age (Nieuwenhuizen *et al.*, 2010).

Therefore, it is necessary to consider health care programs and physical activity of this age group. Difficulty in activities such as daily activity, self-care, work, entertainment, and health dysfunction are the problems that may limit their activity and have negative results on their daily life (Rasoulzadeh *et al.*, 2015). Many studies were conducted in Iran over different features of the elderlies' behaviors to promote health status. The literature showed that the elderly had low knowledge, attitude, and practice in relation to healthy life style (Samadi *et al.*, 2007); so, they need physical activity and suitable diet for improving their health (Malek Afzali *et al.*, 2006, Morovati-SharifAbad *et al.*, 2003, Motaleb Nejad and Shirvani, 2002).

Education is one of the effective approaches for improving the individual health and quality of life in elderly people. Correct and effective educational methods need well understanding of the old people

needs. Educational services in each age group need studying and knowing all aspects of needs and defects in the health are with regard to the target population (Khavoshi *et al.*, 2015, Saarnio *et al.*, 2016). Ghahremani et al. showed that health education programs had positive effects on old people's quality of life components such as physical function, body ache, general health, energy and happiness, social function, and psychological health (Ghahramani *et al.*, 2009). This previously mentioned declaration showed that unhealthy life style was associated with higher mortality rate and people with healthy life style would have better quality of life with longer life expectancy. On the other hand old age common diseases could be prevented by healthy life style (Taghdisi *et al.*, 2012). Thus, it is necessary to evaluate the elderlies' life style by conducting suitable interventions. This study was carried out to evaluate and compare different aspects of life style in the elderlies and to clarify its different dimensions.

Material and Methods

Study design: This cross-sectional study was conducted using a descriptive analytical design. The inclusion criteria for the elderlies were having satisfaction to participate in the study, 60 years of age or older, tendency to enter the study, visual and audience ability for completing the questionnaire, talking and answering ability for completing the questionnaire, and no depression or Alzheimer. Excluding criteria were having unwillingness to participate in the study or to complete the questionnaires and not answering to more than half of the items in the questionnaire.

Sampling and data gathering: Introduction letter was produced by Shahid Beheshti University of Medical Science to the State Welfare Organization of Iran. Later the welfare centers of 3 districts (north, center, and south) of Tehran were selected. After visiting the nursing homes under supervision of the selected welfare organizations, eligible old people were selected to enter the study. Since the elderlies in the nursing homes did not cooperate well, we selected our participants from old people who were in the parks of these three distincts. Simple sampling

method was used and eligible old people entered the study after completing written constant forms. The research team read the questions for the participants and recorded their answers. The demographic and life style characteristics of the participants were also recorded using the questionnaires. In this study, the participants' lifestyle was evaluated using the Iranian elderlies' lifestyle questionnaire with confirmed validity and reliability in a previous research (Eshaghi *et al.*, 2010). This questionnaire includes 46 question; 15 questions are about prevention, 5 questions are about sport and entertainment, 14 questions are about healthy nutrition, 5 questions are about stress management, and 7 questions are about social and personal relationships. The total score of life style was calculated for all dimensions of the questionnaire. The attainable scores can range from 42 to 211. The scores of 42-98 showed unfavorable, 99-155 moderately favorable, and 156-211 favorable life styles.

Ethical considerations: All participants were explained about the study goals and ensured about confidentiality of the data. Furthermore, all participants were asked to sign informed consent forms. They were also explained about voluntary participation in the study. This study was approved as a research project by Shahid Beheshti University of Medical Science by the students' research committee with no. 22776 in 30/05/2017 and Ethical Code of IR.SBMU.RETECH.REC.1395.1058.

Data analysis: Data analysis was done using SPSS (version 21). To analyze the descriptive data, the variables' frequency and percentage were calculated. Mean and standard deviation were also applied to report quantitative data. Moreover, the Pearson correlation factor, student t-test, and ANOVA were applied for descriptive- analytical interpretations. The significance level was set at ≤ 0.05

Results

In this study, 200 old people were evaluated. The participants' mean age was 71.28 ± 7.63 years, which did not have a significant effect. **Table 1** shows the participants' demographic characteristics. The participants' mean scores in different dimensions of elderly life style are shown in **Table 2**.

The total scores of life style in men and women were 167.83 and 164.18, respectively. Both genders had favorable level of life style and no significant difference was observed between men and women in this regard ($P < 0.05$). Considering the stress and preventive dimensions, a significant difference was observed between men and women ($P = 0.01$ and $P = 0.03$). Life style dimensions' scores in men and women are compared in **Figure 1**.

Table 3 showed a significant difference in total lifestyle scores with regard to education. Associate degree had the highest lifestyle mean score (176.3), while illiterate and elementary levels had the lowest scores (162.22). Lifestyle scores were significantly different in terms of nutrition as well as sport and entertainment considering the participants' educational levels ($P < 0.05$). In these two dimensions of bachelor's degree and higher educational levels had the highest scores.

In terms of marital status, the highest score of lifestyle belonged to single people (170.33), whereas, the lowest scores belonged to the divorced individuals (157). Considering the marital status, no significant difference was observed in total score of lifestyle, but a significant difference was found in nutritional as well as social and personal relationship dimensions ($P < 0.05$); divorced people had the highest score of nutrition, while married elderlies had the highest score of social and personal relationship ($P < 0.05$). **Table 4** showed that there was significant statistical relationship between age and nutrition field.

Table 1. Demographic characteristics of the study population (n=200)

Characteristics	Number	Percent
Gender		
Men	85	42.5
Women	114	57
Marital status		
Single	6	3
Married	92	46
Divorce	3	1.5
Widow/Widower	99	49.5
Educational status		
Illiterate	108	54
Elementary	57	28.5
Diploma	12	6
Associate degree	22	11
Bachelor degree and higher		

Quantitative characteristics	Mean	SD	Max	Min
Age (y)	71.28	7.63	91	60
Weight (kg)	71	11.93	100	31
Height (cm)	163.45	10.02	185	100
Body mass index (kg/m^2)	26.62	4.03	40.37	16.87

Table 2. Mean scores of lifestyle dimensions in study population

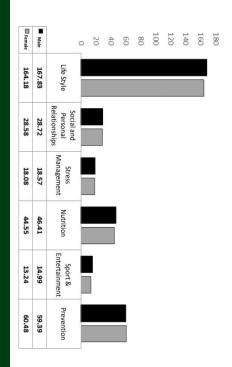| Life style dimensions	Mean	SD	Min	Max
Preventive field	60.02	6.09	37	72
Sport and entertainment field	13.99	4.24	5	28
Nutrition field	45.40	6.54	22	56
Stress field	18.34	3.78	8	25
Social and between personal field	28.68	4.56	10	35
Lifestyle	165.81	17.75	119	204

Figure 1. Mean scores of life style dimensions in study population based on the evaluated dimensions in both genders

Table 3. Mean ± SD of life style score based on the participants' education and marital statous

Demographic variables Lifestyle dimensions	Educational status					Marital status				
	Illiterate and elementary	Diploma	Associate degree	Bachelor degree and higher	p-value	Single	Married	Divorce	Widow/ widower	p-value
Preventive	59.3 ± 6.1	60.3 ± 5.8	64.9 ± 5.8	60.3 ± 6.2	0.09	60.7 ± 5.5	60.5 ± 6.3	55.3 ± 9.2	59.7 ± 5.7	0.45
Sport and entertainment	12.9 ± 4.1	14.7 ± 4.0	14.9 ± 3.9	16.6 ± 4.0	0.001	14.5 ± 4.5	14.6 ± 4.2	13.0 ± 3.0	13.4 ± 4.1	0.26
Nutrition	44.3 ± 6.7	45.0 ± 6.5	48.9 ± 4.6	50.1 ± 3.6	0.002	46.1 ± 9.9	46.7 ± 5.7	47.0 ± 3.6	44.0 ± 6.9	0.03
Stress	18.0 ± 4.0	18.4 ± 3.5	19.7 ± 2.0	18.5 ± 3.7	0.42	19.8 ± 5.5	18.7 ± 3.5	17.3 ± 3.5	17.9 ± 3.8	0.33
Social and personal relationship	280.8 ± 5.1	29.6 ± 4.1	28.5 ± 4.1	28.6 ± 3.8	0.15	24.3 ± 5.0	29.0 ± 4.7	24.3 ± 4.9	28.7 ± 4.2	0.03
Total score of life style	162.2 ± 17.9	169.4 ± 17.2	176.3 ± 16.1	170.58 ± 13.35	0.02	170.3 ± 16.5	168.6 ± 17.5	157.0 ± 14.1	163.4 ± 17.8	021

Table 4. Pearson correlation of age and body mass index (BMI) with different dimensions of lifestyle

Variables	Lifestyle	Preventive field	Sport and entertainment filed	Nutrition field	Stress field	Relation field
Age						
Correlation	0.08	0.04	0.04	0.15	0.01	0.04
P-value	0.27	0.55	0.50	0.02	0.79	0.53
Body mass index						
Correlation	0.00	0.04	-0.01	-0.13	-0.01	0.09
P-value	0.99	0.53	0.79	0.06	0.79	0.16

Discussion

In this study, the total mean score of the elderlies' lifestyle was 165.81, which showed a favorable level for the elderlies living in Tehran. Mean scores of lifestyle were higher in men than women, but both genders were at a favorable level in terms of lifestyle. Other previous studies showed lower lifestyle scores in Iran (Samadi *et al.*, 2007), which may indicate an improvement in the elderlies' lifestyle in recent years.

Regarding different aspects of lifestyle, the prevention dimension had the best score with a mean of 60.02 ± 6.09, while the sport and entertainment dimension received the worst scores with a mean of 13.99 ± 4.24. Morovati et al. showed that the worst scores were for the social relationship (Morovati-SharifAbad *et al.*, 2003), but in our study, social and personal relationship had the third ranking level between other dimensions of lifestyle. This may show improvement of the elderlies' social lifestyle, which could be resulted from higher social situations of the old population in the society. Considering the lifestyle dimensions, men achieved the highest scores in sports and entertainment as well as nutrition dimensions, but women received their best scores in the prevention dimension. This result was in accordance with findings of other studies in this field (Babak *et al.*, 2011, Ghahraman Mahmudi *et al.*, 2013, Hanioka *et al.*, 2007, Ueno *et al.*, 2012). Sharifian et al. showed that most elderlies, especially women, participated in social and religious activities. With regard to the leisure activities' dimension, only one third of the elderlies (mostly men) participated actively in leisure activities (Sharifian Sani *et al.*, 2016). Considering that women have more responsibility for self-caring and doing housework at home with no pension, economic security plays an important role in single and widowed female elderlies. In addition, gender and family roles reduce the women's access to leisure time, such as health and social participation (Sayer and Gornick, 2009).

The stress management scores were higher in men than women that may be resulted from higher scores of men in sport and entertainment as well as nutrition dimensions. This can be justified by saying that sports play a significant role in increasing the elderlies' satisfaction, freshness, and happiness, as potential factors of stress management. This finding was supported by some other studies (Abdoli and Modaberi, 2012, Aihara *et al.*, 2011, Mortazavi *et al.*, 2012). Regarding the prevention dimension, the scores of women were higher than men, which shows the importance of this dimension for women. The prevention dimension includes items such as personal health, alcohol, smoking and tobacco use, as well as reference to physicians or treatment center In the case of a sickness. This finding is supported by many other studies in reporting that women refer to physicians more frequently than men, because they pay more attention to their health and treatment (Armstrong, 2002).

In evaluation of educational status and lifestyle, the elderlies with associate and bachelor degree had higher lifestyle mean scores. The mean of different lifestyle dimensions increased in higher educational levels. This finding is in accordance with the study by Najimi et al.

(Najimi and Moazemi Goudarzi, 2012). The educational status is one of the important variables in determining the individuals' socio-economic status. According to the literature, socio-economic status is related to different aspects of lifestyle such as food habits and physical activity, which affects weight and obesity prevalence. So, educational status is one of the effective factors on people's lifestyle (Yannakoulia *et al.*, 2016). Hosseini et al. showed that the elderlies' educational level was significantly related with their instrumental activities such as using phone, going to distance places, going to stores for shopping, preparing their own food, doing house works, taking medications, managing their own economic problems, doing heavy works near home, going up and down the stairs, and walking (Hosseini SR *et al.*, 2018).

This study showed no significant relationship between total mean score of lifestyle and age (p<0.05), but a significant relationship was found between age and nutrition, which is supported by other studies, too (Ghahraman Mahmudi *et al.*, 2013, Hanioka *et al.*, 2007, Malek Afzali *et al.*, 2006, Morovati-SharifAbad *et al.*, 2003).

It seems that the elderlies' nutritional status had an effective role on their health improvement. So, by increase of age the kind and amount of food consumption as well as the nutritional style should be considered. However, no significant relationship was found between total lifestyle score and BMI in this study (p<0.05), which is supported by other studies (Goulart *et al.*, 2007, Najimi and Moazemi Goudarzi, 2012, Tonstad *et al.*, 2007).

The most important limitation of this study was the elderlies' reluctant to devote their time to complete the questionnaire. The questionnaire completing process was boring for the old people and made them tired. This process had to be done in more than one session.

Conclusion

Considering low scores of sport and entertainment in elderly people, an educational program should be designed to improve the elderlies' health status. The elderlies' participation in the community and their voluntary activities will help them to improve their health and lifestyle. Elderly policy-making should provide the elderlies with the opportunities to continue their involvement in society. Social participation is generally related to the elderlies' mental health and plays an important role in policy making.

Conflicts of interest

There was no conflict of interest in this study.

Authors' contributions

Sheikhhossein F performed the study and collected the data as well as writing the manuscript; Haghighian Roudsari A contributed in designing and conducting the project, analyzing and interpreting the data and writing the manuscript; Milani Bonab A had roles in writing the manuscript, and finalizing approval of the version to be published; Zahedi-rad M helped in writing and editing the manuscript, Saffar Mohammad-abadi F and Haghgo M involved in performing the study; Seyedmomeni K supported for analyzing the data.

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