

# Happiness and Its Related Factors among the Elderly in Hamadan (Iran): A Cross Sectional Study

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Received 2016 August 29; Revised 2016 October 15; Accepted 2016 November 02.

## Abstract

**Background:** Happiness is one of the indicators of mental health that originates from the cognitive and emotional assessment of individuals from their lives. Happiness is believed to evolve from the comparison of the current circumstances related to achievement. However, gerontological literature has been limited to happiness in the elderly.

**Objectives:** The aim of this study was to determine happiness status and examine the relationship between happiness and some variables among Iranian elderly.

**Methods:** This cross-sectional study was carried out on 411 elderly people (60 - 75 years old) in Hamadan, west of Iran, in 2016, by using multistage random sampling method. Two instruments were used in this study including a demographic questionnaire and Oxford happiness questionnaire. Data analysis was performed using Pearson correlation, independent t-test, and One-way ANOVA.

**Results:** The mean score of happiness was 41.17 ( $\pm$  15.2), which was evaluated at a moderate level. There was no significant difference between male and female elderly in happiness status. All 5 dimensions of happiness had a positive significant correlation with each other ( $P < 0.01$ ). Results from T-Test and ANOVA indicated that there was a significant relationship between happiness and some socio-demographic characteristics such as age ( $P = 0.002$ ), educational level ( $P = 0.001$ ), and income status ( $P = 0.001$ ).

**Conclusions:** Life satisfaction, financial status, and educational level contributed to the positive feeling in the perception of happiness in the elderly. Thus, adopting programs to increase happiness in the elderly could be useful as one of the strategies to improve all dimensions of health such as physical, mental, and social aspects.

**Keywords:** Happiness, Aged, Mental Health, Retirement

## 1. Background

It is obvious that happiness, as one of the human psychological needs, has received the attention of many researchers (1). Happiness can be introduced as a positive inner experience and as one of the indicators of mental health that originates from the cognitive and emotional assessment of individuals from their lives (2). Some psychologists as Argyle consider happiness as the combination of positive affect, absence of negative affect or loss of depression and anxiety, and satisfaction with life (3). Happiness leads to the creation of a better life with greater efficiency (4). The individuals who have introduced more joyful positions and activities as the sources of their happiness benefit greater from mental health (5). Happiness is interrelated with increased physical and mental health, easier sleep, reduced level of stress and depression, improvement of cardiovascular function, higher longevity, better compatibility with life events, stronger immune sys-

tem, increased quality of life, and finally, life satisfaction (6, 7).

Old age is a period of human life in which mental health, especially hope and happiness, may be impaired. This period usually begins from the age of 60. Physical and mental changes in this era can cause disorders in one's functioning and disturbs his/her compatibility with the environment. Physical and mental health and happiness of the elderly in this stage of life start a descending trend (8). International studies show that happiness has been declining in men and women in the past few decades. The existence of a negative correlation between increasing age above 60 and life satisfaction, as one of the components of happiness, has been proven in research (9). According to the World Happiness Report by the world health organization (WHO), Iran is placed in rank 115 among the countries of the world that is even lower than Djibouti and Palestine (10). In addition, Montazeri et al. reported happiness of 18 - 65-year-old Iranians was at a moderate level in a manner

that each one year increase in the age had led to a one percent decline in happiness (11).

Studies have reported the prevalence of depression and anxiety in the elderly as 22.4 and 23.5 percent, respectively (12). Another study showed that 15 to 46 percent of the elderly suffer from psychiatric symptoms and mental disorders, such as depression, anxiety and stress, memory loss, changes in sleep patterns, loneliness, and social isolation (13). The elderly's happiness in life depends upon many factors, such as individual, psychological, physical, social, economic, religious, spiritual, and cultural dimensions. The identification of these factors can have a decisive role in the happier life in this age group (3).

In their study, Anila et al. found that happiness and wellbeing had a positive significant correlation with hopefulness (14). In another study, the U-shaped relationship of age with happiness was revealed (15). In terms of the relationship of socio-economic conditions with happiness and life satisfaction, the results of Peiro's study showed that age, health, and marital status are correlated with happiness and life satisfaction. In contrast, there was a insignificant correlation between income and satisfaction or happiness (16).

The number of Iranian old people in 2012 was estimated about 6 million, which comprises 5.7 percent of the whole population of the country. This number is projected to increase to 21 percent by 2050 (17, 18). Thus, the present study aims to determine happiness status and its relationship with demographic components among the elderly. In this way, the effective factors in this domain are identified and the unmatched role of these factors in helping with adoption of appropriate educational plans consistent with the needs of the elderly can be clarified.

## 2. Methods

### 2.1. Design and Participant

This cross-sectional study was conducted on 411 elderly people aged 60 - 75 years who were recruited through multistage random sampling method in the Hamadan City, West of Iran, in 2016. Participants were selected from retirement clubs (15 clubs). For this purpose, researchers prepared the list of subjects from the retirement clubs. At the first stage, the clubs were selected in proportion to the size based on the ratio of the total number of the elderly in every club to the total number of the elderly covered by the fifteen clubs. At the second stage, stratified sampling was performed in every club according to sample size and finally, subjects were selected to be enrolled in the study through simple sampling method in each club. Sample size was estimated based on the rate of happiness among

elderly people in a similar study (19). However, since there was a risk for incomplete questionnaires, 420 elderly people were recruited. 411 out of 420 the elderly participated in this study (response rate of 98%).

The inclusion criteria were being a member of a retirement club, aged 60 to 75, and giving consent to participate in the study. Exclusion criteria included unwillingness to participate in the study, history of mental disorders (Alzheimer, dementia), and physical problems (vision and hearing problems) in the participant. Before recruiting, the subjects were asked about psychiatric disorders, such as Alzheimer and dementia, and were excluded from the study in case of the presence of the disorder. In case of hearing and vision impairments, the elderly were excluded from the study if the disorder exerted disruptive effects. The study was approved by Hamadan University of Medical Sciences' institutional review board and ethics committee (IR.UMSHA.REC.1394.478) and conducted in accordance with the ethical standards laid down in the declaration of Helsinki.

### 2.2. Measures

The self-administered questionnaire included closed questions and required approximately 30 min to complete. The questionnaire included two sections.

Demographic and background variables, it included age, gender, marital status, occupation status, education level, income, and family size.

The Oxford happiness questionnaire (OHQ), The OHQ consists of 29 items assessing happiness on six dimensions: life satisfaction, joy, self-esteem, calm, control, and efficacy (e.g., "I always have a cheerful effect on others"). The items were rated on a 4-point scale ranging from 0 (not at all) to 3 (always), so this test produced a total score in range of 0 to 87. In this questionnaire, the normal score is between 40 and 42 (20). In other words, a mean score for each of the six subscales and a total score for OHQ were calculated; higher scores indicated a greater level of happiness. The reliability and validity of this questionnaire among Iranian populations were confirmed by previous studies (19, 21, 22).

### 2.3. Data analysis

All statistical analyses were performed using version 18.0 of the statistical software package SPSS (SPSS Inc., Chicago, IL, USA). Pearson correlation, independent T-Test, and One-way ANOVA were used to determine the association between happiness and demographic variables. The level of significance was set at  $P < 0.05$ .

### 3. Results

The mean age of the participants was  $64.89 \pm 4.59$  years. More than half of them were aged 60-65 years. Majority (88.3%) of the participants were married and living with their husbands. At the time of survey, 132 (32.1%) reported household income less than \$400 per month. More details on demographic characteristics of the participants are shown in [Table 1](#).

[Table 2](#) reports the correlations between the six dimensions of happiness. According to the results, all dimensions had a positive significant correlation with each other ( $P < 0.01$ ). In this study, the total mean score of happiness was  $41.17(\pm 15.2)$ , which was evaluated at a moderate level. In addition, based on the acquired scores, all the dimensions of happiness were evaluated at a moderate level including life satisfaction (%47.3), joy (%48.5), self-esteem (%48.6), calm (%45.1), self-control (%45.6), and efficacy (%42.3).

[Table 3](#) summarizes the descriptive and inferential results from T-Test and ANOVA with socio-demographic characteristics as independent variables and happiness dimensions as dependent variables. According to the results, there was a significant association between happiness and socio-demographic characteristics such as age ( $P = 0.002$ ), educational level ( $P = 0.001$ ), and income status ( $P = 0.001$ ). In other words, people with lower age, greater education level, and higher income expressed more happiness (significant ANOVA and post-hoc analysis results with Bonferroni-Holm corrections for P values).

### 4. Discussion

The purpose of this study was to determine happiness status and examine the relationship between happiness and some variables among the elderly in Iran. Happiness in life depends on several factors, such as health status, marital status, security, education, income, and social relationships (22). International social research has shown huge differences in average happiness and life satisfaction of different nationalities (3). These studies introduced social and economic factors effective in happiness of nations because these factors may affect how participants respond to questions about happiness (41.17). In this study, the mean score of happiness among men and women was evaluated at a moderate level. These results are consistent with results of studies conducted in Thailand and India as well as in China (14, 19, 23). However, this rate of happiness is higher than that in African countries and lower than that in European countries and America (10, 24). To justify the difference, it can be said that economy, advanced technology, and welfare of people in western countries may have

led to high levels of happiness. On the contrary, an opposite situation is clearly observed in African countries with low quality of life. On the other hand, no significant difference was observed between men and women. Many studies have been done on happiness difference between genders. According to Veenhoven, the effect of gender is small (25) and Travers and Richardson (1993) and Saunders (1996) reported that there was no gender difference in the degree of happiness (26). Wood et al. reviewed 93 studies in America and found that women were slightly happier than men on average although men seemed to experience more happiness than women with aging (27). In analyzing the obtained results, one can argue that women experience stronger positive and negative effects than men do and the level of depression is higher in women.

According to the results of this study, income was significantly correlated with happiness and its components. In agreement with this finding, various studies have shown that human happiness increases with increased wealth; on the other hand, reduced wealth decreases happiness. Montazeri et al. showed that employment status and income level of individuals have a significant impact on their happiness (11). In a study, Easterlin found that happiness is associated positively with higher incomes. Subsequent research appears consistent with the Easterlin's findings regarding the stagnant long-term relationship between happiness and real GDP in the United States (28). This means that income meets partly the material needs of the people in these groups and therefore affects happiness whereas high income excessively beyond one's needs does not increase happiness anymore (29).

In terms of age, the results of this study indicated the presence of an inverse correlation between age and happiness as well as its components so that individuals' happiness reduced as age increased. Studies show that a U-shaped relationship exists between happiness and age as people experience greater happiness in old ages (15, 16). In line with this finding, Montazeri et al. showed that happiness levels decrease in people with aging (11). In another study conducted on the old people in Thailand, age changes did not bring about a dramatic difference in happiness among people, which is in contradiction with the current findings (19). To account for the paradox in the above result, one can argue that aging along with lifestyle will be the cause of many physical and psychological problems (30). This will undoubtedly affect the satisfaction and happiness of the elderly. On the other hand, the social relations of the elderly are reduced (31) with increasing age in a manner that a higher feeling of loneliness is developed in the elderly due to cultural and technological changes, emergence of a generation gap, and indifference to the values and traditions of this age group. It seems that the pop-

**Table 1.** Frequency of Demographic Variables among Participants

Variable	Number	Percent
<b>Gender</b>		
Male	304	74
Female	107	26
<b>Age</b>		
60 to 65	263	64
66 to 70	83	20.2
71 to 75	65	15.8
<b>Marital status</b>		
Single	48	11.7
Married	363	88.3
<b>Education</b>		
Under diploma	152	37
Diploma	104	25.3
Academic	155	37.7
<b>Job</b>		
Retired	381	92.7
Other	30	7.3
<b>Family size</b>		
< 3	248	60.3
≥ 3	163	39.7
<b>Income</b>		
< \$300	132	32.1
\$300 - \$500	191	46.5
≥ \$500	88	21.4

**Table 2.** Means, Standard Deviation, Range of Scores, and Correlation of Happiness Dimensions among Participants

Variable	1	2	3	4	5	6	Mean ± SD	Range of Scores
<b>1. Life Satisfaction</b>	1						11.36 ± 4.7	0 - 24
<b>2. Joy</b>	0.796 <sup>a</sup>	1					11.64 ± 4.3	0 - 24
<b>3. Self-Esteem</b>	0.721 <sup>a</sup>	0.773 <sup>a</sup>	1				7.3 ± 2.9	0 - 15
<b>4. Calm</b>	0.689 <sup>a</sup>	0.663 <sup>a</sup>	0.690 <sup>a</sup>	1			4.06 ± 2.1	0 - 9
<b>5. Self-Control</b>	0.747 <sup>a</sup>	0.741 <sup>a</sup>	0.696 <sup>a</sup>	0.622 <sup>a</sup>	1		5.48 ± 2.5	0 - 12
<b>6. Efficacy</b>	0.517 <sup>a</sup>	0.520 <sup>a</sup>	0.422 <sup>a</sup>	0.476 <sup>a</sup>	0.472 <sup>a</sup>	1	1.27 ± 0.8	0 - 3
<b>Total Happiness</b>	0.922 <sup>a</sup>	0.923 <sup>a</sup>	0.869 <sup>a</sup>	0.800 <sup>a</sup>	0.855 <sup>a</sup>	0.592 <sup>a</sup>	41.17 ± 15.2	0 - 87

<sup>a</sup>Correlation is significant at the 0.01 level.

ulations in the mentioned studies actually enjoy a higher quality of life and greater levels of education and health services than the populations in developing countries do, such as in Iran. This can be evidence of the increased hap-

piness in old ages.

In this study, no significant relationship was observed between marital status and happiness. This finding is not consistent with studies done by Ingle Hart and Sofie

**Table 3.** Association between Happiness Dimensions and Demographic Variables among Participants<sup>a</sup>

Variable	Total Happiness		Life Satisfaction		Joy		Self Esteem		Calm		Control		Efficacy	
<b>Gender</b>														
Male	41.34	15.62	11.40	4.85	11.63	4.37	7.39	2.95	4.13	2.09	5.50	2.59	1.25	0.04
Female	40.59	14.28	11.26	4.49	11.63	4.30	7.06	2.75	3.87	1.89	5.40	2.53	1.31	0.08
P value	0.124		0.790		0.959		0.314		0.271		0.710		0.544	
<b>Age</b>														
60 to 65	42.53	15.28	11.70	4.80	11.93	4.27	7.64	2.88	4.22	2.08	5.72	2.52	1.30	0.87
66 to 70	41.45	13.84	11.39	4.40	11.91	4.22	7.36	2.73	4.09	1.77	5.39	2.50	1.27	0.81
71 to 75	35.14	15.74	9.96	4.81	10.13	4.56	5.87	2.83	3.38	2.08	4.61	2.72	1.15	0.77
P value	0.002		0.031		0.010		0.000		0.012		0.008		0.441	
<b>Marital status</b>														
Single	37.19	14.24	10.08	4.74	10.93	4.39	6.54	2.79	3.27	1.96	5.22	2.48	1.12	0.86
Married	41.67	15.34	11.53	4.71	11.73	4.34	7.41	2.91	4.17	2.06	5.15	2.59	1.29	0.84
P value	0.178		0.047		0.231		0.052		0.001		0.471		0.192	
<b>Education</b>														
Under diploma	37.34	15.35	10.83	4.65	10.63	4.41	6.46	2.29	3.48	2.08	4.74	2.59	1.16	0.81
Diploma	44.86	14.15	12	4.65	12.54	4.09	8.12	2.76	4.53	1.87	6.18	2.53	1.46	0.86
Academic	42.39	15.19	11.46	4.89	12.02	4.29	7.58	2.78	4.31	1.98	5.73	2.43	1.25	0.84
P value	0.001		0.149		0.001		0.000		0.000		0.000		0.21	
<b>Job</b>														
Retired	41.20	15.50	11.34	4.79	11.65	4.42	7.34	2.93	4.07	2.05	5.49	2.61	1.28	0.85
Other	40.40	12.16	11.60	4.27	11.46	3.33	6.86	2.48	3.96	1.95	5.33	2.10	1.16	0.74
P value	0.057		0.781		0.769		0.325		0.783		0.744		0.468	
<b>Family size</b>														
< 3	40.60	15.38	11.27	4.73	11.60	4.27	7.11	2.88	3.91	1.94	5.38	2.66	1.29	0.79
≥ 3	41.97	15.19	11.50	4.78	11.70	4.40	7.60	2.91	4.28	2.09	5.62	2.52	1.24	0.88
P value	0.373		0.640		0.819		0.099		0.073		0.360		0.567	
<b>Income</b>														
< \$300	37.76	14.92	10.81	4.60	10.93	4.56	6.48	2.80	3.46	1.91	4.87	2.48	1.18	0.85
\$300 - \$500	41.46	15.11	11.20	4.65	11.74	4.38	7.43	2.78	4.16	2.03	5.60	2.57	1.28	0.87
≥ \$500	45.55	15.09	12.54	5.04	12.48	3.79	8.21	3	4.75	2	6.11	2.57	1.38	0.76
P value	0.001		0.024		0.032		0.000		0.000		0.001		0.206	

<sup>a</sup>Values are expressed as mean (SD) unless otherwise indicated.

Vanassche that showed married people are happier and more satisfied with life than single ones (32, 33). In fact, marriage leads to the creation of a sense of satisfaction and serenity by inducing positive affect, love, compassion, and a sense of security. However, the above-mentioned feelings either are not at play in single people or exist in them with lower severity. Of course, the advantages of marriage vary in different cultures. It should be noted that the reason for the absence of any significant difference in happiness in this study might be attributed to the small sample size of single people compared to married ones.

One of the important factors in the achievement of happiness is education because education has a great impact on both individuals' job and income (11, 34). The findings of this study showed that happiness and its components, except satisfaction and self-efficacy, had a significant relationship with education. This means that individuals

experience more happiness with the increased level of education. This is consistent with the studies conducted in Iran and other parts of the world. To explain the correlation of dissatisfaction with higher education, one can refer to sufficient income, unavailability of decent jobs, and social credit (11, 34). In a recent review of the happiness literature, Veenhoven (2010) concludes that education is the only capability that does not seem to make people happier (35).

Another finding of this study was the non-significant relationship of occupation with happiness and its components. In an American survey, it was revealed that 10 to 20 percent of the population described themselves happy compared to 30 percent of the total unemployed population. Unemployment affects every aspect of happiness, such as positive affect, life satisfaction, and positive emotion (3). Job as a daily activity does coincide with higher

levels of happiness (36). The results pertaining to jobs and occupations have been probably affected by the issue that a significant number of participants were retired and only 2.7% of them had been unemployed.

The results of this study also showed no significant difference regarding family size, which is consistent with the findings of a study conducted in Thailand by Rossarin (19). It seems that the quality of relationships between family members is of higher importance than the quantity of family members because quality of family is regarded as a potential factor for social support. The constrained communication and access to the old people and their reluctance to cooperate are among the limitations of this study.

#### 4.1. Conclusion

An average level of happiness was expressed by the elderly in this study that strongly requires promoting happiness to increase quality of life. The results of this research provide the possibility of having access to and analysis of the data pertaining to the effective factors in happiness, including demographic variables and happiness components. This, in turn, can facilitate the policies associated with each of these areas. Planners and policymakers can use these results in order to adopt programs and policies towards the promotion of happiness among the elderly.

#### Acknowledgments

We would like to thank the Deputy of Research and Technology (Hamadan University of Medical Sciences) for the financial support of this study.

#### Footnotes

**Authors' Contribution:** Milad Heydari ara was the main investigator, contributing to study design, data collection, and drafting of the manuscript. Babak Moeini supervised the research and contributed to all parts of the study. Majid Barati, Maryam Farhadian, and Mohammad Babamiri were advisors of the study and contributed to study design, performed the statistical analysis, and revised the final manuscript. All authors read and approved the final manuscript.

**Conflict of Interests:** The authors declare that there is no conflict of interest.

**Funding/Support:** This study is a part of MSc thesis in health education and promotion that was supported originally by grants from Hamadan University of Medical Sciences (project number: 950117107).

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