

## Quality of life in elderly people in Kashan, Iran

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### ABSTRACT

The objective of this article was to identify determinants of quality of life and investigate their association with physical and social functions, physical and emotional roles, and physical and mental health among older people in Kashan, Iran. In a cross-sectional study 389 elderly persons (aged  $\geq 60$  years) was selected randomly from 120 zones of Kashan. The structured interview consisted of 36 questions including sub-questions related to different aspects of life by using on SF-36 health survey. The mean age of participants was  $69.8 \pm 7.74$  years. Illiteracy rate in men and women were 31.2% and 8.5% ( $P < 0.0001$ ), whereas marriage rates were 87.6% and 87.1% ( $P = 125$ ), respectively. The mean score of aspects of physical function ( $P < 0.0001$ ), general health perception ( $P < 0.0001$ ), physical role ( $P < 0.0001$ ), vitality ( $P = 0.0007$ ), mental health ( $P = 0.003$ ), and bodily pain ( $P < 0.0001$ ) in men was higher than in females, whereas social function ( $P = 0.844$ ) and emotional role ( $P = 0.397$ ) were similar between the two genders. Illiteracy is common in elderly people, and quality of life in men was higher than women in all aspects.

**Keywords:** Quality of life, Old age, SF-36 health survey

### Introduction

Quality of life is a universally desired patient outcome that is essential to human health<sup>[1]</sup>. Quality of life is a subjective and multidimensional concept that is increasingly being recognized as a useful outcome in health and social care research. The World Health Organization Quality of Life group defined quality of life as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. The subjective nature of quality of life purports that it can be conceptualized differently by different groups of people. Age, gender, health status, and cultural factors are some of the important factors that influence their conceptualization<sup>[2]</sup>. The term quality of life is of a more recent origin.

Social scientists started to use it in the 1970s and since then there has been a growing interest in quality of life issues in medicine, nursing and other health care areas. There are various explanations for this growing interest. One has to do with the growing number of elderly people in society. Higher age often brings about health problems and a decrease in functional capacity. This means that we have a growing number of people living with chronic diseases, health problems and decreasing capacity. For these patients the goal of health care cannot be freedom from disease. What we can do is to help the patients to live as good a life as possible despite their illnesses and decreasing capacities<sup>[3]</sup>.

There are several previous studies about quality of life in elderly people in different societies. However, a few studies

about quality of life in this group in Iran were done. In order to obtain a detailed and organized program like other countries in the world and many of the East-Mediterranean countries (EMRO) have proposed their seniors' health national program. It was necessary for Iran to perform an epidemiological survey to determine seniors' social and physical health, setting priorities for social and physical health needs, assess the amount of services needed for them and to adopt national policies on caring for this age group.

The objective of this article was to identify determinants of quality of life and investigate their association with physical and social functions, physical and emotional roles, and Physical and Mental health among older people in Kashan, a city in Iran located in the center of this country. The estimated 2006 population of Kashan City is 301864 and of that 51.2% of the population is male.

## Materials and Methods

### Study population:

A cross-sectional study of 389 elderly persons (aged  $\geq 60$  years) was selected randomly from 120 zones of Kashan city. Data for this study were collected between April 2005 and April 2006. The sample was restricted to people living in non-institutional settings (e.g. their own homes or houses for elderly people). The study site has been described as a typical Iranian agricultural community and as being similar to most of rural Iran in terms of ethnicity, culture, and language. Individuals who agreed to participate met with the researcher or research assistant who explained the purpose of the study and obtained informed consent.

### Data collection:

Because elderly people in institutions usually have more health problems and lower functional capacity than elderly people living in their own homes, they might have difficulties in completing a long interview. The researchers sent a letter to the informants, describing the purpose of the study, and then contacted them by telephone to set a date for the interview. Ethical committees in Kashan University of medical sciences have approved this study. The structured interview consisted of 36 questions including sub-questions related to different aspects of life: age, sex, marital status, literacy (ability to read and write), physical function, knowledge of general health perceptions, physical role, social function, emotional role, vitality, mental health, and bodily pain. Questions were based on SF-36 health survey. SF-36 is a generic questionnaire for the measurement of quality of life, and covers 8 dimensions of health status and 2 summary areas, one physical and one mental<sup>[4]</sup>. The scores are in the range of 0 to 100 (a higher score indicating a better health status). The questionnaire has been trans-

lated and validated in an Iranian population<sup>[5]</sup>. The reason for choosing previously tested instruments was to guarantee initial validity and reliability.

Components of each question of quality aspects were categorized into five steps according to categorized scales: The scores on the summed quality of life questions could range from 0 to 100 (mean = 50): very good (80-100), good (60-79), moderate (40-59), poor (20-39), and very poor (0-19).

### Statistical analysis:

Results were reported as the mean  $\pm$  standard deviation (SD) for quantitative variables and percentages for categorical variables. Categorical variables between the groups were compared using Pearson's  $\chi^2$ -test and Fisher's exact test. Differences in mean scores with regard to aspects of quality of life were tested by non-parametric one-way analysis of variance, the Mann-Whitney U-test. P values of 0.05 or less were considered statistically significant. All statistical analyses were performed by using SPSS version 13 and SAS version 9.1 for windows.

## Results

### Demographic characteristics:

The age of our study population ranged from 60 to 120 years with the mean age of  $69.8 \pm 7.74$  years (Figure 1). Demographic characteristics of cases in two genders were summarized in Table 1. Male to Female ratio was 1.08. There were no significant differences in the mean age ( $P=0.465$ ) and marriage condition ( $P=0.125$ ) between the two genders, but illiteracy was more frequent in women ( $P<0.0001$ ). Literacy was found in 31.2% of men and only 8.5% of women, whereas only 1.4% of men and 0.5% of women had a postgraduate degree.

### Aspects of quality of life:

Scores of different aspects of quality of life in the two genders are shown in Table 2. With the exception of emotional role, very good scores predominated in the male elderly group. Also, comparison of mean scores between the two genders showed that these scores were higher in men in aspects of physical function, general health perception, physical role, vitality, mental health, and bodily pain (Table 3).

## Discussion

Public health policies in most countries are concerned with how to keep older people living independently with a qualitatively good life in the community as long as possible. However, knowledge about what may characterize those seemingly 'healthy' older people is sparse<sup>[6]</sup>.

**Table1.** Demographic characteristics of elderly population

Characteristics	Female (n= 187)	Male (n=202)	P value
Mean age (Mean $\pm$ SD)	68.49 $\pm$ 7.19	70.12 $\pm$ 7.22	0.465
Literacy * (%)	8.5	31.2	<0.0001
Marriage (%)	87.1	87.6	0.125
* Ability to read and write			

**Table2.** Scores of different aspects of quality of life in two genders

Aspect	Very poor (0-19)	Poor (20-39)	Moderate (40-59)	Good (60-79)	Very good (80-100)
Physical function: -Male	0	2.5	35.7	40.8	30.1
-Female	0	12.4	61.6	20.7	5.1
General health perception: -Male	30.1	2.5	30.7	0	30.6
-Female	6.7	9.8	51.8	0	31.6
Physical role: -Male	5.1	9.6	58.6	0	26.5
-Female	1.5	15.5	67.3	1.5	14.5
Social function: -Male	63.7	1.5	12.2	0	22.9
-Female	60.1	0.5	7.2	0	32.1
Emotional role: -Male	13.2	2.5	30.1	0	52.0
-Female	19.1	2.0	27.4	0	51.2
Vitality: -Male	25	2.5	32.1	0	40.3
-Female	12.4	3.1	43.0	0	46.6
Mental health: -Male	81.6	0	5.1	0	9.1
-Female	76.6	0	3.1	0	20.2
Very low	Low	Moderate	High	Very high	
Bodily pain: -Male	27.5	5.6	16.8	0	44.8
-Female	9.8	8.8	31.0	0	50.2

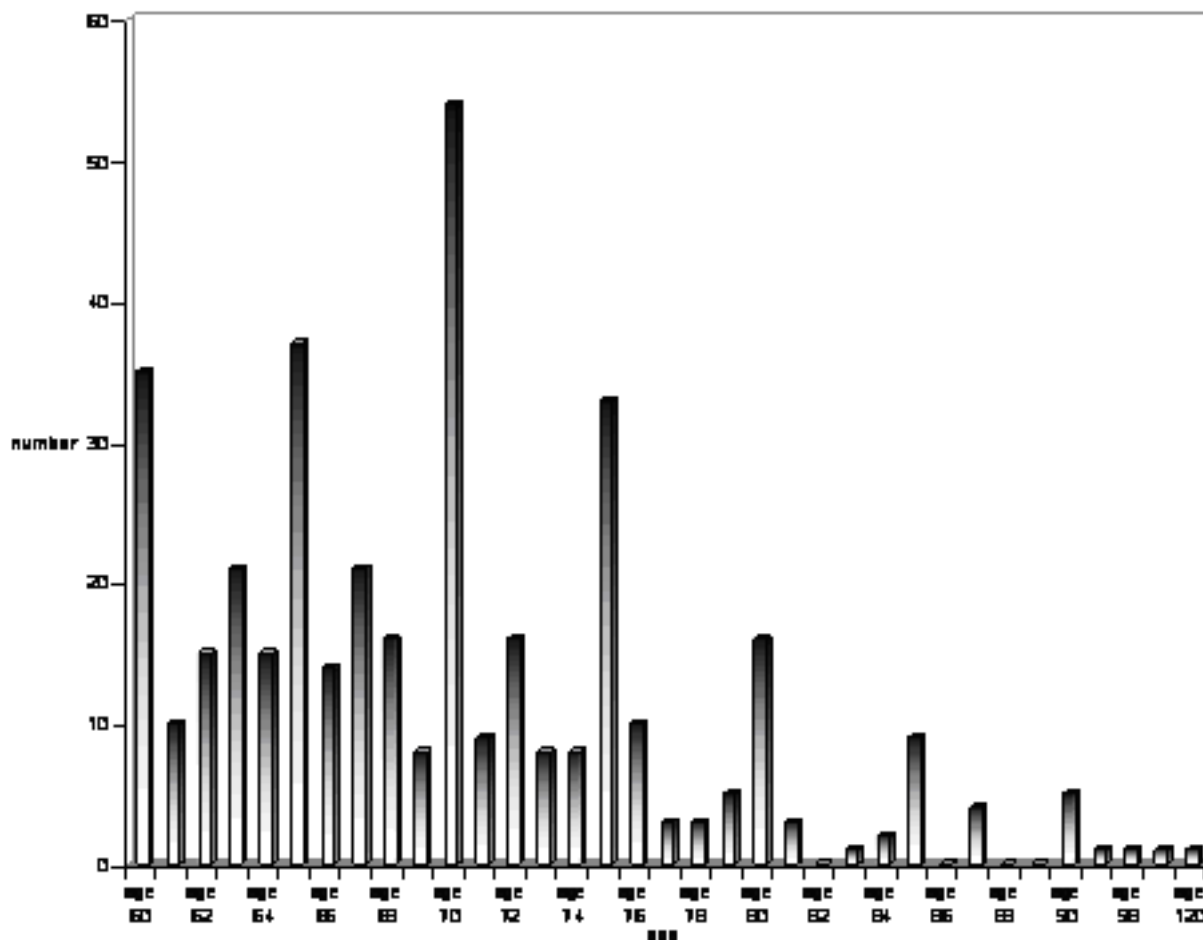
**Table3.** Comparison of quality of life means scores in elderly men and women

P value	Female (n=187)	Male (n=202)	Aspect
<0.0001	57.01±13.82	66.6±18.35	Physical function
<0.0001	55.59±14.89	65.72±17.31	General health perception
<0.0001	47.54±12.07	54.56±12.68	Physical role
0.844	78.03±17.50	78.40±19.30	Social function
0.397	61.21±12.68	62.38±14.41	Emotional role
0.0007	59.70±15.72	65.76±19.02	Vitality
0.003	91.43±16.67	97.36±22.78	Mental health
<0.0001	57.22±15.79	66.10±20.61	Bodily pain

**Table 4.** Comparison of quality of life means scores in Kashan and other cities

Aspects	Kashan (Mean±SD)	Tehran (Mean±SD)	Zahedan (Mean±SD)	Canada (Mean±SD)	Lebanon (Mean±SD)	Turkey (Mean±SD)
Physical function	59.07±17.69	58.3±25.5	42.7±21.9	75.9±20.5	81.3±22.8	58.9±27.6
General health perception	60.71±16.92	50.1±20.1	38.6±15.6	73.3±18.3	66.3±22.9	50.2±20.1
Physical role	51.05±12.85	38.8±39.8	36.8±33.0	68.6±35.0	63.6±43.6	54.3±42.4
Social function	78.22±18.40	59.6±28.1	43.9±16.0	63.3±20.0	68.8±29.6	71.3±24.9
Emotional role	61.08±14.05	50.0±43.6	45.0±24.7	82.1±34.2	53.0±43.3	60.9±20.4
Vitality	62.73±17.69	54.6±18.8	46.7±19.4	64.9±18.5	60.8±22.5	42.5±21.7
Mental health	94.42±21.47	63.2±17.4	42.6±18.9	79.6±14.0	62.8±22.5	58.8±45.7
Bodily pain	61.70±18.89	58.3±28.5	37.8±19.3	72.3±24.1	68.9±30.6	59.5±28.1

**Figure 1**



According to the latest census taken in 1996 in Iran, the elderly population aged 60 and older was 6.6% of the whole population and the Census Bureau predicts that the elderly age dominance will be more significant from the year 2030 on. In this regard the elderly population aged over 60 will be 8.5 million in 2020 and five years later in 2025 this will reach up to 10.5 million<sup>[7]</sup>.

In our study, illiteracy was found in 68.8% of elderly males and 91.5% of elderly females in Kashan, whereas marriage rate in elderly males and females were 87.6% and 87.1%, respectively. In another study, it was found that overall illiteracy rate

in Iran was very high among the elderly. 79% of urban females and 95% of rural females were illiterate, on the other hand 50.7% of urban males and 71.5% of rural males were illiterate. Also, marriage rate in males was two times more than females, so that 37-42% of females had a husband while 86-89% of males had a wife. The reason for this is that men may marry for a second time following loss of their wives while females remain widowed<sup>[7]</sup>.

In this article, we also compared our results about quality of life in selected elderly people in Kashan city with two other cities in Iran; Tehran<sup>[8]</sup> and Zahedan<sup>[9]</sup> and four cities in other

countries; Toronto in Canada<sup>[10]</sup>, south cities in Lebanon<sup>[11]</sup>, and Samsun in Turkey<sup>[12]</sup>.

Results of this comparison are summarized in Table 4. We found that the mean scores of quality of life in all aspects in Kashan were higher than the capital of Iran (Tehran). Physical role score in this city was more than the other two cities in Iran. Also, physical role score was less and social function and mental health was more than other countries. These results showed that several factors can influence the quality of life in elderly populations in different societies. Functional capacity, perceived health, good housing conditions, an active life style, and good social relationships were some of the factors that explained life satisfaction and subjective quality of life<sup>[13-16]</sup>. Low economic status is another determinant affecting quality of life. Social capital was discussed as an important aspect of successful aging<sup>[17]</sup>.

In summary, although extremely wealthy in terms of tourism potentials, the city remains largely undeveloped. Illiteracy is common in the elderly population, and quality of life in men was higher than women in all aspects.

### Acknowledgement

This research project has been supported by Kashan University of Medical Sciences and Health Services. We are indebted to Farzan Institute for Research, Science and Technology for technical assistance and statistical analysis. The authors would like to thank the interviewers who collected the information, the general practitioners who volunteered their practices for the study, and the participants who gave up their time for the study.

### References

1. Emery MP, Perrier LL, Acquadro C. Patient-Reported Outcome and Quality of Life Instruments Database (PROQOLID): frequently asked questions. *Health Qual Life Outcomes* 2005; 3:12.
2. Nilsson J, Masudrana AM, Naharkabir Z. Social Capital and Quality of Life in Old Age Results From a Cross-Sectional Study in Rural Bangladesh. *J Age Health* 2006; 18 (3): 419-34.
3. Lawton M. A multidimensional view of quality of life in frail elders. In: *The Concept and Measurement of Quality of Life in the Frail Elderly*. Birren J, Lubben J, Rowe J, Detchman D, eds). San Diego: Academic Press, 1991: 3-27.
4. Ware JE, Sherbourne CD. The MOS 36-Item short form health survey (SF-36). *Med Care* 1992; 30 (6): 473-83.
5. Alonso J, Prieto L, Antó JM. The Spanish version of the SF-36 Health Survey (the SF-36 health questionnaire): an instrument for measuring clinical results. *Med Clin (Barc)* 1995; 104 (20): 771-6.
6. Borglin G, Jakobsson U, Edberg AK, Hallberg IR. Older people in Sweden with various degrees of present quality of life: their health, social support, everyday activities and sense of coherence. *Health Soc Care Community* 2006; 14 (2): 136-46.
7. Teymoori F et al. Social Welfare and Health (Mental, Social, Physical) Status of Aged People in Iran. *Middle East J Age Aging* 2006; 3(1): 1-8
8. Vahdaninia MS, Gashtasbi A, Motazeri A, Maftoun F. Quality of life related to health in elderly. *Payesh* 2005; 4: 113-20.

9. Ahmadi F, Salar A, Faghihzadeh S. The study of quality of care in Zahedan elderly population. *Hayat* 2003; 10: 61-7.
10. Hopman WM, Towheed T, Anastassiades T, Tenenhouse A, Poliquin S, Berger C, Joseph L, Brown JP, Murray TM, Adachi JD, Hanley DA. Canadian normative data for the SF-36 health survey. Canadian Multicentre Osteoporosis Study Research Group. *CMAJ* 2000;163 (3): 265-71.
11. Sabbah I, Drouby N, Sabbah S, Retel-Rude N, Mercier M. Quality of life in rural populations in Lebanon using SF-36 Health survey. *Health Qual Life Outcomes* 2003; 1(1): 30
12. Canbaz S, Sunter AT, Dabak S, Peksen Y. The prevalence of chronic diseases and quality of life in elderly people in Samsun. *Turk J Med Sci* 2003; 33 (5): 335-40.
13. Karjalainen P. Vanhusten tyytyväisyys ja sen mittaamisesta. *Sosiaalisia Erikoistutkimuksia XXXII*: 99. Sosiaali- ja terveystieteiden tutkimuskeskus, Helsinki 1984
14. Ojala T. Livskvalitet i äldre åldern Folkpensionsanstaltens Publikationer, ML: 92. Folkpensionsanstalten, Åbo; 1989.
15. Beijar C, Christiansson T. Källor till livskvalitet i högre ålder. *Gerontologia* 1995; 9: 273-82.
16. Nilsson M, Ekman SL, Sarvimaeki I. Ageing with joy or resigning to old age. *Health Care Later Life* 1998; 3 (2): 94 -110.
17. Cannuscio C, Block J, Kawachi I. Social capital and successful aging: The role of senior housing. *Ann Int Med* 2003;139 (5 pt 2): 395-9.