



## Elderly Awareness on Healthy Lifestyle during Aging

Magid Taheri<sup>1</sup>, Mehri Mohammadi<sup>2</sup>, Babak Paknia<sup>3</sup> and Abolfazl Mohammadbeigi<sup>4\*</sup>

<sup>1</sup>Medical Sciences Faculty, Arak University of Medical Sciences, Arak/ Iran

<sup>2</sup>Deputy of Development and Human Resources, Arak University of Medical Sciences, Arak/ Iran

<sup>3</sup>Department of Statistics and Information Technology, Arak University of Medical Sciences, Arak/ Iran

<sup>4</sup>Department of Epidemiology, Health School, Qom University of Medical Sciences, Qom, Iran

### Abstract

**Background:** Lifestyle choices are associated with cardiovascular disease and mortality. As Iran started to experience population ageing, it is important to consider and address the elderly people's needs and concerns, which might have direct impacts on their wellbeing and quality of life.

**Aim:** There have been only a few researches into different aspects of life of the elderly population in Iran. So, this study aimed to assess the knowledge, attitude and practice (KAP) of elderly people in Tehran, Iran.

**Setting and design:** This is a cross-sectional study that conducted in Tehran, Iran.

**Methods and material:** Self-administered structured questionnaire was designed to measure knowledge, attitude and practice about healthy life style. The questionnaire completed by 412 elderly people during 2012.

**Statistical analysis used:** Cronbach's alpha coefficient, Pearson correlation coefficient and analysis of variance were used in data. A higher score means better.

**Results:** The mean score of males was significantly higher than in females. Furthermore, the average score of elderly membership in social activities was our findings revealed that the elderly have a low level of knowledge, attitude and performance towards healthy life style.

**Conclusion:** It seems designing a comprehensive program regarding a healthy lifestyle in this population to be of prime necessity. So, our results suggest measuring the quality of life and general health status in elderly people.

**Keywords:** Healthy lifestyle; Knowledge; Attitude; Practice; Elderly; Aging

### Introduction

The number of elderly people and their percentage of the whole population are greater than ever. According to the data of the United Nations, in 2002, the worldwide total number of people aged 60 and older was 629 million (10% of the whole population), and by the year 2050 it will increase to 1.964 billion (21% of the whole population) (ECOSOC, 2002) [1-3]. In Iran, according to population and housing censuses in 1976 to 2006, children population (0-14 Years old) decreased from 45.5% in 1976 to 25.1% in 2006, and persons aged 60 and over increased from 5.3% to 7.3% in 2006 [3].

Iran has started to come across with the population ageing phenomenon too. Although, Iran still has a relatively young population, the proportion of elderly is projected to double in less than 20 years [4]. The United Nations statistical projections demonstrate rapid growth of elderly population in Iran. While the proportion of people with 60 years old age and above in Iran was 5.4% in 1975 it will increase to 10.5% in 2025 and 21.7% in 2050 [5]. According to the last census the population of our country in 2011 was over 70 million and 472 thousand people, who number 5 million and 120 thousand of them that 27.7% were elderly. 63.6% of seniors are living in cities and 35.4% in villages [6]. Thus, it is no longer possible to ignore the commencing ageing phenomenon in Iran and therefore, it is vital to anticipate requirements of this age group in Iran to plan appropriate policies to address their growing needs and to support their healthy life style. In fact the total size of population of Iran will fail to double in the next fifty years, but the number of elderly aged 65 years and over will experience about six-fold increase [6]. So, aging phenomenon

in Iran can create healthy, economic and social consequences due to increasing of diseases and their burden [7-9].

Healthy life styles in elderly are described as a lifelong process optimizing opportunities for improving and preserving health and physical, social, and mental wellness; independence; quality of life; and enhancing successful life-course transitions [10].

Recent research has provided fresh evidence that a healthy lifestyle in elderly individuals [11-13] that combines principles of healthy nutrition [14], sleep hygiene [11], regular physical activity [15], non-smoking [16], regular periodic examination [17], having mental health [18], elderly person's participation in social activities [19], in addition to being a family. The nurses' health study and the health professionals follow-up Study documented a 62%-80% reduction in coronary events among men and women who maintained the healthy lifestyle for 16 or more years [20,21]. The purpose of this study was to identify knowledge, attitude and practice of elderly towards healthy lifestyle during aging. The study focuses on elderly people aged 60 years and upper.

**\*Corresponding author:** Abolfazl Mohammadbeigi, Department of Epidemiology, Health School, Qom University of Medical Sciences, Qom, Iran, E-mail: [beigi60@gmail.com](mailto:beigi60@gmail.com)

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## Materials and Methods

### Study design and data collection

This was a cross-sectional survey of a random sample of elderly Iranians selected from the general population in Tehran. Tehran has more than 9 million inhabitants and 22 districts and it is most densely populated region in Iran [6]. The sampling method was based on a multi-stage stratified sampling approach. Information on the total number of households and their addresses were available for all districts (provided by the health centers in each region of Tehran). Proportionate allocation sampling was used to identify a sampling fraction for each of the districts. Then, random sampling was applied within each stratum to select the required households in the districts to ensure that every household within the districts has the same probability of being sampled. All participants were interviewed at their home. To collect data, trained interviewers conducted face-to-face interviews. Each interview lasted for approximately 45 minutes. Those who were not available for interview at given time were asked for another appointment. Information about Tehran elderly on knowledge, attitude and practice (KAP) concerning healthy lifestyle during aging has not been studied previously. The Ethics Committee of Shahid Beheshti University of Medical Sciences approved the study.

### Structured questionnaire

A structured questionnaire was designed. It contains 44 core questions or statements; 7 for demographic characteristics, 14 for knowledge, 7 for attitude and 15 for practice on healthy lifestyle in old age. A self-administered, structured questionnaire was designed and modified by the aid of previous researches. Questionnaires were completed by a sample 412 from 425 respondents in 5 district (1,7,9,14,21) of Tehran.

Each questionnaire was comprised of four distinct parts; demographic characteristics of the participants, healthy lifestyle during aging knowledge, attitudes and practices. Questions about sex, age, education, marital status, level of education, employment, how to provide cost of living and membership of association were included in the first part of the questionnaire.

In the knowledge part, there were 14 close-ended questions emphasizing personal hygiene, meals, correctly use vegetables, fruits, protein, fat, dairy, exercise, sleep health, social activities, general examination, consumption of food Supplements. Each question was provided by two possible answers (true and false). The knowledge scores were assigned to respondents according to their answers to questions. The score range was between 0 and 14 and the scores below 33% age points were considered as poor, 33-66% age points, middle and upper 66% age point high knowledge.

Subsequent part of the questionnaire was dealing with the attitudes of the responders about various measures for healthy lifestyle. Seven questions were designed and elderly were asked to indicate their level of agreement to the statements using a three-point rating scale (agree, no-idea and disagree). The score ranged between 0 and 21 and any score individual desire to the 21 shows the correct attitude more conducive to individual questions in aging healthy lifestyle is and vice versa.

Practices of elderly were assessed by their self-reported healthy behaviors in the last part of the questionnaire. In this part, 14 questions were provided with two-point rating scale (correct function and false function). The score ranged between 0 and 14 and the scores below 7 were considered as poor practices. One additional question concerning

how smoking in elderly smokers (rarely, occasionally, regularly and very low, every day (Less than a pack), high (A packet or more)).

After collecting data and entering data into computer the final analysis using statistical software SPSS 11.5 using appropriate statistical tests was performed for testing test the association between knowledge, attitudes and practices scores. Content validity of questionnaire was approved by specialists in nutrition, epidemiology and gerontologist. Also, the reliability of the questionnaire was tested using Cronbach alpha statistic and estimated more than 0.7.

## Results

The response rate was 96.9%. Out of 412 elderly people in the sample 242 (58.7%) were men and 170 women (41.3%). The mean age of participants was 71.34 with SD=9.86. The mean score of knowledge and attitude calculated  $6.05 \pm 1.4$  and  $30.1 \pm 4.1$  respectively (Table 1).

Over 70% of the elderly have excellent knowledge (answering right) on each of four statements out of 14 (Table 2). The response of Tehran elderly to the attitude questionnaire on healthy lifestyle is presented in Table 3. Over 90% of the elderly have great positive attitude (answering right) on each of four statements out of 15. Moreover, the response of elderly to practice questionnaire on healthy lifestyle is presented in Table 4. Over 70% of the students have good healthy practice (Answered right) in response to four questions out of 14.

Characteristic	Female (n=170) %	Male (242) %
Age (yr)		
60-69	56.5	43.4
70-79	31.8	45.5
≥ 80	11.8	11.2
<b>Marital Status</b>		
Single	.0	0.8
Living with spouse	54.1	91.3
Divorced	1.8	1.2
Death of spouse	44.1	6.6
<b>Education</b>		
Illiterate	55.3	36
Under diploma	37.1	52.1
Diploma	4.7	5.4
Higher	2.9	6.6
<b>Cost of living</b>		
With job/salary	20	50
Retired/salary	51.2	40.5
Children	20.6	7
Relatives (family member)	3.5	0.4
Institution	4.7	2.1
<b>Membership in association or institution</b>		
Member	8.2	12.4
Un-member	91.8	87.6
<b>Smoking</b>		
No smoking	91.18	71.90
Rarely smoking	0.59	1.24
Occasionally smoking	2.94	3.72
Regularly and have very low smoking	1.76	2.48
Smoking every day	1.18	9.92
High smoking	2.35	10.74

Table 1: Socio-demographic characteristic of elderly in Tehran, Iran.

Question no.	Question statements	Responses. n(%)	
		Having knowledge	No knowledge
1	Drinking averagely 6-8 glasses of liquid in 24 hours is necessary for elderly	202 (49)	210 (51)
2	There are differences in taking some foods in an elderly with other people	212 (51.5)	199 (48.3)
3	Drinking averagely 1-2 glasses of milk in a day is necessary in elderly	187 (45.4)	225 (54.6)
4	Using fruits and vegetables is necessary in elderly daily diet	317 (76.9)	95 (23.1)
5	Numbers of elderly meals are five times a day: breakfast, morning snack, launch, afternoon snack, dinner	5 (1.21)	407 (98.79)
6	If not using a proper diet, supplement therapy by medical advice is necessary	38 (9.2)	374 (90.8)
7	Using enough meat (white) and less fat in old age is essential	357 (86.6)	55 (13.4)
8	Using more protein (low-fat meat, white meat, low-fat or skim milk and cereals) is necessary for an elderly compare with other people	81 (19.6)	331 (80.3)
9	Physical exercising 2-3 times weekly and each time for an hour is necessary for elderly	206 (50)	206 (50)
10	Having a regular sleep and waking program during day and night prevent insomnia in elderly	144 (34.9)	268 (65)
11	Sleeping 6 hours a day is enough for elderly	86 (20.8)	326 (79.2)
12	Participating in social activities causes health and freshness in elderly	329 (79.8)	83 (20.2)
13	Living with family for an elderly's mental health is useful	334 (81)	78 (18.9)
14	Being visited by physician for general examination at least every 6 month is necessary for elderly	162 (39.3)	250 (60.67)

**Table 2:** Summary of questions and number of responses for assessment of responder's healthy life style knowledge of 412 elderly in Tehran, Iran.

Question no.	Question statements	Responses. n (%)	
		Positive attitude	Negative attitude
1	Daily using of fresh fruits and vegetables is elderly's diet program is necessary	408 (99)	4 (0.9)
2	Using more protein (low-fat meat–white meat–low fat or skim milk and cereals) is necessary for elderly	359 (87.1)	53 (12.8)
3	Diet in a elderly should have less fat from younger people	382 (92.7)	30 (7.2)
4	Regular physical exercise in old age is necessary	399 (96.8)	13 (3.1)
5	If using a proper diet, there is no necessity to supplements	361 (87.6)	51 (12.3)
6	Living with family is necessary for elderly	360 (87.4)	52 (12.6)
7	Elderly should manage their life in old age	403 (97.80)	9 (2.2)

**Table 3:** Summary of questions and number of responses for assessment of responder's healthy life style Attitude of 412 elderly in Tehran, Iran.

Question no.	Question statements	Responses. n (%)	
		Healthy practice	Unhealthy practice
1	Do you drink 6-8 glasses of liquid in a day?	208 (50.5)	204 (49.5)
2	Do you use enough fruits and vegetables daily?	183 (44.4)	229 (55.6)
3	Do you use more protein (low fat meat, white meat, low-fat or skim milk and cereals) than other members of family?	34 (8.3)	378 (91.7)
4	Do you use less fat than other members of family?	307 (74.5)	105 (25.5)
5	Do you use supplement accompanying with meals?	328 (79.6)	84 (20.4)
6	Do you use just the salt adds in food while cooking?	352 (85.4)	60 (14.6)
7	Do you exercise regularly and daily?	201 (48.8)	211 (51.2)
8	How do you exercise daily?	184 (44.7)	228 (55.3)
9	Do you have enough sleep?	176 (42.7)	236 (57.2)
10	Do you smoke?	327 (79.3)	85 (20.6)
11	Do you have active participation in social activities?	83 (20.1)	329 (79.9)
12	Do you live with a family member?	401 (97.2)	11 (2.7)
13	Do you visit your doctor at least every 6 month?	64 (15.5)	348 (84.5)
14	Do you manage your financial affairs in life?	326 (79.1)	86 (20.8)

**Table 4:** Summary of questions and number of responses for assessment of responder's healthy life style Practices of 412 elderly in Tehran, Iran.

However, four questions has high unhealthy practice response (answered wrong), it is the response to the question number 3 "Do you use more protein (low fat meat, white meat, low-fat or skim milk and cereals) than other members of family?" 91.7%; question number 13 "Do you visit your doctor at least every 6 month?" 84.5%, and question number 11 "Do you have active participation in social activities?" unhealthy practice answered.

The mean scores achieved by men of all questions were significantly more than women. The average score in the elderly members of associations and organizations were significantly higher than non-

member elderly. Person correlation test between the average age of respondents and knowledge ( $r=-0.28$ ), attitude ( $r=-0.16$ ) and practice ( $r=-0.12$ ) assessment survey scores showed a significant inverse correlation. However, this rate was not very high correlation.

Independent t-test showed significant difference between the mean of attitude scores by marital status, so that the scores achieved by the married elderly ( $30.8 \pm 3.9$ ) were higher than other groups ( $28.1 \pm 4$ ). ANOVA test showed that levels of education has not significant difference in Knowledge ( $p=0.259$  and attitudes ( $p=0.171$ ) of elderly people.

## Discussion

Generally there is a direct relationship between physical activity and high level of education, considering the physical activity components of a healthy lifestyle, higher awareness in people with higher education is justifiable [22-24]. Based on research findings, the average knowledge score of studied population has decreased with increasing age; the average attitude score of studied population has decreased with increasing age and also the average practice score of studied population has decreased with increasing age. With decreasing knowledge and attitude mean scores with increasing age seems Considering the educational level of most elderly group old and oldest old is lower from level of education group young old, the result was predictable. It was also predictable, average practice score decreases with age due to reduced ability of older people in old age.

Regarding the relationship between educational level and knowledge about healthy life style, it seems that we can reduce the mean scores of knowledge, attitude and practice of elderly women than elderly men, is associated with a lack or shortage of educational facilities and education in their youth and middle age. The results in this section in relation to yield reduction in the mean scores of women than elderly men, average performance score consistent with another studies [22,24].

The average performance score was higher than elderly people with children to elderly people without children, that as a reason to have decreased ability in older ages and the need to protect children [24]. In the presence of association, increase social contact and thus reduce the depression of older people [13,24].

A longitudinal survey conducted in elderly people of Belgium, Denmark, France, Italy, Portugal, Spain, Switzerland, and The Netherlands [11,25]. This large study showed that healthy lifestyle was related to stable self-perceived health, a delay in functional dependence, and mortality. Moreover, based on the recent study results, inactivity and smoking, and low-quality diet have an increased mortality risk. Multiple unhealthy lifestyle factors have a synergic effect and this study showed that a healthy lifestyle at older ages is related to a delay in the deterioration of health status and a reduced mortality risk [11,12,26].

Since the population of the current study was elderly people, we encounter to some problems. The questions of study were long and so some of participants feel fatigue in interview and answering. We would enforce to remove of some participants due to sever diseases and other age related problems. So the representativeness of sample confounds. However, regarding to the effect of awareness of practice as an important principle in health policy, increasing of knowledge is the first step for healthy life style. Moreover, Improving and maintaining a healthy lifestyle in elderly people across is a great challenge for the all developed and developing countries. In Iran especially due to recent demographic changes interventional programs in diet and life style could be more efficient for decreasing of morbidity and mortality in upcoming years.

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