Original Article

The quality of life and its related factors in the elderly covered by health care centers in Khoy city, Iran

Yousef Sherizadeh[1], Reza Sarkhoshi[2], Towhid Babazadeh*[3], Fatemeh Moradi[4], Fariba Shariat[5], Katayoon Mirzaeian[4]

[1] MSc Student, Department of Health Education and Health Promotion, School of Public Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran

[2] General Practitioner, Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran

[3] PhD Candidate, Department of Health Education and Health Promotion, Student Research Committee, School of Public Health, Tabriz University of Medical Sciences, Tabriz, Iran

[4] Municipal Management, Department of Municipal Health, Tehran Municipality, Tehran, Iran

[5] Department of Municipal Health, Tehran Municipality, Tehran, Iran

Abstract

Introduction: Ageing is a stage of human life that can affect the quality of life (QOL) of people by being exposed to the resultant problems of old age. Therefore, this study aims to examine QOL and identify the influential factors to adopt accurate and comprehensive policies concerning the senior citizens aged 60 and older in health centers of Khoy city, Iran.

Methods: This cross-sectional study was conducted on 297 elderly. Sampling was performed using multi-stage random sampling method among the healthcare centers. To collect data, Lipad 31-statement QOL questionnaire was used. To analyze the data, SPSS software, descriptive statistical tests, Students' independent t-test, one-way analysis of variance and Pearson correlation were used at the significance level of P < 0.05.

Results: The overall score of life quality of the participants was 49.70. Accordingly, 83.8% of the elderly had a medium-quality life. The results of this study showed that there was no difference between the life quality of men and women. In addition, there was a significant correlation between QOL and its dimensions and education, marital status and life partners. Also there was significant negative correlation between QOL and age (r = -0.600, P = 0.001).

Conclusion: According to findings of the study, most of the elderly lead a medium-quality life. Education, living with spouse and marital status are influential factors on QOL. Identifying these factors and enhancing them among the elderly can considerably empower the elderly and optimize planning the related issues.

Introduction

Ageing is a biological process which all creatures will undergo. It is a period of human life that occurs after midlife.

Increasing life expectancy has been one of the major achievements of the human being in the twentieth century. The world's population is heading towards ageing. In the

next 40 years, the elderly population will double. According to United Nations (UN) forecasts, in the next 50 years, the elderly population in the world will reach two billion.[1] The process of population ageing in our country is tangible as in other countries. The UN has predicted that the population over 60 years of age in Iran during 2011 to 2050 will constitute 33% of the total population with a growth of 26%. It makes Iran the third country in the world in terms of population ageing rate.[2] If in the twentieth century, the major health challenge was just "to survive", the main challenge of the new century in this field is leading a life with superior quality. Therefore, examining the life quality of the elderly and the senior citizens has become a necessity. The terms the elderly, the senior citizens, the old and the aged are normally used for the people who are over 60 years of age.[3]

The expression "adding life to years of living rather than prolonging the life" in the last decades has dominated the changing course of the aged care. It has lifted emphasis from a medical model to prolong life at any cost and highlighted human-focused care model aiming at the emerging life quality.[4] According to the definition of World Health Organization (WHO), quality of life (QOL) is the individuals' perception of their position in life in terms of culture, value system in which they live, goals, expectations, standards and priorities.[5] Therefore, the QOL is quite subjective and is based on the understanding of different aspects of life. It cannot be observed by others. It is noteworthy that the QOL includes several dimensions.

Most scientists agree that the concept of QOL generally contains five aspects i.e. physical, psychological, social, mental and disease-related symptoms or changes related to treatment. However, the QOL of the elderly may be addressed in terms of performance, independence, and ability to participate in life activities. However, in the past century, the world's population was very young and the governments and politicians had been obsessed with this issue,

but now QOL of the senior citizens is considered to be one of the main challenges of the current century and the planners and policy makers of various fields of social, health, etc. are seriously entangled with it.[6]

The changes a person undergo in the ageing period include decreased physical abilities, change in the body's reaction to drugs, important life events such as retirement, living at nursing homes, reduced income and loss of opportunities for social contacts that causes loneliness in the elderly. All of these factors can affect the life quality of the elderly.[7] In this regard, Nejati in his study on the elderly of the city of Qom, Iran, has reported 48% percent depression, 86% anxiety and sleep disorders, 9% social dysfunction and 87% somatic symptoms.[8] In addition, these findings were also reported in the study conducted by Joghtayee and Nejati that indicated the unfavorable situation of mental health among this vulnerable group of the community.[9]

Major causes of these disorders are the losses including losing job, losing social status, retirement crisis, the loss of the beloved family members, retirement crisis, leaving home by children, poor health, weakness and disability which lead to grief reactions, loss of freedom, loss of stability and economic efficiency, sensory loss and change in self-image. These factors endanger the mental health of the senior citizens.[10] Several studies have corroborated a significant relation between living conditions and health of adults and the impact of complex mechanisms that independently affect their lives in various ways. Moreover, the relative importance of basic living conditions and social conditions and the impact of social policies at the macro level have been effective in determining death and disease over time.[11] Obviously, the purpose of the life of the elderly is not merely being alive and living a prolonged life, rather the type and QOL are crucially important. Therefore, improving the QOL of the senior citizens at the first stage requires comprehensive information about the quality

of their lives. Addressing this issue is possible only through measuring the QOL. Hence, this study was conducted to assess the QOL and its related factors in the elderly covered by health care centers in Khoy City, Iran, in 2013.

Methods

This research was a descriptive-analytic study. The population consisted of all the people ageing 60 years and over residing in the city of Khoy in 2013. The sample size was estimated to be 297 participants using GPower software at the confidence level of 95%, test power of 95% and effect size of 0.22. Considering 20% drop in the elderly population during the study, the estimation reached 297 individuals. Sampling was conducted through multistage random sampling method. First, a list of health care centers in the city of Khoy was provided. In the next step, the urban and rural health centers were considered as five clusters. Then, the required samples according to the estimated sample size were randomly selected from the centers. Afterwards, according to the Bureau of the Census of 2010, the number of all households with people ≥ 60 years old was extracted and the final sampling was accomplished using random sampling.

Inclusion criteria: informed consent for participation in the study and having 60 years of age and over

Exclusion criteria: any history of confusion and amnesia, psychiatric disorders, being on psychiatric medication and death of a close relative in the past one month.

To collect data on QOL, the Lipad questionnaire was used which was completed through direct interviews with the elderly. This questionnaire is standardized with no cultural load. This questionnaire was developed in 1998 by Diego et al. and was examined in Leiden in the Netherlands, Padua in Italy and Helsinki in Finland. It can be easily used as an international tool with no cultural load for all aged groups in different societies.[12] In Iran, this questionnaire had been translated, normalized and the validity and reliability confirmed by Ghasemi et al. (Cronbach's alpha = 0.831).[13]

This questionnaire consists of 31 multiple-choice questions scored zero to three that examine the QOL of the elderly in seven dimensions including physical function (5 items), self-care (6 questions), depression and anxiety (4 items), cognitive functioning (5 items), social functioning (3 items), sexual functioning (2 items) and life satisfaction (6 questions). This questionnaire has been designed in a way that the dimensons are not revealed to the respondent. It should be noted that to collect demographic data, a check list designed for this purpose was used which included variables such as age, sex, marital status, education, life partners and financial situation.

Before completing the questionnaire, all the participants were thoroughly briefed and consented to participate. The overall QOL for people was classified as low (0-31), medium (31-62) and satisfactory (63-93). Data was analyzed through SPSS software (version 22, SPSS Inc., Chicago, IL, USA) using descriptive statistics [mean, standard deviation (SD)], Student's independent t-test, one way analysis of variance (ANOVA) and Pearson correlation.

Results

In this study, 297 elderly participated. The mean (± SD) age of the participants was 70.59 (6.18). One hundred seventy eight of them were married and 119 were widowed or divorced. In terms of education, 227 participants were illiterate and 70 were literate. One hundred eight of the elderly reported their economic situation to be poor, 129 medium, 41 good and 19 very good. Two hundred fifty five elderly lived in their own houses, 42 in rental houses and relatives' and acquaintances' places. Moreover, 178 of the elderly lived with their spouses, 94 with children, 13 with relatives and acquaintances and 12 lived alone.

The results showed that the mean (± SD) value for QOL score was 49.70 (10.04). The results also suggested that the QOL in men was higher than women, but this difference was not statistically significant. The average score of QOL (± SD) was 50.03 (10.23) in men and 49.42 (9.83) in women.

There was a significant negative correlation between age and the average QOL in the aged people (r = -0.006, P < 0.001). In other words, as age increases the life quality of the elderly decreases. Results of independent t-test showed that there was no statistically significant difference between male and female senior citizens in terms of QOL (P = 0.601). The results showed that 34 (11.4%) of the elderly lead a poor-quality life, 249 (83.0%) medium-quality life and 14 (4.7%) of them had a satisfactory life quality.

To examine the relation between QOL and its dimensions and marital status, Student's independent t-test was used. The findings of this study indicated that the QOL and its dimensions had statistically significant correlation with marital status. Namely, the QOL of the married elderly was more

satisfactory than those who were divorced or had lost their spouses (Table 1).

We found a statistically significant correlation between literacy of the elderly and their QOL. The literate elders lead a life with better quality (Table 2).

Our results showed that there was a significant relation between life partner of the elderly and overall QOL and its dimensions. As shown in table 3, seniors who were living with their spouses had higher scores in terms of overall QOL and its aspects than those who were living with other people.

Discussion

In this study, the QOL of the elderly covered by health care centers of Khoy city was examined using Lipad questionnaire. According to the results, most of the elderly examined in this study were leading a medium-quality life. Findings of this research are consistent with the results of the studies done by Hesamzadeh et al.[14] and Davami and Tavakol.[15]

Table 1. Comparison of mean of life quality scores and its dimensions with marital status of the elderly

Variable	Married (n = 178)	Deceased and divorced (n = 119)	P*	95% CI	
	Mean ± SD	Mean ± SD		Lower	Upper
Overall life quality	53.90 ± 6.57	43.40 ± 11.00	< 0.001	8.42	12.4
Physical functioning	8.90 ± 2.06	7.26 ± 2.52	< 0.001	1.10	2.16
Self-care	13.10 ± 2.67	10.00 ± 3.80	< 0.001	2.31	3.79
Depression and anxiety	5.75 ± 1.92	4.73 ± 1.69	< 0.001	0.59	1.44
Cognitive functioning	8.20 ± 2.39	6.80 ± 2.04	< 0.001	0.87	1.92
Social functioning	3.01 ± 1.40	4.46 ± 1.59	< 0.001	0.91	1.64
Sexual functioning	3.01 ± 1.40	2.55 ± 1.05	< 0.001	0.16	0.76
Life satisfaction	9.14 ± 2.19	7.56 ± 2.25	< 0.001	1.06	2.10

*Students' independent t-test; SD: Standard deviation; CI: Confidence interval

Table 2. Comparison of mean of life quality scores and its dimensions with literacy

Variable	Literate (n = 70)	Illiterate (n = 227)	P*	95% CI	
	Mean ± SD	Mean ± SD		Lower	Upper
Overall life quality	48.30 ± 10.70	54.30 ± 5.43	< 0.001	-8.68	-3.45
Physical functioning	8.03 ± 2.48	8.92 ± 1.93	0.006	-1.52	-4.15
Self-care	11.30 ± 3.64	13.60 ± 2.33	< 0.001	-3.13	-1.31
Depression and anxiety	5.25 ± 1.85	5.65 ± 2.01	0.122	-0.91	0.10
Cognitive functioning	7.42 ± 2.38	8.37 ± 2.12	0.003	-1.57	-0.32
Social functioning	5.11 ± 1.75	5.58 ± 1.43	0.044	-0.92	-0.01
Sexual functioning	3.80 ± 1.28	2.82 ± 1.30	0.851	-0.38	0.31
Life satisfaction	8.25 ± 2.22	9.50 ± 2.55	< 0.001	-1.72	-0.43

*ANOVA test; SD: Standard deviation; CI: Confidence interval

Table 3. Comparison of mean of life quality scores and its dimensions with life partner of the elderly

Variable	Spouse	Children	Relatives and acquaintance	Living alone	P*	95% CI	
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD		Lower	Upper
Overall life quality	54.50 ± 5.48	43.60 ± 10.90	38.00 ± 10.30	38.60 ± 10.50	< 0.001	48.50	50.50
Physical functioning	8.95 ± 2.04	7.41 ± 2.56	6.30 ± 2.21	6.41 ± 1.78	< 0.001	7.97	8.52
Self-care	13.30 ± 2.42	10.20 ± 3.79	8.07 ± 3.20	8.25 ± 4.15	< 0.001	11.50	12.30
Depression and anxiety	5.76 ± 1.97	4.74 ± 1.61	4.30 ± 1.65	5.01 ± 1.47	< 0.001	5.13	5.56
Cognitive functioning	8.36 ± 2.35	6.73 ± 1.94	6.23 ± 1.78	5.66 ± 1.82	< 0.001	7.37	7.91
Social functioning	5.81 ± 1.51	4.38 ± 1.59	4.00 ± 1.41	4.12 ± 1.38	< 0.001	5.03	5.42
Sexual functioning	3.11 ± 1.42	2.52 ± 1.01	2.02 ± 0.73	6.75 ± 2.35	< 0.001	2.68	2.98
Life satisfaction	9.23 ± 2.14	7.75 ± 2.31	6.75 ± 2.05	6.75 ± 2.35	< 0.001	8.24	8.78

*ANOVA test; SD: Standard deviation; CI: Confidence interval

The results also showed that age had a significant negative correlation with the QOL. In other words, as age increases, the QOL decreases. These results are in line with the findings by Nabavi et al.[16] and Vahdaninia et al.[17] These findings indicate that we are required to develop accurate and appropriate programs to improve the life quality of the elderly. Therefore, the efforts should be made to delay the effect of age on the body to provide higher quality to the life of the elderly population.

Another variable examined was sex. In this study, men had a non-significant higher QOL compared to women. Several studies suggest that QOL varies in terms of sex. Some studies have argued that the QOL was significantly higher in men,[6,16,18-22] while others have reported no significant difference between the QOL and sex.[15,23] The difference in the results may be attributed to the difference in the data collection environment. The low QOL in the elderly people may be justified by considering the fact that female seniors compared to the male ones are more vulnerable to difficulties. In addition, women are financially weaker than men to earn a living and meet their needs.

Another variable studied in terms of QOL was marital status. The conducted studies show a significant association between marital status and QOL.[16,20] In the present study, the results revealed that the elderly who were married gained the maximum score (53.56) compared to those who were widowed and divorced (43.44). The finding confirms a significant positive association

between marital status and the QOL. The study by Vahdainia et al.[17] reported that elderly living with their spouse in Tehran, Iran, had better QOL than those who were widowed or divorced. Also, Saberian et al. found that marital status was significantly associated with mental health and married people were mentally healthier and felt better.[10] This can be attributed to family support which has a beneficial impact on the physical and mental health of the elders. Family can be a support and haven where the person is emotionally and mentally nourished.

The findings indicate that the QOL was poor in the elderly who were illiterate. This suggests that there was a positive relation between literacy and QOL in the elderly. According to the results, the literate participants gained the maximum scores in overall QOL, physical aspects, and self-care and life satisfaction. This can be due to their information on health, well-being and improvement of standard of life. Some studies have confirmed these findings.[10,16,19,20,22-24] One study showed that education level was an effective factor that may directly or indirectly influence QOL through improving socio-economic status.[25]

The study conducted by Alipour et al. showed that emotional support had the greatest impact on QOL. The elderly who received more emotional support enjoyed a better life quality.[20] The study of Gholizadeh and Shirani also confirmed the finding that the elderly who lived with their spouses and children had a higher QOL compared to those who live with the relatives and

friends.[26] According to the study by Bowling et al., poor psycho-social status and feeling of loneliness was observed among subjects living alone as a consequence of lack of emotional support within the household, and absence of practical support.[27] However, others indicated that living alone is not necessarily the same as feeling lonely and experiencing a poor QOL.[28,29]

The research conducted by Naing et al. showed that family relationships and self-esteem altogether predicted 53% of the QOL in the elderly people.[24] Also, the study carried out by Mousavi Sardashti et al. showed that there was a significant positive association between social support (emotional aspect) and QOL in the elderly.[21]

This study has several limitations. It is time-bound and temporary. It depends on the responses the ability give in terms of the conditions of time and place of the interview also the mental status of the elderly at the time of interview and self-declaration. One of the limitations of this study is that the study design was cross-sectional and it is hence difficult to establish cause-effect relationships between QOL and socio-demographic variables. A prospective study is needed to examine the relationships in future.

Conclusion

With regard to the modernization of society and the problems of old age, we require paying special attention to the needs of the elderly. According to the results of this study, expanding the communication between the elderly and their family members such as spouses and children can remarkably improve the QOL in the elderly. The results of this study showed that 11.4 and 83.8% of the elderly had poor- and medium-quality life respectively.

Authors' Contribution
Yusef Sherizadeh and Towhid Babazadeh designed the study, collected the data and helped in drafting the manuscript. Reza Sarkhoshi helped in drafting the manuscript and data collection. Fateme Moradi, Fariba Shariat and Katayoon Mirzaeian drafted the manuscript and analyzed the data.

Conflict of Interest
Authors have no conflict of interest.

Ethic approval
The Ethics Committee of Shahid Beheshti University of the Medical Sciences approved the study.

References
1. WHO Centre for Health Development (Kobe J. Global health expectancy research among older people [Online]. [cited 2001]; Available from: URL: http://apps.who.int/iris/handle/10665/66927
2. Garousi S, Safizadeh H, Samadian F. The study relationship between social support and quality of life among elderly people in Kerman. Jundishapur Sci Med J 2012; 11(3): 303-16. [In Persian].
3. Clark PG. Quality of life, values, and teamwork in geriatric care: do we communicate what we mean? Gerontologist 1995; 35(3): 402-11. DOI: 10.1093/geront/35.3.402
4. Neyazi M, Babaiefard A. Sociology elderly. Tehran, Iran: Sokhanvaran Publications; 2011. [In Persian].
5. Castel AD, Balota DA, McCabe DP. Memory efficiency and the strategic control of attention at encoding: impairments of value-directed remembering in Alzheimer's disease. Neuropsychology 2009; 23(3): 297-306. DOI: 10.1037/a0014888

6. Agha Nouri A, Mahmoudi M, Salehi H, Jafarian K. Quality of life in the elderly people covered by health centers in the urban areas of Markazi Province, Iran. Salmand Iran J Ageing 2012; 6(4): 20-9. [In Persian].

7. Moore S, Sinclair SP. An introduction to sociology. Trans. Saghebfar M. Tehran, Iran: Ghoghnos Publications; 1997. p. 133. [In Persian].

8. Nejati V. Assessing the health status of elderly people in the province of Qom (2007). J Qazvin Univ Med Sci 2009; 13(1): 67-72. [In Persian].

9. Joghatayee MT, Nejati V. Evaluation of health status in Kashan city. Salmand Iran J Ageing 2006; 1(1): 3-10. [In Persian].

10. Saberian M, Haji Aghajani S, Ghorbani R. Study of the mental status of the elderly and its relationship with leisure time activities. J Sabzevar Univ Med Sci 2004; 10(4): 53-60. [In Persian].

11. Population Reference Bureau. Today's research on aging - effects of early life on elderly health [Online]. [cited 2009 Apr]; Available from: URL: http://www.prb.org/pdf09/TodaysResearchAging16.pdf

12. Narimani K. A study of the effect of self-care training on the hemodialysis patients' quality of life. Daneshvar Med 2009; 16(79): 63-70. [In Persian].

13. Ghasemi H, Harirchi M, Masnavi A, Rahgozar M, Akbarian M. Comparing quality of life between seniors living in families and institutionalized in nursing homes. Social Welfare Quarterly 2011; 10(39): 177-200. [In Persian].

14. Hesamzadeh A, Seyed Maddah SB, Mohammadi Shahbolaghi F, Fallahi Khoshknab M, Rahgozar M. Comparison of elderly's quality of life living at homes and in private or public nursing homes. Salmand Iran J Ageing 2009; 4(14): 66-74. [In Persian].

15. Davami M, Tavakol KH. A comparative study of quality of life elderly people living at home and in nursing homes in Isfahan 2000 [Thesis]. Isfahan, Iran: Isfahan University of Medical Sciences; 2001. [In Persian].

16. Nabavi S, Shoja M, Mohammadi S, Rashedi V. Health-related quality of life in community-dwelling older adults of Bojnurd in 2014. J North Khorasan Univ Med Sci 2014; 6(2): 433-9. [In Persian].

17. Vahdaninia M, Goshtasbi A, Montazeri A, Maftoun F. Health-related quality of life in an elderly population in Iran: a population-based study. Payesh Health Monit 2005; 4(2): 113-20. [In Persian].

18. Haji Agaei N, Ghodusi R, Nazifi F, Shahkandi M, Kiyarusta N, Golchin M. Evaluate the quality of nursing in Qazvin in 2007. Journal of Perception 2007; 5(20):43-46.

19. Habibi Sola A, Nikpour S, Sohbatzadeh R, Haghani H. Quality of life in elderly people of west of Tehran. Iran J Nurs Res 2008; 2(7): 29-35. [In Persian].

20. Alipour F, Sajadi H, Forozan A, Biglarian A, Jalilian A. Quality of life of elderly in region 2 Tehran. Salmand Iran J Ageing 2008; 3(9-10): 75-83. [In Persian].

21. Mousavi Sardashti M, Keshavarz H, Ansari E, Hosseinpour K. Study of the relationship of emotional support and quality of life of the elderly in Shahr-e Kord. J Health Syst Res 2014; 10(1): 58-66. [In Persian].

22. Barati M, Fathi Y, Soltanian AR, Moeini B. Mental health condition and health promoting behaviors among elders in Hamadan. Sci J Hamadan Nurs Midwifery Fac 2012; 20(3): 13-21. [In Persian].

23. Zahmatkeshan N, Bagherzadeh R, Akaberian S, Yazdankhah MR, Mirzaei K, Yazdanpanah S, et al. Assessing quality of life and related factors in Bushehr elders -2008-2009. J Fasa Univ Med Sci 2012; 2(1): 53-8. [In Persian].

24. Naing MM, Nanthamongkolchai S, Munsawaengsu C. Quality of life of the elderly people in Einme township Irrawaddy division, Myanmar. Asia J Public Health 2010; 1(2): 4-10.

25. Population Division DUN. Socio-economic characteristics of the older population [Online]. [cited 1950]; Available from: URL: http://www.un.org/esa/population/publications/world ageing19502050/pdf/91chapterv.pdf

26. Gholizadeh A, Shirani E. The relation between personal, family, social and economic factors with the life satisfaction. Applied Sociology 2010; 21(1): 69-82. [In Persian].

27. Bowling A, Grundy E, Farquhar M. Living well into old age: three studies of health and well-being among older people in east London and Essex. London, UK: Age Concern England; 1997.

28. Victor CR, Scambler SJ, Bond J, Bowling A. Loneliness in later life. In: Hagan Hennessy C, Walker A, Editors. Growing older: quality of life in old age: quality of life in old age. New York, NY: McGraw-Hill Education; 2004.

29. Tunstall J. Old and alone: a sociological study of old people. Abingdon, UK: Routledge; 1996.