

## **Iranian Elderly With And Without Hearing Impairment: The Comparison Between Their quality Of Life**

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**Abstract:** Hearing impairment is one of the most common difficulties among the elderly. Due to its prevalence, the aim of this study was to compare the quality of life among the hearing and hearing impaired elderly. This descriptive-correlational research was conducted on the elderly who spent their time in the parks of Tehran (Iran). One hundred individuals were randomly selected. Data was collected using questionnaires about quality of life (sf-36). The collected data was analyzed with Pearson correlation and T- test analysis. The quality of life among the hearing elderly (mean 97.47) was better than the quality of life among older people with hearing impairment (93.48). Total scores of quality of life among hearing and hearing impaired elderly showed a statically significant difference ( $p < 0.05$ ). Quality of life among older women was significantly better in comparison with the older men ( $p < 0.01$ ). Quality of life among hearing elderly was better than the hearing impaired elderly. The results of this study imply the importance of quality of life in maintaining mental health among the elderly.

**Keywords:** Quality of life, hearing impairment, elderly

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### **I. Introduction**

The dramatic increase of the elderly population around the world is a phenomenon of the 20th century and is projected to continue in the 21st century which is the century of population aging around the world. Aging is the final stage of human development. In Iran, the age of 60 is considered as the onset of the elderly because it overlaps with the retirement age. Therefore, entering the aging period is partially determined by the law, because the mandatory and contractual retirement age is usually 60 years [1]. According to the Statistical Center of Iran, the population pyramid of Iran has moved to aging since 2012 and 7.3% of the population is formed by the elderly at moment, which is expected to reach to 10 million by 2021 [2].

Nowadays, due to the increasing lifespan and life expectancy index, more important issue -as the passing of life-is quality of life that has attracted the attention of experts and researchers to aging. Quality of life is one of the main indexes with several aspects, such as physiological aspects and individual performance which considering that, are a great importance. Researches show that many problems occurring physiologically at old age can have an impact on quality of life [3]. Using the evaluation of quality of life based on findings can recognize the different aspects of the issues and challenges in the elderly. Also, based on its findings can be achieved policy making, health care, social support, cultural context making and improving the economic situation that are effective steps fortaken to improve the quality of life [4].

In Iran, 28.5% of the elderly suffer from limited physical activities and need help to carry out normal activities in their lives reducing their quality of lives [5]. In the meantime, their particular problem cannot be ignored. Hearing impairment is the third most common physical disorder among people aged more than 65 years. The psycho-social disorder affects physical health [6]. These people sometimes suffer from poor self-esteem, irritability, isolation, frustration and probably are hearing impaired. The prevalence of hearing loss increases dramatically with increasing age [7]. With increasing age, changes happen in different aspects of their health, including physical weakness, mental, intellectual and there will be all kinds of diseases, therefore, the elderly are more prone to harm and reduced quality of life due to these changes and require especial attention and care [8];[9]. One of the most common defects in the old age is hearing impairment among people over 65 years [9]. Hearing loss in the elderly is one of the most devastating sensory damages, because it causes communicative disorder consequences which are psychologically, socially and occupationally inappropriate. The elderly patients will suffer multiple disorders of vision, hearing and other senses resulting in limited social situations, gradual increasing dependence on others and reduced quality of life [3].

In a study conducted by Witham on the elderly patients with heart failure in England, physical performance damages are the most important factor in reducing the quality of life among these patients [10]. Mohammedan et al. studied the elderly to assess visual function and its correlation with quality of life in Iran. The findings showed a direct relationship between visual function and quality of life among the older people and this correlation is maintained despite the difference in age, sex, marital status and the level of education. Alivand conducted a study to compare mental health of the elderly with hearing loss with and

without hearing aids in Ahvaz. The mean mental health scores showed a significant difference between men and women. The mean difference in measures of mental health in the studied groups was statistically significant, meaning that the hearing impaired elderly without hearing aids experience more depression, anxiety, somatic symptoms and social dysfunction. The elderly population in general and the elderly with hearing loss in particular have often been considered by psychologists and very little research is available on this group. In particular, few studies have been done on the issue of quality of life as an effective variable in the lives of the healthy and hearing impaired elderly. This study can be a step towards a better understanding of the healthy elderly population with hearing impairment and discuss strategies to support this group of the elderly.

## II. Method

This study was a descriptive-correlational study in 2014, having the elderly of the city of Tehran as its population. This study was carried out on 100 elderly men and women over the age of 60 and in 3 regional parks in Tehran (Zones 2, 4, 11) through simple random sampling with the consent of the elderly to identify those with hearing impairment. The finding collected according to what the elderly said and examined the status of older hearing as well hearing. Also, the researcher detected according to the criteria of the elderly with hearing loss.

### 2.1. Tools & Procedures

Among the various tools used for the elderly in various studies including the study of Hickey et al., it was found that 36-item form of the elderly quality of life is one of the most widely used tools to measure health status and quality of life among older adults. Moreover, according to objectivity with clarity and simplicity of expression, validation and reliability in different groups, reputation, integrity and availability of translations of this tool lead to higher use of it and more popularity of 36-item rather than any other measurement tools of health status and quality of life. Initially, 36-item quality of life questionnaire was given to the under study elderly. After completing the questionnaire and, if necessary, having the guidance from the researcher about information needed, the questionnaires were collected and entered into the SPSS software.

## III. Findings

After collected data and entered into the SPSS software, the statistical analysis was done on the raw data and the results were obtained;

**Table 1. Demographic Characteristics of the Elderly**

Variable	Mean	Standard deviation	Number
Area of residence	5.28	2.83	100
Occupation	.92	.78	100
Audition status	1.35	.51	100
Disease	1.20	.44	100
Religious activity	.86	.84	100
Gender	1.53	.61	100
Education	2.29	1.36	100
Age	2.03	.74	100

**Table 2. Pearson Correlation Test Results on the Relationship of Demographic Characteristics and Quality of Life**

Predictor variables	Examined Indicators	Risky behavior
Area of residence	correlation coefficient	<b>-.039</b>
	Significance level	.351
	Number	100
Occupation	correlation coefficient	<b>.027</b>
	Significance level	.396
	Number	100
Audition status	correlation coefficient	<b>-.396</b>
	Significance level	.000
	Number	100
Disease	correlation coefficient	-.112
	Significance level	.134
	Number	100
Religious activity	correlation coefficient	<b>-.086</b>
	Significance level	.197
	Number	100
Gender	correlation coefficient	<b>.238</b>
	Significance level	.009
	Number	100

Education	correlation coefficient	.094
	Significance level	.176
	Number	100
Age	correlation coefficient	-.138
	Significance level	.085
	Number	100

In conjunction with the demographic characteristics and quality of life, Pearson correlation test showed that each profile hearing status and gender had a correlation coefficient of -0.396 and -0.138 at the error level of less than 0.1 percent. There is a significant negative correlation with the variable quality of life among the elderly.

**Table 3. Mean and Standard Deviation of the Quality of Life in Older Adults with and without Hearing Loss**

Auditory status	Mean	Standard deviation	Number
With hearing loss	93.48	8.18	39
Healthy	97.47	7.85	61
Total	95.47	8.01	100

**Table 4. T-Test Results about the Quality of Life of Hearing Impaired and Healthy Elderly**

Levin test		T test Criteria	Freedom degree	Probability value
F	SIQ			
0.243	0.623	2.37	96	0.243

As is shown in Table 4, SIQ score of Levine test is greater than 0.05. This indicates equality of the variances between the two groups and also the significant level of t test, which this value is less than 0.05. Thus, according to the calculated t, the level of life quality of the healthy elderly is significantly higher than the elderly with hearing impairment.

**Table 5. Mean and Standard Deviation of Quality of Life for Elderly Men and Women**

Auditory status	Mean	Standard deviation	Number
Men	4.82	2.45	50
Women	5.74	3.12	50
Number	5.28	2.83	100

**Table 6. T Test Results about the Quality of Life for Men and Women**

Levin test		T test Criteria	Freedom degree	Probability value
F	SIQ			
0.295	0.589	-3.686	97	0.000

As shown in Table 6, SIQ score of Levine test is greater than 0.05 indicating equality of the variances between the two groups. Moreover, the significance level of t test is less than 0.01. Thus, according to the calculated t, the level of life quality of the elderly women is significantly more than the elderly men.

#### IV. Discussion And Conclusion

This study aimed to evaluate and compare the quality of life among the healthy elderly and those with hearing impairment in three areas of Tehran. The results showed that the quality of life among the healthy elderly is significantly better than the elderly with hearing impairment and the elderly quality of life is significantly associated with their health status, therefore, the mean score of quality of life in all eight dimensions was higher in healthy elderly compared to elderly with hearing loss thereby is related to the results of the study conducted by Alivandwhich showed that hearing loss and associated communication disorders among the elderly people can cause disorder in mental health and it can also affect people's health and weaken their self-esteem and cause irritability, isolation, despair, depression and anxiety [6]. In a study conducted by Napoli titled the quality of life and its relation to the auditory function in the elderly population and the cross-sectional relation between function auditory and cognitive status and disorders such as depression and disability and also assess the role of hearing aids in depressive symptoms using multiple regression analysis to the results achieved that there was a positive correlation between auditory function and scale of assessing the depression among the elderly and also by increasing the level of hearing impairment the daily activities of life scores was reduced [11]. Also evidence from this study showed that hearing loss showed different results in age, educational level and depressive symptoms. Given that there has been a few researches conducted in the field of

quality of life among the elderly with hearing loss, non-aligned researches also could give more information to readers.

The results of a research conducted by Habibiin Ardebil showed that various factors affect the quality of life among the elderly who most of them have at least one chronic disease. Between quality of life and chronic diseases only in the aspects of physical and emotional role, significant relationship was observed[4]. As for the effect of gender, women's average points score on all measures was lower than men and showed statistically significant differences [12]. This finding confirms the results of other studies in this field [13];[14]. However, in other studies, gender as the variable has not shown to be effective in dealing with other variables and factors such as functional disability that were more relevant [15]. Several studies show that the number of chronic diseases increases with age. Furthermore, the results of this study show that the quality of life among the elderly women is better than the quality of life among the elderly men which is consistent with results of the study of KhoushehMehri that showed the quality of life among the elderly women who are residents of nursing homes is better than men, in Alborz province. It seems that in the four areas of mental, physical, motor, social and environmental factors differences were observed between men and women. In mental aspect of quality of life, men and women were similar but women were relatively more satisfied in social and environmental areas than men possibly due to the low age and needing more to social interactions for women compared to men. However, men had higher quality of life in the physical domain compared to women[16].

Iran's population is aging and attending to their quality of life has a special place and more importance than the past. Moreover, the results of this study indicate low quality of life among the elderly with hearing damage and more attention is required to this group of the elderly. Thus, the results of this study suggest the followings as much as possible: a. paying more attention by families and related authorities to the elderly, particularly the elderly with hearing impairment. b. authorities attention in the planning towards mental and physical health of the people. c. another reason is that due to increasing life expectancy, lifetime and naturally old age is more important and according to their mental and physical problems and the volume and diversity of the elderly problems has increased the need to respond to these issues, an institutional necessity. Therefore, planning principles to improve the quality of life of this stratum of society seems necessary.

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