



# Relationship between Quality of Life and Life Style Health Promotion Behaviors in the Elderly

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## ABSTRACT

**Aims** Elderly is an important period of human life, and the elderly population in Iran is increasing. Therefore, the present study was aimed to investigate the relationship between quality and lifestyle health promotion behaviors among the elderly in Hamadan, 2015.

**Instrument & Methods** This cross-sectional study was conducted on 230 retired elderly over 60 years selected by cluster sampling method in Hamadan retirement centers. A standard questionnaire for quality of life and lifestyle was used to collect data. Data were analyzed using SPSS-16 software, chi-square, and correlation analysis. The significance level was considered 5%.

**Findings** Lifestyle in the elderly was undesirable (61.3%), and 38.7% had a moderate quality of life. Physical functioning was the most undesirable aspect of lifestyle, and physical activity was the most undesirable aspect of quality of life. The results of the Chi-squared test showed two significant relationships between lifestyle status and gender as well as the quality of life with gender ( $p < 0.05$ ). The mean of lifestyle and quality of life were significantly different between marital variables ( $p < 0.05$ ). The results showed a positive correlation between lifestyle scores and quality of life ( $r = 0.479$ ,  $p < 0.001$ ).

**Conclusions** According to an undesirable lifestyle and moderate quality of life in the elderly, it is recommended that interventions be made to increase lifestyle and quality of life, especially in physical functioning, exercise, and physical activity in the elderly.

**Keywords** Aging; Quality of Life; Lifestyle; Health Promotion

## CITATION LINKS

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## Introduction

Currently, the world's population is aging [1]. Improving living conditions and increasing life expectancy have become one reason for the aging crisis in societies. With the increase in the elderly population, economic, social, and health problems have become one of the most important concerns of the 21st century [2]. In Iran, the proportion of the elderly population is rapidly increasing due to the decrease in birth rate and the increase in life expectancy, which is rapidly increasing over the past thirty years; the aging rate of Iran's population has more than doubled, and at present, about 8.7% of the total population of the country are people aged 60 and over. It is also predicted that the aging rate of Iran's population will reach 11.3% in 2025 and 31% of the total population in 2050 [3]. Therefore, it is not far from the mind that the increase in the aging rate of 60 years and older in Iran can create major problems for the country's health care and nascent social security systems [4].

The goal of supporting the elderly should not be to boost their life expectancy. Rather, in the world today, the concept of "dynamic aging" has been proposed that with the boost in the number of the aging population, their quality of life should also be considered [5]. According to the World Health Organization, quality of life is the cultural system in which individuals perceive their situation in life in aspects of culture, the value system in which they are surrounded, and their goals, desires, criteria, and preferences [6]. Studies have shown that health-promoting behaviors presented to the elderly are a potential factor in improving health, quality of life, and a decrease in healthcare costs. Quality of life is also considered a valuable goal to promote health in aging [7]. Various factors like age, sex, marital status, education, occupation, life companions, and the number of annual visits to the physician are associated with different dimensions of quality of life regarding the health of the aging [6, 8]. Also, some studies indicate that socio-economic problem and various changes that occur physiologically in aging affect reducing the quality of life in old age [9, 10]. Lifestyle or health-promoting behaviors are important because they influence the quality of life and disease prevention. 53% of the source of death of people are allied to their lifestyle [3]. Millio defines lifestyle as "patterns of behavioral choice among the options available to individuals according to their social and economic status" [11].

An elderly lifestyle affects their mental health and changes their communication pattern or their presence in social activities. Therefore, choosing a healthy lifestyle at this age is of great importance because of its ability to prevent disease and improve physical and mental health [12]. One of the misconceptions about old age is that it is too late to choose such lifestyles in the last years of life. However, it should be noted that adopting a healthy

lifestyle is important at all stages of the life process, and although the main feature of old age is weakness and reduction, but it is never too late to take advantage of health habits such as smoking cessation, proper diet, and exercise. It can be done by teaching a healthy lifestyle to prevent non-communicable diseases in old age [13]. Clark and his colleagues consider intervention in a healthy lifestyle in the elderly to reduce the negative consequences of this period and express that an intervention lifestyle has beneficial effects for the elderly [14]. Adopting a healthy lifestyle in old age is very important because of its ability to prevent disease, strengthen the quality of life, improve life expectancy and strengthen physical and mental health [15].

Considering that despite conducting various researches in the field of elderly health, each of them has focused on the part of the life of this group, rare research has been done in the field of a comprehensive study of the style and quality of life of the aging in Iran; therefore present study aimed to investigate the relationship between quality of life and lifestyle health promotion behaviors among retired elderly.

## Instrument and Methods

This cross-sectional study was performed on the aging under the auspices of the Hamadan Retirement Center in 2015. Based on the study of Nejati *et al.* [16] and considering  $s=22$ ,  $d=3$ , and 95% confidence level, the sample size was obtained by considering a 10% sample drop equal to 230 elders. Since Hamadan has 36 retirement centers, five centers were randomly selected from among them, and the list of retirees of each center was separated by researchers according to gender. Moreover, from each list in each center and according to the equal sample of the elderly, in a simple random manner, 23 retired elderly men and women 60 years and older (a total of 115 women and 115 men) were selected. Literacy, being covered by the Hamadan Retirement Center, having no diagnosed psychological problems, and not having physical disabilities including blindness, deafness, and physical disability requiring the use of a wheelchair or walker were the inclusion criteria.

The questionnaire used had three parts: demographic variables, localized lifestyle questionnaire [17], and standard quality of life questionnaire [18]. Demographic questions in this study included age, gender, education, marital status, post-retirement occupation. The health-promoting lifestyle profile (II) questionnaire [16] has 52 questions in the form of 6 dimensions that are graded in a 4-point Likert scale (not at any time=1, occasionally=2, frequently=3, continuously=4). The dimensions of the questionnaire are the dimension of spiritual growth and self-fulfillment (with nine questions), the dimension of responsibility for one's health (with nine questions), the dimension of interpersonal relationships (with nine questions),

the dimension of stress management (with eight questions), the dimension of exercise and physical activity (8 questions) and proper nutrition (9 questions), which in this questionnaire, a score of less than the average for each dimension or a total score of the questionnaire, meaning unfavorable lifestyle status, and a score higher than the average, meaning favorable lifestyle status, were considered [19]. The Short-form 36 Questionnaire (SF-36) [17] also has 36 questions. It is in eight dimensions, including general health (5 questions), physical function (10 questions), role limitation due to physical reasons (4 items), and role limitation due to emotional reasons (3 items), physical pain (2 items), social functioning (2 items), vitality (4 items) and mental health (5 items). A rating scale is used to score SF36. In 11 questions of this questionnaire, a score of zero represents the worst, and a score of 100 represents the best possible condition for the person, and in the other 25 questions, a score of zero represents the best possible condition for the individual. Therefore, the order of the measurement scale in 11 questions is directly related to the score related to the overall quality of life, and in the other 25 questions is inversely related. By summing the scores of each subscale and dividing the number by the number of questions in that subscale, the score of that subscale is obtained, and in general, the score is lower than the average of poor quality of life, 51 to 70% higher than the average of the average quality of life and a score of 71 to 100% higher than the average indicated a good quality of life [20]. Reliability and validity of lifestyle and quality of life questionnaires were evaluated and confirmed in previous studies [17, 18].

This study was approved by the ethics committee of Hamadan University of Medical Sciences. The selected individuals were contacted by phone and invited to attend the covered retirement center. The researchers then explained the study's objective, the participant's role in the study, the confidentiality of the information obtained, and the willingness to participate in the study. Then, if the elderly agree to participate in the study and acquire written consent, the questionnaires were completed.

Data were analyzed using SPSS 16 software and chi-square, one-way analysis of variance, and Pearson correlation analysis. The significance level of the tests was considered less than 0.05.

### Findings

The mean±SD of the age of participants was 65.71±6.21 years. Most of the elderly had a diploma (42.2%), married (71.7%), and currently unemployed (73%; Table 1).

The results of the quality of life study showed that most of the elderly had a moderate lifestyle (49.1%) and most of the older women had a moderate lifestyle (60.9%), and most of the older men had a favorable lifestyle (40.9%). Regarding the quality of life dimensions, physical function had the weakest status

(49.1%), and mental health had the best status (72.1%; Table 3).

**Table 1)** Absolute and cumulative frequency of demographic variables in the elderly covered by the Retirement Center in Hamadan

Variables	N	%	
Age Groups	60-65	147	63.9
	66-70	38	16.5
	71-75	22	9.6
	76-80	17	7.4
	81-85	3	1.3
	≥86	3	1.3
Gender	Male	115	50.0
	Female	115	50.0
Marriage Status	Married	165	71.7
	Single	24	10.4
	Divorced	37	16.1
	Widow	4	1.7
Education Level	<Diploma	77	33.5
	Diploma	97	42.2
	>Diploma	56	24.3
Job Status	Employed	62	27.0
	Unemployed	168	73.0

Most of the elderly (61.3%) had an unfavorable lifestyle. Among the dimensions of lifestyle, exercise, and physical activity, among other dimensions of lifestyle had an unfavorable status (20.9%), and spiritual growth and self-fulfillment had a favorable status (59.6%; Table 2).

**Table 2)** Frequency distribution of lifestyle dimensions of the elderly covered by Hamadan Retirement Center

Lifestyle Dimensions	Unfavorable		Favorable	
	N	%	N	%
Spiritual growth and self-fulfillment	93	40.4	137	59.6
Health responsibility	124	53.9	106	46.1
Healthy nutrition	118	51.3	112	48.7
Interpersonal relationships	103	44.8	127	55.2
Stress management	156	67.8	74	32.2
Exercise and physical activity	182	79.1	48	20.9
General Life style	141	61.3	89	38.7

**Table 3)** Frequency of quality of life dimensions of the elderly covered by Hamadan Retirement Center

Quality of Life Dimensions	Poor		Moderate		Good	
	N	%	N	%	N	%
General Health	75	32.6	104	45.2	51	22.2
Physical function	113	49.1	54	23.5	63	27.4
Restriction of role-playing for physical reasons	94	40.9	82	35.6	54	23.5
Restriction of role-playing for emotional reasons	90	39.2	72	31.3	68	29.5
Physical pain	63	27.4	115	50.0	52	22.6
Social function	9	3.9	55	23.9	98	42.6
Youthfulness	82	35.6	115	50.0	33	14.4
Mental Health	2	0.9	62	27.0	166	72.1
General Quality of Life	65	28.3	113	49.1	52	22.6

The chi-square test results showed a significant relationship between lifestyle status and gender (p=0.036) and quality of life with gender (p=0.043; Table 4).

The results of one-way analysis of variance showed

that there was no significant difference between the mean of lifestyle between age groups ( $p=0.492$ ) and education ( $p=0.419$ ) and only in marital status was a significant difference ( $p=0.024$ ). Also, the results of one-way analysis of variance showed that the mean quality of life was not significantly different between age groups ( $p=0.745$ ) and education ( $p=0.939$ ) and only in marital status was a significant difference ( $p=0.004$ ; Table 4).

The results of the Pearson correlation test showed that there was a significant ( $p<0.001$ ) and positive ( $r=0.479$ ) correlation between lifestyle and quality of life.

**Table 4)** The mean±SD of lifestyle and quality of life by demographic characteristics in the elderly covered by the Hamadan Retirement Center

Variable	Lifestyle	Quality of Life
<b>Gender</b>		
Male	132.15±21.54	57.59±13.26
Female	123.07±24.70	60.90±15.18
<b>Age</b>		
60-65	133.19±25.16	58.92±14.53
65-70	126.30±26.81	59.08±13.13
70-80	130.10±33.72	60.80±15.09
<b>Education</b>		
<Diploma	128.60±28.40	59.31±16.13
Diploma	134.95±24.75	58.85±12.44
>Diploma	133.82±22.54	60.24±14.55
<b>Marriage Status</b>		
Married	135.18±23.47	60.14±13.42
Divorced	133.16±22.17	64.42±15.41
Widow and Single	118.05±35.28	50.47±14.21

## Discussion

The present study aimed to determine the quality of life and lifestyle health promotion behaviors of the aging covered by the Hamadan Retirement Center in 2015. Whereas the boost in life expectancy and growth of the aging population is one of the achievements of the 21st century, which is due to the improvement of health, social, economic conditions, reduction of mortality, an increase of life expectancy, and implementation of birth control policies [21], One of the purposes of the present study was to measure the dimensions of lifestyle among the elderly covered by the Retirement Center in Hamadan. The present research findings showed that the dimension of exercise and physical activity had an unfavorable status, and the dimension of spiritual growth and self-fulfillment of lifestyle had a more favorable status. The study of Mahmoudi *et al.* [22] showed that the dimension of exercise in the lifestyle of the elderly was unfavorable. It seems that in old age, due to the limitations created in physical and motor condition, physical activity and exercise are associated with problems, and it can be inferred that having a good physical condition can be one of the facilitating factors. Regarding the mental and spiritual condition of the elderly, the study of Movahedi *et al.* [13] also showed that among the components of lifestyle, the spiritual and psychological condition was better than other dimensions. It seems that considering that the period of old age is one of the last periods of a

person's life, so the elderly in this period turn more to the secret and need and spiritual relationship with the One Creator.

One of the purposes of the present study was to measure the lifestyle status of the elderly covered by the Retirement Center. The present research findings showed that most of the aging under study had an unfavorable lifestyle status. Seifzadeh [23], and Fallah Mehrabadi [24] studies are in line with the present research. The study of Zanjani *et al.* [25] showed that most of the aging had a moderate lifestyle status, and also the results of the study of Delioga *et al.* [26] showed that most of the elderly had a tremendous lifestyle which is inconsistent with the present study. Because in today's society, the advancement of technology has caused little human activity in doing things and is also one of the items of lifestyle, physical activity, and mobility. This issue is much less common in the elderly than in other people in society. The elderly have a poor lifestyle due to mobility limitations and the relative weakness of physical strength.

Regarding lifestyle, the findings of the present research showed that lifestyle in women was less than men and had a more unfavorable situation. In this regard, the results of other studies [23, 24, 27] confirm and are in line with the present study. Women are more sensitive and weaker than men due to their physical and mental condition. Older women are more and more physically and mentally debilitated due to the difficult pregnancy period and the complications and risks of childbirth. The lack of financial independence compared to men exposes them to a more unfavorable lifestyle. Another goal of this present study was to measure the dimensions of quality of life in the elderly covered by the Retirement Center. So that physical function among the other proportions of quality of life had the weakest status, and mental health had the best status among other proportions of quality of life. The study of Aliasquarpoor & Eybpoosh [28] also showed that the physical function of the elderly was at an unfavorable level and the mental or psychological function was at a good level which is in line with the present study. The study of Seraji *et al.* [29] showed that the physical performance of the elderly was better than other aspects of quality of life, which is inconsistent with the present study. The study of Hashemian *et al.* [30] showed that the mental state of the elderly had a more unfavorable condition than other aspects of quality of life, which is inconsistent with the present study. It seems that the elderly, due to poor muscle and motor conditions, face limitations in performing continuous and better physical activity, which can negatively affect their quality of life.

Determining the quality of life of the aging covered by the Retirement Center was another aim of the present study so that the elderly in this study had a moderate quality of life. Naseh & Heidari [31] are in line with the results of the present study. Miranda *et al.* [32] showed

that the quality of life of the aging understudy had a good condition that is not in line with the present study. The elderly may have achieved their goals in life due to living longer than ordinary people in society, and some of them may have seen their lives as merely lasting and reaching the stage of old age. Therefore, satisfaction in this group in the community generally expresses relative satisfaction. From the perspective of mental health, the elderly are more secretly in need of God due to the closing time of death and having a shorter life span than ordinary people, or they try to get closer to God due to the forgiveness of sins. In this research, the quality of life was better in men than in women. Various studies also indicate the superiority of women's quality of life over men [28, 31]. Another aim of the present research was to measure the relationship between lifestyle and quality of life of the aging covered by the Retirement Center in Hamadan. The present research showed a correlation between the mean scores of lifestyle and the mean scores of quality of life. Similar studies [33, 34] also indicate the relationship between these two important variables. It can be argued that disability and reduced activity are more pronounced at older ages, and physical limitations may influence the quality of life of the aging.

One of the limitations of this study was data collection in the form of self-reporting. Due to the nature of the subject matter, the elderly may not have stated the facts. Of course, researchers should gain the trust of the elderly on the fact that the information will be confidential. Also, considering that the present study was conducted in retirement centers and according to the office working hours of the centers, information was collected only during office hours and by inviting the elderly.

## Conclusion

The results of this study showed an unfavorable lifestyle and average quality of life in the aging. Elderly lifestyles are also associated with their quality of life. Physical function was the most undesirable dimension of lifestyle, and physical activity was the most undesirable dimension of quality of life. Since the quality of life and lifestyle, which are both characteristics of a healthy and health-oriented life, it is recommended to intervene to improve lifestyle and quality of life, especially in physical function, exercise, and physical activity in the elderly population.

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