

## A comparative study of the quality of life of the elderly between the members of the supportive community and the non-members

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### Abstract

**Background:** It is generally assumed that menopause and other age-related physiological changes can significantly decline the quality of life of the elderly. The aim of this study was to compare the quality of life of the elderly members of a supportive community (Jahandigan Organization Health Center) with the non-members of the supportive community.

**Methods:** This study measured the level of the quality of life in 344 elderly people using the original Lipad Life Quality questionnaire for the elderly. In order to analyze the data, descriptive statistics, and chi-square test, t-test and one-way ANOVA were used.

**Results:** The means for the quality of life in elderly members of supportive community and non-members were  $63.9 \pm 12.6$  and  $62.8 \pm 12.5$ , respectively, so there was not a statistically significant difference. The quality of life of older adults was significantly correlated with the level of education, their housing status, and diseases ( $p < 0.05$ ).

**Conclusion:** The quality of life of the elderly is not only influenced by demographic variables, but it is also affected by various social, economic, cultural variables, and diseases. Hence, the social participation of the elderly is needed to be investigated and taken into account by policymakers.

**Keywords:** Aged, Quality of Life, Social Welfare

### Introduction

It is generally assumed that aging of the population is a global phenomenon as well as one of the 21st century's achievements. In most industrial societies, aging of population is a gradual process taking place after a continuous socio-economic development during several decades and generations. The pace of this process is more tangible in developing countries, and usually occurs over a generation and during two or

three decades (1). Statistics show that the average life expectancy at birth reached almost 79 in 2011, which was formerly 47 in 1900 (2). According to the World Health Organization, the number of people above 60 in the world is over 900 millions, 125 millions of whom are 80 and above. This number is expected to reach 2 billion by 2050. The current growth patterns show that 80% of these elderly will be deployed in less developed or developed countries (3). According to the

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documentations of World Health Organization, people aged 60 and above are known as elderly (4) and the countries with an elderly population of 7% or more are classified as countries with aged population (5). Thus, according to 2006 census, with a 7.27 percent population above 60, Iran has become an elderly country (6), in which the number will have reached over 26 millions by 2050 (7). 1.7 % is annually added to the world population, which is an increase of 2.5 % for the population above 65 and more (8). The age of elderly is a part of a biological process, which does not stop, and includes all living creatures, including humans (9). Today, considering the increase in the life span and life expectancy, a more important index, the quality of life, has been raised. The main challenge of hygiene was to survive in 21th century and to have a better quality of life in the present century (10). The quality of life is the perception of individuals about their position in life in terms of culture, the value system in which they live, their goals, expectation standards, and qualities. Therefore, it is a completely mental issue, not visible to others, and it is based on the understanding of the individuals about different aspects of life (11). The quality of life can be affected by several factors. Various studies have reported the relation between variables such as age, education, marriage, occupation, gender, and health status with the mean scores of quality of life differently (12 and 13). The main challenge of hygiene in 21th century is a life with a superior quality (13). Hence, the promotion in quality of life is one of the greatest hygiene goals to improve people's health, especially the elderly and the disabled (7). The problems of the elderly cannot be solved only by one organization and seeks a combination of capabilities and interference of all sectors, including public and private sectors (14). The United Nations Second Summit Declaration on Aging requires the governments to promote, create and secure the access of the elderly to social services based on specific needs of the elderly, and also clarifies the role of families, volunteers, societies and organizations in informal support and care in addition to public services (15).

In our country, paying attention to problems of the elderly has been considered as an important issue in

policymaking, and attention to this group has been on the agenda of various organizations in charge of elderly affairs including the municipalities. It has also forced organizations to undertake various programs including the establishment of the elderly centers since 2007 and expand them in various areas of Tehran in an attempt to add a large number of old people to these centers to use their programs. Therefore, the present research aims at determining and comparing the life quality of the elderly members of supportive community (the Jahandigan Organization Health Center) with similar non-member groups to study the role of social activities in the quality of their lives. The study also strives to pursue the elderly covered by Shahid Beheshti University of Medical Sciences and other organizations located in the areas in terms of their success in improving the life quality, which was accomplished through the collaboration of the municipality.

### Materials and Methods

A comparative study was carried out with a sample of 344 elderly people ( $\geq 60$  years old). The Ethics Committee of the Tehran University approved the research protocol for this study. The subjects agreed to participate in the study by giving their informed consents. 174 of them were members of a supportive community (the Jahandigan Organization Health Center), and 170 elderly individuals were living in their home and were not members of supportive community. The participants were randomly recruited from the community. To collect the data, the researcher was introduced to the health departments located in the areas, covered by Shahid Beheshti University of Medical Sciences (regions 1, 3, 4, 7, 8, 12, 13 and 14). Having attended all the departments and explained the details of the questionnaire, the questionnaire was presented to authorities of health centers for sampling. In general, there are 128 health centers located in the area under the coverage of Shahid Beheshti University of Medical Sciences of Tehran. Two member elderly and two non-member elderly were also randomly considered for each health center, which makes 256 samples for each group and 512 people in total.

**Table1.** Demographic Characteristics of the Elderly Members of supportive community (Jahandigan Organization Health Center) and non-member elderly (N=344)

| Demographic Characteristics | Organization members                    |     | Non-member |     | Total  |     | P value |      |
|-----------------------------|---|-----|------------|-----|--------|-----|---------|------|
|                             | Number                                  | %   | Number     | %   | Number | %   |         |      |
| Gender                      | man                                     | 36  | 21.6       | 44  | 27     | 80  | 24.2    | 0.24 |
|                             | woman                                   | 131 | 78.4       | 119 | 73     | 250 | 75.8    |      |
| Age                         | 60-74                                   | 165 | 94.8       | 150 | 88.2   | 315 | 91.5    | 0.02 |
|                             | 75-90                                   | 9   | 5.1        | 20  | 11.7   | 29  | 8.4     |      |
| Education                   | Illiterate                              | 17  | 9.8        | 31  | 18.2   | 48  | 14      | 0.19 |
|                             | Elementary school                       | 56  | 32.2       | 47  | 27.6   | 103 | 29.9    |      |
|                             | Middle school                           | 36  | 20.7       | 28  | 16.5   | 64  | 18.6    |      |
|                             | Diploma                                 | 49  | 28.2       | 46  | 27.1   | 95  | 27.6    |      |
|                             | University                              | 16  | 9.2        | 18  | 10.6   | 34  | 9.9     |      |
| Marital Status              | Single                                  | 9   | 5.2        | 4   | 2.4    | 13  | 3.8     | 0.35 |
|                             | Married                                 | 108 | 62.1       | 110 | 64.7   | 218 | 63.4    |      |
|                             | Deceased husband-wife                   | 52  | 29.9       | 54  | 3.8    | 106 | 30.8    |      |
|                             | Separated or divorced                   | 5   | 2.9        | 2   | 1.2    | 7   | 2       |      |
| Income Source               | Wage                                    | 9   | 5.5        | 10  | 6.4    | 19  | 5.9     | 0.42 |
|                             | Retirement pension                      | 103 | 62.4       | 100 | 63.7   | 203 | 63      |      |
|                             | Free job                                | 18  | 10.9       | 12  | 7.6    | 30  | 9.3     |      |
|                             | Helped by children                      | 8   | 4.8        | 15  | 9.6    | 23  | 7.1     |      |
|                             | Other                                   | 13  | 7.9        | 12  | 7.6    | 25  | 7.8     |      |
| Type of housing             | No income                               | 14  | 8.5        | 8   | 5.1    | 22  | 6.8     | 0.56 |
|                             | Personal                                | 124 | 72.1       | 130 | 76.9   | 254 | 74.5    |      |
|                             | Leased                                  | 36  | 20.9       | 26  | 15.4   | 62  | 18.2    |      |
|                             | Belonged to relatives and acquaintances | 5   | 2.9        | 6   | 3.6    | 11  | 3.2     |      |
| Life companions             | Public housing                          | 2   | 1.2        | 4   | 2.4    | 6   | 1.8     | 0.18 |
|                             | Private housing                         | 5   | 2.9        | 3   | 1.8    | 8   | 2.3     |      |
|                             | wife-husband                            | 61  | 35.3       | 59  | 34.9   | 120 | 35.1    |      |
|                             | Children                                | 28  | 16.2       | 40  | 23.7   | 68  | 19.9    |      |
|                             | Relatives                               | 3   | 1.7        | 6   | 13.6   | 9   | 2.6     |      |
| Life companions             | Friends                                 | 15  | 8.7        | 7   | 14.1   | 22  | 6.4     | 0.18 |
|                             | alone                                   | 26  | 15         | 18  | 10.7   | 44  | 12.9    |      |
|                             | Husband/wife and children               | 40  | 23.1       | 39  | 23.1   | 79  | 23.1    |      |

The member elderly were randomly selected from the list of members of Jahandigan Organization Health Center in the areas under the coverage of Shahid Beheshti University of Medical Sciences regardless of their gender, and two neighboring families residing in the right side of the members' houses were also selected as the non-member elderly. Considering the definition of health-care centers for aging, a number of members were excluded from the research considering their age (under-60) and the absence of criteria to enter the study, and 344 elderly people finally remained (174 members and 17 non-members). The size of the sample was determined to be 141 individuals for each group (a total of 282 people), based on sample size formula. Sampling was done in a larger number of elderly due to the probability of a sample drop. The criteria for entering the study included: an over-60 age, willingness to cooperate, residence in the areas covered by Shahid Beheshti University of Medical Sciences of Tehran, non-hospitalization at the hospital or home at the time of completing the questionnaire. The exclusion criteria included: lack of willingness to cooperate at the time of completing the questionnaire, deafness, and mental illness. The data collection tool comprised two sections: a general questionnaire including demographic characteristics, social-economical status in which such variables as age, gender, marital status, education level, income source, housing situation and comrades in life were considered, and Lipad Life Quality questionnaire which was a translation of Lipad Life Quality questionnaire for the elderly. This questionnaire was developed under the auspices of the World Health Organization and was studied by De Leo et al. in cities of Padua and Brescia in Italy, Leiden in Netherlands and Helsinki of Finland (16). Its application is fairly rapid, and it is easy to understand by the elderly with low education and does not require trained personnel (17). The questionnaire has 31 options and studies life quality of the elderly in 7 areas including physical function (5 options), self-care (6 options), depression and anxiety (4 options), mental function (5 options), social function (3 options), sexual function (2 options), and satisfaction with life (6 options). This part of the questionnaire has been designed in Likert form and each question has 4 options from zero (worst case) to three (best case) and has a minimum of zero and a maximum of 93 points. The main questionnaire was the life quality of Lipad elderly people in English, translated and standardized

by Hesamzade et al. in Iran, whose Cronbach's alpha value was calculated to be  $\alpha=0.83$  (18).

#### *Statistical analysis*

Descriptive statistics, Chi-square tests, t-test and one-way variance analysis were used for data analysis. The p-value of under 0.05 was considered significant.

## Results

Overall, 80 out of 344 subjects were elderly men with an average age of  $64.07 \pm 11.9$  years, and the rest were elderly women with an average age of  $63.3 \pm 12.2$ . The highest frequency of age is related to the age group of 60 to 74, with a frequency of 315 subjects. In this study, the average age is  $65.3 \pm 5.14$  years in the elderly members of Jahandidegan organization, and  $66.6 \pm 6.12$  in non-member elderly group that there was a significant statistical difference among the two groups ( $p=0.027$ ). But they had no significant statistical differences in rest of the status (Table 1).

The relationship among demographic characteristics in terms of age, gender, marital status, education level, income source, type of housing and life companions in elderly members of Jahandidegan organization and non-member elderly is shown in Table 2 with the average scores of life quality. According to the results from this study, there is a significant statistical relationship among education level, housing situation and illness in both elderly groups with quality of life ( $P < 0.05$ ). There is a significant statistical relationship between average quality of life and marital status in elderly members of Jahandidegan organization ( $p=0.004$ ). In non-member elderly of the organization, although there was the highest average of life quality among the married couples, there was no significant statistical relationship observed among the quality of life and the marital status. The average scores of life quality among elderly men and women in both groups had no significant statistical difference with each other. The quality of life in both elderly groups, based on different areas of municipality within the coverage of Shahid Beheshti University of Medical Sciences of Tehran (regions 1, 3, 4, 7, 8, 12, 13 and 14), had no significant differences with each other.

Table 3 shows the comparison of life quality average scores and its dimensions in both groups of elderly members of Jahandidegan organization and non-member elderly. The results of the study showed that the total life quality and each of its dimensions

among the two elderly groups had no significant statistical differences with each other.

The most common health problems in the two groups of elderly members of Jahandidegan organization and non-member elderly were: heart problems and hypertension (29.1%, 29.7%), muscular, skeletal and movement disorders (19.6%, 19.9%), metabolic problems (13.3%, 14.2%), and digestive problems (10.1%, 9.4%). In term of illnesses, 12.3% of elderly members of Jahandidegan Organization had no diseases, 44.4% had one disease, 26.3% had two diseases, 11.1% had three diseases, and 5.8% had four or more diseases. In the non-member elderly group, 6.6% had no diseases, 47.6% of them had one disease, 22.3% had two diseases, 18.1% had three diseases, and 5.4% had four diseases or more. Most people in both groups were suffering from the same diseases. In terms of daily activities in the two groups of elderly members of Jahandidegan organization and non-member elderly, the most frequent daily activities included: watching television (19.3%), attending mourning ceremonies and mosque (17.9%), walking (17.7%), going to park (11.5%), and meeting relatives and friends (9.4%). In the non-member elderly group, the most frequent activities included: watching television or listening to the radio (23.4%), walking (20.2%), attending mourning ceremonies and mosque (12.7%), going to park (12.1%), and meeting relatives and friends (10.4%).

The most important needs in life in the member elderly group were: the need for cash (17.3%), fun and entertainment (16.4%), hygiene and health (14.9%), companionship for loneliness (12.7%), and vehicle (6.7%).

## Discussion

In the present study, the elderly members of Jahandidegan Organization were younger than the non-member ones, for which the difference was statistically significant. Consistent with the results of our study, age is one of the most important variables in social participation among the elderly. The younger elderly were more involved in social participations (19- 21). Comparing the quality of life in both groups, some demographic factors such as education level, housing status and illness were effective in the life quality of the elderly, through which some problems of the elderly can be addressed or be prevented in future. This can also help us plan to reduce their effects on life quality and take preventive measures.

According to the results of our study, there was a significant statistical relationship between the quality of life and education level. In other words, the increase in education level of people raised their life quality score. Consistent with our study, there is a significant and direct statistical relationship between the quality of life and education level (22- 26), but in a study by Bazrafshan et al. on elderly women members of Jahandidegan Organization of Shiraz City, no significant relationship was observed between the total life quality and education level (14).

In our study, no significant statistical relationship was observed between total life quality and gender in both groups of the elderly, but there was a significant statistical relationship between the quality of life and gender in some studies (23, 27), which is inconsistent with our study. However, the reason for this could be our lack of attention to gender in selecting the samples and the low number of female subjects compared to that of men (21.6% men versus 78.4% women).

According to the results of this study, there is a significant relation between the average of life quality and marital status in elderly members of Jahandidegan Organization. In the non-member elderly, although the highest average of quality of life is observed in married subjects of the group, there is no significant statistical relationship is observed between the quality of life and marital status. In some studies, however, there is a significant relationship among the total average score of life quality and marital status and the life quality total score of the married elderly is higher than other groups (14, 22- 23), which is consistent with our studies.

The results of this research also show a significant relation between the average of life quality and housing status in both groups of elderly members of Jahandidegan Organization and the non-member elderly. According to a study by Hekmatpour et al. on the life quality of elderly women in Arak, a significant relationship was observed between the life quality and the residence type of the studied population (23). Similarly, in the study by Alipour et al. in 2008, there was a significant relationship between the quality of life and housing status. The quality of life in the elderly with personal house was higher than other factors, which makes these two studies inconsistent with our study (24).

The results of this study showed that there was a significant relationship between the average of life quality and the cases of disease in both groups of the member elderly of Jahandidegan Organization and the

**Table2.** Relation of quality of life with demographic characteristics in two groups of the elderly members of supportive community (Jahandidgan Organization Health Center) and non-member elderly (N=344)

| Demographic characteristics |                             | Member elderly |                    |         | Non-member elderly |                    |         |
|-----------------------------|-----------------------------|----------------|--------------------|---------|--------------------|--------------------|---------|
|                             |                             | Mean           | Standard deviation | p-value | Mean               | Standard deviation | p-value |
| Gender                      | Man                         | 62.8           | 13.32              | 0.402   | 65.3               | 10.59              | 0.13    |
|                             | Woman                       | 64.49          | 11.68              |         | 62.07              | 12.79              |         |
| Age                         | 60-74                       | 63.99          | 12.42              | 0.702   | 63.25              | 11.51              | 0.20    |
|                             | 75-90                       | 62.33          | 17.05              |         | 59.45              | 18.36              |         |
| Education                   | Illiterate                  | 55.71          | 12.95              | 0.006   | 55.39              | 15.48              | 0.004   |
|                             | Elementary school           | 63.13          | 12.27              |         | 64.77              | 12.06              |         |
|                             | Middle school               | 62.17          | 12.42              |         | 63.11              | 10.68              |         |
|                             | Diploma                     | 67.39          | 9.25               |         | 63.8               | 11.33              |         |
| Marital status              | College                     | 98.63          | 18.16              | 0.004   | 67.39              | 8.91               | 0.06    |
|                             | Single                      | 51.78          | 21.07              |         | 61.5               | 12.47              |         |
|                             | Married                     | 66.02          | 11.04              |         | 64.69              | 10.83              |         |
|                             | Deceased husband/wife       | 61.94          | 12.84              |         | 59.11              | 15.03              |         |
| Housing status              | Separated or divorced       | 60.60          | 12.07              | 0.023   | 61                 | 4.24               | 0.004   |
|                             | Personal                    | 65.92          | 11.01              |         | 64.71              | 10.71              |         |
|                             | Leased                      | 59.28          | 14.95              |         | 55.04              | 15.8               |         |
|                             | Relatives and acquaintances | 56.2           | 17.69              |         | 57.67              | 15.41              |         |
| Health problems             | Public housing              | 58.50          | 9.19               | 0.001   | 51.25              | 20.88              | 0.001   |
|                             | Private housing             | 58.8           | 15.7               |         | 60.67              | 13.57              |         |
|                             | non                         | 70.71          | 11.83              |         | 59.09              | 10.35              |         |
|                             | One disease                 | 66             | 10.21              |         | 66.38              | 10.72              |         |
| Health problems             | Two disease                 | 64.2           | 11.47              | 0.001   | 60.57              | 14.94              | 0.001   |
|                             | Three disease               | 57.11          | 11.23              |         | 59                 | 8.73               |         |
|                             | Four disease and more       | 54.2           | 15.99              |         | 53.78              | 13.79              |         |

non-member elderly, and that the elderly with higher number of disease had a lower life quality average. Consistent with our research, other studies also found a significant relationship between decrease in quality of life and suffering from chronic diseases (14, 27- 29).

In this study, there was no significant statistical difference among the total average of life quality and each of its domains between the two groups of elderly members of Jahandidegan Organization and the non-member elderly. The results can convey the managers and policymakers of the society the message that social functions of the two groups had no significant statistical difference with each other. The member elderly, in case of availability of effective supportive programs from the organizations, must have a more successful elderly period and be able to establish and maintain more social relationships with the others. As a result, it is expected to have a better life quality at least in one of its areas, for which there was no statistical difference with the non-member elderly. The elderly people need social protection to be able to confront their illnesses, needs, dependency and loneliness to be optimistic about the future. Considering the changes taking place in the current structure of the society, lots of elderly are exposed to loneliness, social isolation, and constraints in social relationships. In a study by George et al., social support and participation in family and community activities were mentioned as the most important predictors for increasing the quality of life (30). In a study by Alipour et al., social participation had a significant effect on life quality of the elderly. This could imply that the elderly with more social participation experienced a better life quality (25).

No study similar to ours, examining two elderly groups in terms of life quality, has been carried out in our country so far. It seems that, since people's life quality is a function of various social, economic, cultural, employment variables etc., and many factors affecting the life quality of the elderly can also be changed and interfered, then the quality of life can be improved with the lowest costs through knowing these effective factors in every society. For this reason, the municipality of Tehran has been focusing on the social participation issue of the elderly since a few years ago and is trying to persuade the elderly to engage in society and collective activities. Considering the results of the present research and the absence of a significant difference between the life quality of the two groups of the elderly members of the organization and the non-member elderly, it seems that there is a need to study different dimensions of life quality among the elderly

of Tehran. There is also an urgent need for practical plans, based on this need assessment, which could be used as a model to improve the life quality of the elderly throughout the country.

Kaveh et al. proposed the reuse of the physically active and appropriate elderly in vacant jobs in private sectors, childcare centers, as well as such community health activities as child care in health centers, public immunization, improvement programs, or other similar activities to promote the quality of life in the elderly (31). In fact, many of the psychological and social problems of the elderly are related to their abandonment from the family; hence, considering a number of factors affecting the quality of life of the elderly and the impact of involvement in the society, their quality of life seems to increase at the same time with their presence in the organizations, the support conditions of the family, and their involvement in social activities. It seems that if these centers can provide such conditions for the employment of the elderly with the support of the municipality of Tehran, it will have a better impact on the quality of life of the elderly.

According to a study by Mohammadzadeh Asl et al., on ranking the indicators of urban welfare of different areas of Tehran conducted in 2010 (32), different areas of Tehran were classified based on the development level, and regions 1, 2, 3 and 6 had the highest level of urban welfare (areas 1 and 3 are covered by Shahid Beheshti University of Medical Sciences). Assuming that the quality of life in the areas with a higher level of development must also be higher, the present research tried to compare different areas of the municipality covered by Shahid Beheshti University of Medical Sciences (regions 1, 3, 4, 7, 8, 12, 13 and 14) in terms of the quality of life. The results showed that there was no significant statistical difference between these two areas. This suggests that other variables such as employment status, income status, the social statue of people, and other factors in different areas can affect the quality of life. Furthermore, there are different neighborhoods with different levels of economic, social and cultural levels in each area, all of which can affect the quality of life that has not been addressed in this study. Moreover, since the data collection method was based on a questionnaire and the statements of individuals, their honesty can affect the results. This issue was controlled by explaining to them that the contents of the questionnaire were confidential, and that there was no need to mention their names. They were also reassured

that the results were used to increase the health level of the elderly in the society.

Considering the fact that there are 354 Jahandidegan Organizations in health centers of Tehran, based on the information obtained from the social municipality deputy of Tehran, and each one covers a large number of the elderly in their own neighborhoods as members, these organizations can, therefore, have an effective role in improving the life quality of the elderly by assessing their needs in different areas of education, life skills, health and treatment needs, etc. They can also modify the life patterns of the elderly covered by them in social, physicals and mental fields and other aspects of the quality of life.

It can be concluded that the quality of life in the elderly, in addition to being impacted by demographic variables, is influenced by several social, economic, cultural, occupational factors, and illnesses. Since the age of elderly is considered as a natural occurrence, a longer life must be accompanied by opportunities for health, participation and security. Therefore, the dimensions of social partnership in programs for the needs of the elderly must be studied and considered by the planners and policymakers of the elderly affairs. It seems that special attention to the health of the elderly, their periodic examinations, necessary self-care trainings, establishing elderly clinics, intersectional collaborations, and governmental policies are essential to improve the health of the elderly and can promote the quality of their lives.

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### Conflict of interest

The authors declare that they have no competing interests.

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