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Assessing the Quality of Life in Elderly People and Related Factors in Tabriz, Iran

Yaser Khaje-Bishak[1], Laleh Payahoo[1*], Bahram Pourghasem[2], Mohammad Asghari Jafarabadi[3]

[1]*Department of Nutrition, Student's Research Committee, Students Basij of Moje Danish, Faculty of Health and Nutrition, Tabriz University of Medical Science, Tabriz, Iran*
[2]*Department of Nutrition, Faculty of Health and Nutrition, Tabriz University of Medical Science, Tabriz, Iran*
[3]*Department of Epidemiology, Faculty of Health and Nutrition, Tabriz University of Medical Science, Tabriz, Iran*

ABSTRACT

Introduction: Elderly people may suffer from the multiple health disorders due to the vulnerability for many physical and mental disturbances. Quality of life in elderly population can be affected by many environmental factors. The aim of this study was aimed to examine the quality of life in elderly people in Tabriz, Iran in 2012.
Methods: This cross-sectional study was carried out on 184 elderly people (male=97; female=87) with age ≥ 60 years. The participants surveyed in this study were elderly people who were living in the community and come voluntarily to the daily care centers. Validated Persian self-reported version of World Health Organization Quality of Life-BRIEF (WHOQOL-BRIEF) questionnaire including 26 broad and comprehensive questions were used to determine the quality of life in elderly people. Independent t-test and Pearson correlation were used to compare differences and correlation between the total score of quality of life and influential factors.
Results: Total score the quality of life in both genders was 90.75 (13.37) (range between 26-130). Male elderly had slightly high score in the quality of life; however, these differences were not significant. A significant difference was observed between having cardiovascular diseases, respiratory and gastrointestinal diseases, hearing and visual impairments with total score in the quality of life. Also, there was no significant difference between gender and age variables with total score in the quality of life.
Conclusion: Policies and programs should be considered for improving the quality of life. Future studies are needed for assessing other influential factors on the quality of life in elderly population.

Introduction

Aging as a natural process of life is due to gradual changes in metabolic activity of organs and disability in regeneration capacity of cells. Worldwide, the average life span of people has been increasing. Several factors including heredity, life style and healthy diet, avoiding smoking and physical activity can effect on the longevity of life.[1]

According to the WHO report, there are more than 600 million elderly individuals worldwide;[2] it is estimated this rate will be double by 2025 and 2 billion by 2050.[3,4] The number of Iranian elderly continues to grow due to many sensible changes in cultural,

socioeconomic and demographic characteristics.[3] In 2006, United Nations (UN) reported that 6% of Iran population was aged 60 and above and it is estimated will rise to 26% by 2050.[5,6]

Elderly people have higher probability of suffering from multiple health disorders due to experience reduced physical and mental functions. Loneliness, impaired sexual activity and chronic metabolic disorders are some of causes can result in emotional disturbances.[7] These problems can decrease life quality of elderly.

According to WHO statements, quality of life defined as an individual's perception of their position in life in the context of the

culture and values systems in which they live and in relation to their goals, expectations, standards and concerns.[8] In addition, quality of life is described as a wellness resulting from a combination of physical, functional, emotional and social factors.[9]

Poor economic, cultural, educational and health care conditions and also inadequate social interactions can result in poor quality of life in elderly people.[10-12] Chronic diseases such as diabetes mellitus, coronary heart diseases, osteoporosis and cerebrovascular are most common diseases in elderly people. These disturbances that cause medical, social and psychological problems can decrease physical functions and the quality of elderly's in the community. As well as, burden of diseases will be increased obviously.[13-16]

Considering the vulnerability of elderly people and importance of healthy status in this population and due to the lack of studies regarding quality of life and associated factors in elderly people living in community and in the region, this study was aimed to assess the quality of life in elderly population in Tabriz, Iran in 2012.

Materials and methods

This cross-sectional study was conducted on 184 elderly subjects aged 60 years and over, between January 1 and March 30, 2012 in Tabriz, Iran. The regional Ethics Committee in Tabriz University of Medical Sciences approved the protocol of the study. After explaining the whole protocol of study, a written informed consent taken from the eligible participants.

Sample size was determined on the basis of information derived from a similar study.[17] considering a confidence level of 95%, Z=1.96, SD=14.4, Mean=41.7, 184 samples were calculated. The participants were elderly people who were living in the community and come to the daily care center (not resident in health care centers) in Tabriz city. They were voluntarily to take part in the study. There were two daily care centers where we recruited randomly samples there. Demographic characteristics of subjects (age, gender, diseases background) were collected through face-to-face interview. Subjects of both genders, apparently and healthy, independent, mobile, and were able to communicate verbally defined as inclusion criteria. Exclusion criteria were individuals with Alzheimer disease and other cognitive disorders who had no ability to answer the questions and took part in the interview.

Persian self-reported version of World Health Organization Quality of Life-Brief (WHOQOL) questionnaire that validated in Iranian population were used to determine the quality of life in elderly population. The questionnaire consisted of 26 broad and comprehensive questions. The first section was two questions about the Overall Quality of Life (OQOL) and Overall Health Status (OHS).

24 items constituted four dimensions of health including physical, psychological, social and environmental. Physical health domain were evaluated through seven indicators including pain, dependence on medical aids, energy, mobility, sleep and rest, activities of daily living, and work capacity measure. Psychological health was assessed with six items including positive feeling, personal belief, concentration, bodily image, self-esteem, and negative feeling. Regarding social relationship dimension, three items were completed that focused on personal relationships, social support, and sexual life.

Environmental health with eight items deals with issues related to security, physical environment and financial support, accessibility of information, leisure activity, home environment, health, and transportation. All scores are transformed to reflect 4–20 for each domain with higher scores corresponding to a better QOL. There was no overall score for the WHOQOL-BREF and each domain was calculated by summation of their specific items. Where an item was missing, the mean of other items in

the domain was inserted. Where more than two items are missing from the domain, the domain score was not calculated, except for domain 3, in which more than one missing item was required to discard the calculation.

Summing the total scores for each particular domain manifested the individual's perception of quality of life. All domain scores were scaled in a positive direction (higher score indicated higher QOL). Scoring was done using the table given for converting raw scores to transformed scores. Compliance of questionnaire by the participants was in well and the allocated time for the questionnaire was 30 minutes. The score more than median of total score (median=52) categorized as an acceptable level of quality of life. Validity and reliability of questionnaire were approved in other study according to the confirmation of panel of experts and the score of alpha Cronbach=up to 0.7, respectivley.[18,19]

Statistical Package for Social Sciences (SPSS) (version 13.0, Chicago, IL, USA) was used for statistical analyzing of the data.

Normality of data was evaluated using the Kolmogorov-Smirnov test.

Continuous variables were expressed as mean (SD) and qualitative data were presented as frequency (percent). Chi-square test was used for comparison of nominal variables. Independent t-test and Pearson correlation were used to compare differences between the total score of quality of life with gender, diseases background and age variables.

Results

Demographic characteristics of participants are shown in Table 1. Mean ages of 184 participated elderly were 69.4 (7.9) years and about 52% were males. There was no significant difference in proportion of two gender in the study (P=0.461). Fifty percent of elderly had cardiovascular diseases. Also bone diseases were other most common and

reported ones with 32.6 percent. Total score of quality of life in both genders was 90.75(13.37) (range between 26-130). Male elderly had slightly high score of quality of life; however, these differences were not significant (P=0.438). Regarding the score of OQOL and OHS (range between1-5), results showed that overall quality of life and overall health status in participants were about in moderate level (respectively, 3.61 (0.84) and 3.57 (0.81). Four dimension of quality of life in participated subjects were depicted in Table 2.

There was no significant differences between gender and age variables with total score of quality of life (respectively P=0.438 and P=0.612). Regarding diseases background, a significant differences was observed between having cardiovascular diseases, respiratory diseases, gastrointestinal diseases, hearing and visual impairments with quality of life (P<0.05). Nevertheless, this differences was not apparent with having bone diseases (P>0.05). Table 3, depicted differences between quality of life variable and demographic characteristics.

Discussion

Elderly population need especially care services to maintain high level of quality of life and health status. In this study, the quality of life in elderly people was assessed.

The results showed that participated subjects had approximately acceptable level of quality of life. There was no significant difference between two genders, however, males had high score than females (P=0.438).

In this regard, several studies manifested different results. In agreement of this result, Ahmadi et al.,[17] manifested that there was no significant differences between gender and quality of life among 200 elderly people in Zahedan city aged 65 years and above, by QOL-SF- 36.

However, Ahangharan et al.,[20] assessed quality of life among 300 elderly in Tehran

Table 1. Demographic characteristics of elderly people (n=184)

	Elderly people		
Characteristics	**Male**	**Female**	**Total**
Gender[*]	97 (52.7)	87 (47.3)	184 (100)
Age(yr)[**]	69.9 (8)	68 (7.0)	69.4 (7.9)
Diseases background[*]			
Cardiovascular diseases	48 (49.5)	44 (50.6)	92 (50)
Respiratory diseases	9 (9.3)	6 (6.9)	15 (8.2)
Gastrointestinal disease	24 (24.7)	19 (21.8)	43 (23.4)
Hearing impairments	20 (20.6)	14 (16.1)	34 (18.5)
Bone disease	27 (27.8)	33 (37.9)	60 (32.6)
Visual impairments	19 (19.6)	17 (19.5)	36 (19.6)

[*]N (%), [**]Mean (SD)

Table2. Mean (SD) of four domains of the WHOQOL-BREF in both genders

	Elderly people		
Domains	**Male (n=97)**	**Female (n=87)**	**Total (n=184)**
Physical health[*]			
- pain	2.97 (1.07)	2.81 (1.02)	2.90 (1.05)
- dependence on medical aids	3.02 (1.13)	3.10 (1.11)	3.05 (1.12)
- energy	3.62 (0.98)	3.50 (0.91)	3.57 (0.94)
- mobility	3.60 (1.12)	3.49 (1.01)	3.55 (1.06)
- sleep and rest	3.38 (1.21)	3.18 (1.20)	3.28 (1.20)
- activities of daily living	3.42 (0.83)	3.40 (0.81)	3.41 (0.82)
- work capacity measure	3.39 (0.88)	3.42 (0.84)	3.40 (0.86)
Total (range between 7-35)	23.43 (4.65)	23.02 (4.41)	23.25 (4.51)
Psychological health[*]			
- positive feeling	3.41(0.82)	3.42 (0.83)	3.42 (0.80)
- personal belief	3.52 (0.80)	3.34 (0.91)	3.45 (0.84)
- concentration	3.59 (0.84)	3.41 (0.92)	3.51 (0.90)
- bodily image	3.72 (0.86)	3.57 (0.85)	3.66 (0.83)
- self-esteem	3.34 (0.87)	3.42 (0.78)	3.38 (0.82)
- negative feeling	3.55 (1.18)	3.54 (1.30)	3.55 (1.24)
Total (range between 6-30)	21.15 (3.60)	20.81 (3.65)	20.99 (3.62)
Social relationships[*]			
- personal relationships	3.97 (0.77)	3.67 (0.93)	3.83 (0.86)
- social support	2.98 (1.15)	3.02 (1.13)	3.00 (1.13)
- sexual life	3.67 (0.89)	3.32 (1.00)	3.50 (0.96)
Total (range between 3-15)	11.04 (2.14)	10.54 (2.16)	10.80 (2.16)
Environmental health[*]			
- security	3.54 (0.85)	3.44 (0.88)	3.50 (0.86)
- physical environment	3.79 (0.78)	3.59 (0.72)	3.70 (0.76)
- financial support	3.25 (1.13)	3.31(1.13)	3.28 (1.13)
- accessibility of information	3.67 (1.06)	3.43 (1.10)	3.55 (1.08)
- leisure activity	3.56 (0.99)	3.62 (0.96)	3.59 (0.98)
- home environment	3.53 (0.91)	3.49 (0.91)	3.51 (0.91)
- health	3.76 (0.92)	3.59 (0.81)	3.68 (0.87)
- transportation	3.68 (0.90)	3.72 (0.89)	3.70 (0.90)
Total (range between 8-40)	28.81 (4.89)	28.40 (4.73)	28.61 (4.81)

[*]Mean (SD)

Table 3. Relation between the total score of quality of life and demographic characteristics

Variables	Mean (SD)	Mean difference	P[ψ]
Age	69.4 (7.5)	1.9	0.612
Gender			
Male	91.48 (13.41)	1.53	0.438
Female	89.94 (13.36)		
Diseases background			
Cardiovascular diseases	87.14 (12.05)	7.22	<0.001[*]
Respiratory diseases	83.27 (13.65)	8.14	0.023[*]
Gastrointestinal disease	84.99 (11.30)	7.67	0.001[*]
Hearing impairments	82.19 (13.67)	10.50	<0.001[*]
Bone disease	89.21 (12.15)	2.28	0.278[*]
Visual impairments	83.18 (14.95	9.41	<0.001[*]

[ψ]Independent t-test, [*]Statistically significant (P<0.05)

city using WHOQOL- BRIEF (n=223 female, n=77 male) with aged 60 years and above.

The obtained results showed that there was significant differences between genders, male had high level of quality than females (P<0.001). In agreement with this study, Farzianpour et al.,[2] surveyed the quality of life among 400 elderly people who were aged 60 years and above in Marivan city using QOL(SF-36), the results showed that males had high scores than females (P<0.001). The obtained results were similar to the Nejati et al., and vahdaninia et al., study.[8,21] It can be related to cultural beliefs and gender discrimination in society. In the majority of societies females are more responsible and active than males.

Emotional nature of females' gender can be the other causes of vulnerability of them.[20]

Correlation between score of quality of life and age was not significant in this study (P=0.612). In agreement with this study, Habibi et al.,[22] that assessed quality of life in 410 elderly people using QOL(SF-12) questionnaire, and presented no significant correlation between quality of life and age variable (P=0.100). Ahmadi et al.,[17] also showed no significant correlation between age and quality of life among 200 elderly people in Zahedan city who were aged 65 years and above by QOL(SF-36). In contrast, Heydari et al.,[23] showed that there was significant correlation between the quality of life obtained by SF-36 with age (P=0.01). A significant difference was observed between

diseases background and quality of life with the exception of bone disease. In agreement of our study, Vahdaninia et al.,[21] manifested that among 396 elderly in Tehran city with aged 60 year and above, there was a positive differences between having diseases and low score of quality of life (P<0.001). Also, Habibi et al.,[22] study, confirm the quality of life among elderly people was better in those who stated their health status in good level than others who stated their health status in the same of other elderly or in not acceptable level.

This study had some limitations; the main limitation of this study was small sample size of participants. In spite of assessing some associated factors affecting on the quality of life, examining the other factors were not possible in this study and can be suggested for the future studies.

Conclusion

A significant difference was observed between having cardiovascular diseases, respiratory and gastrointestinal diseases, hearing and visual impairments with total score in the quality of life. However, our study showed acceptable level of quality of life, planning the policies and programs that improve and promote quality of life and decrease burden of elderly's diseases through establishing governmental or private elderly people clubs and information services for educating elderly people

regarding healthy diet and doing regular exercise can be effective.

Ethical issues

None to be declared.

Conflict of interest

The authors declare no conflict of interest in this study.

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