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Health-related quality of life of elderly living in nursing home and homes in a district of Iran: Implications for policy makers

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Abstract

As the life expectancy increases, the importance of elderly people's quality of life becomes more apparent. The present investigation is aimed to assess the health-related Quality of life of elderly people living in two settings: (i) residents in a nursing home and (ii) elderly people living at homes in a district of North Iran. The study was conducted as a cross-sectional analytical study. Data was collected by face to face interviewing technique using the Iranian version of the short form health survey questionnaire (SF-36) and a form designed by the researchers for recording socio-demographic characteristics. The data are drawn from 220 elderly (>60 years of age) sampled from both settings. Data were analyzed using descriptive and inferential statistics. The average scores for several domains including total physical health, total mental health and overall health (total SF-36 score) were less than 50, which can be interpreted as a less desirable level of health-related quality of life in Iranian elderly people. Residents living at homes scored better in all domains of SF-36. Multiple regression analysis indicated that residency, marital status and education had a significant coefficient for total SF-36 score. The health related quality of life of elderly people in one city in Iran, particularly those in nursing homes, is inadequate. There is a need to design programs to increase elderly people's interaction with others and establish social networks for them and opined that these may enhance a sense of positive quality of life among the elderly.

Keywords: Quality of life, Elderly, Nursing home, SF36

Introduction

Life expectancy for the elderly in developed and developing countries has increased as a result of improvement in public health and medical advances, and the increase in the absolute and relative numbers of elderly people is one of the major features of the world demographic transition (Gupta & Sankar, 2003; Beaglehole & Bonita, 2004). Just now sixty percent of the elderly people live in developing countries (Yang *et al.*, 2011).

Due to the increased longevity and life expectancy, the quality of life (QoL) has been considered as an important issue, attracting the attention of the researchers working on aging (Hall et al., 2011). When the World Health Organization (WHO) defined health as "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity", it implied that the assessment of health and healthcare should not only include traditional measures of morbidity and mortality, but should also include a broader assessment of the QoL (Saxena et al., 2001; Saxena et al., 2002). With attention to these facts, QoL is a critical consideration in national and international healthcare policies and decisions in each country. If health policies cannot provide attempts to add peace and mental and physical health to human generation, the advances in this regard are considered to be ineffective and perilous (Fahev et al., 2003). On the other hand it has been demonstrated that people face different physiological and mental problems as a result of aging that have negative effects on their QoL (Do"nmez & Gokkoca, 2005; Schwarz et al., 2007; Williams et al., 2009). A study conducted by Barry shows that about 60%

of the health care costs, 35% of the hospital discharge, and 47% of the hospitalization are devoted to the elderly (Barry, 2000). The changing social scenario in terms of urbanization, modernization, globalization, and individualism have also resulted in some disorganization in the family and society norms and values, which produce deprivations to the elderly in contemporary societies (Varma *et al.*, 2010).

Since the 1979 revolution, Iran has gone through substantial demographic changes. Decreasing birth rates were accompanied by decreasing death rates and increasing life expectancy, these factors put together are leading to a graying Iranian population (Kiani *et al.*, 2010). Today, the proportion of the population aged 60 and over is 6.17%, and it is estimated that 21.7% of the Iranian population will be aged 60 and above by 2050 (Statistical centre of Iran, 2010), therefore, the social and physical well being of these people has become a challenging issue in Iran.

The elderly in Iran like other developing societies are facing many health and social challenges. One study, including a sample of 300 individuals above the age of 60 in Tehran, revealed that the elderly encounter many hardships including: illiteracy, economic difficulties, problems with daily living, life dissatisfaction, lack of medical insurance, as well as mental and emotional problems (Kaldi ,2004). The same study reported that the underutilization of services amongst the elderly in Iran might negatively affect their health status and QoL. On the other hand, in Iranian society, religious values, cultural norms and traditional practices emphasize that the elderly members of the family be treated with honor



and respect. They are expected to live in good health and it is not culturally appropriate to transfer an elderly family member to a nursing home when they can be taken care of by a relative or caregiver in the household (Sheikhi, 2004: Norouzi et al., 2006). However, it appears that these traditional attitudes and cultural values have undergone changes in recent years due to factors such as social change, increases in urban living, increases in socio-economic difficulties as well as limited resources, which also affect the QoL of the Iranian elderly.

Senescence for some elderly people is a phase of development and satisfaction, whereas for others is a negative stage of life .As determinants of a good QoL in old age vary from person to person as well as different cultural context (Xavier et al., 2003) and as poor studies on QoL among the elderly from North of Iran were conducted, the present study attempts to report the health-related QoL (HRQoL) of elderly in this district. It is anticipated that studies like this may provide important findings that added to the body of knowledge about elderly in Iran and somewhat in other developing countries that have similar socio-cultural-economical contexts.

Methods

Setting and data collection

This cross-sectional analytical study was conducted in Sari city in Mazandaran province in the North of Iran (Islamic Republic of) with assistance of 220 elderly people from October 2010 to February 2011. The sample consisted of Iranian nationality elderly aged 60 years and above of both genders among two groups (i) residents in an exclusive nursing home in this area and (ii) elderly residents at homes. From the 75 residents in nursing

home, 70 elderly who were enough consciousness to fill the questionnaire selected according to the consensus method, while from those elderly people who lived at homes, 150 elderly were selected during a systematic clustering sampling taken from the three Municipal districts of Sari with assistance of health care providers' of health centers.

Instruments

Our instruments for collecting data were a checklist of socio-demographic characteristics of participants and Iranian version of the short form questionnaire of HRQoL,SF-36, which was modified to suit local culture, in terms of using appropriate terms which are used in the local culture and study settings. SF 36 is a well-known generic HRQoL instrument that has been developed in the United State of America, translated in a variety of languages and validated in many countries like Iran (Montazeri et al., 2005). Psychometric properties of this instrument in mentioned study showed that the Iranian version of SF36 is a reliable and valid measure of health related quality of life among the general population. It is including 36 questions organized into eight sub-scales. These subscales address limitations in physical functions and role activities due to health problems, bodily pain, general health perceptions, vitality [energy and fatigue], social limitations as a consequence of physical or emotional concerns, limitations in role activity due to emotional problems, and mental health. These scores are summed to produce raw scale scores for each health concept ranging from 0 to 100 points and higher scores representing a greater HRQoL.

Table 1 Socio- demographic characteristics of participants

		Residents in nursing home (N=70)		Residents at home(N=150)		Total sample (N=220)	
		n	%	n `	%	n	%
	60-64	11	15.7	73	48.7	84	38.2
Age	65-70	10	14.3	36	24	46	20.9
	≥71	49	70	41	27.3	90	40.9
	Female	28	40	68	45.3	96	43.6
Gender	Male	42	60	82	54.7	124	56.4
Marital Status	Married	12	17.1	92	61.3	104	47.3
	Single	19	27.1	3	2	22	10
	Divorced or widow	39	55.7	55	36.7	94	42.7
Education	Illiterate	47	67.1	58	38.7	105	47.7
	Elementary	6	8.6	40	26.7	46	20.9
	Junior high school to	10	14.3	30	20	40	18.2
	Diploma						
	Diploma and above	7	10	22	14.7	29	13.2
Economic Status	Without pension	28	40	109	72.7	137	62.30
	With pensions	42	60	41	27.3	83	37.70
Family	With spouse or family	37	52.9	85	57.2	122	55.5
composition	Alone	33	47.1	65	43.8	98	44.5
Number of children	≤2	33	47.1	18	12	51	23.2
	3	10	14.3	24	16	34	15.5
	≥4	27	38.6	108	72	135	61.4
Spouse status	Alive	12	17.1	94	62.7	106	48.2
	Not alive	58	82.9	56	37.3	114	51.8



Table 2. Descriptive Statistics of domains, 2 summary scales and total SF36 scored of individual and total samples

Domain /scale	Resident in nursing home	Resident at home	Total samples	
	Mean ± SD	Mean ± SD	Mean ± SD	
Physical Function	22.9±29.8	46±30.4	38.6±32	
Role physical	21.4±36.1 35.1±39.1		30.7±38.7	
Bodily pain	41.9±26.4	54.7±24.5	50.6±25.8	
General Health	36.6±19.9	48.8±18.7	44.9±19.9	
Vitality	39.9±25.2	51.5±18.7	47.8±21.6	
Social Functioning	35.8±31.3	60.9±24.2	52.9±29.1	
Role emotional	24.2±42	42.8±45.5	36.9±45.2	
Mental health	40.1±18.4	54.5±14.7	49.9±17.3	
Total physical health	32.5±21.4	47.2±20.2	42.5±21.7	
Total Mental health	33.6±23.7	48.7±21.7	43.9±23.4	
Total SF36 score	32.8±21.4	49.3±20.4	44±22.1	

Data analysis

Data were collected by a psychiatrist. The collected data were entered and analyzed after two times revision using the Statistical Package for Social Sciences for Windows version 16.0 (SPSS Inc., Chicago, IL, USA). Means and standard deviations were computed and reported. The eight subscales of the SF-36 and the total scores of total physical health, total mental health, and total SF-36 were calculated using scoring algorithms. The association between variables was examined by Pearson Correlation Coefficient, T-Test. Independent One-Way Anova Multivariate regression. Multiple linear regression analyses were performed by taking the total physical health, total mental health, and total SF-36 as dependent variables separately. Several sociodemographic variables such as kind of residency, age, gender, marital status, education, economic status, status of the spouse were entered as independent variables. The significance level was p≤0.05.

Ethical consideration

Ethical approval was obtained from the ethical committee at Mazandaran University of Medical Sciences. Permission for collection data was obtained from the Area Nursing home and Health Organization Chief Executive Officers when required. All of the participants were informed of the purpose and design of the study. The participation was voluntary with concern for confidentiality and anonymity. All respondents were informed about the purpose of the study and their consent was obtained before initiating the interview.

Results

Socio-demographic characteristics of individuals and combined sample are reported in Table 1. The

results of the study indicated the mean SF36 score of the study group (N = 220) was 44 ± 22.1 . The mean scores for the SF-36 subscales ranged from 30.7 (SD = 38.7) for role physical to 52.9 (SD = 29.1) for social functioning and in general, the respondents significantly showed better condition on mental component of the SF-36 than its physical component (mean scores 43.9 versus 42.5). Mean and standard deviation scores of eight domains, total physical and total mental health summaries, as well as total SF-36 score are shown in Table 2. For the majority of domains, including totals the average scores were less than 50, which can be interpreted as a less desirable level of HRQoL in Iranian elderly people. However, there are no normative values of SF-36 for Iran, as available for several developed countries, to compare the present values.

Residents in homes scored better in all domains. This means residents living at homes possessed better HRQoL than nursing home residents. For elderly residents in nursing home, role physical yielded the lowest score (21.4±36.1) followed by physical function whereas for residents living at homes the lowest score belongs to role physical (35.1±39.1) followed by role emotional. Performing uni-variate analysis showed statistically significant differences between the mean SF-36 scores of the participants with regard to the socio-

Table 3.Details of multiple regression analysis of total sample (N=220) on total physical health, total mental health and SF-36 score

Score								
	Total physical health	Total mental health	Total SF-36					
	coefficient ± SE	coefficient ± SE	score coefficient ±					
	COEITICIEIT ± 3L	COGINCIENT ± 3L	SE					
Constant	49.23±9.96 *	53.98±10.78*	55.91±9.98*					
Residency	-14.74±3.80*	-17.47±4.12*	-16.60±3.81*					
Gender	4.03±2.99	-0.93±3.24	1.12±3					
Spouse status	1.62±6.99	10.70±7.57	5.60±7.01					
Economic	-0.25±3.11	0.72±3.37	-1.11±3.12					
status	0.2020	0.7220.07						
AGE								
Age 65-70	2.92±3.92	2.74±4.24	3.21±3.93					
Age ≥71	0.52±3.64	3.40±3.94	2.02±3.65					
MARITAL								
STATUS								
Single	6.02±7.32	-4.22±7.92	-0.09±7.34					
	-8.31±7.13	-23.09±7.72*	-15.18±7.15*					
Divorce/widow								
EDUCATION								
Elementary	1.32±3.64	-4.61±3.94	-1.21±3.65					
Junior high	8.43±4.01*	2.38±4.34	6.51±4.02					
school to								
Diploma								
Diploma and	14.61±4.67*	14.36±5.05*	14.78±4.68*					
above	0.000	0.004	0.00					
R ² (adjusted) of	0.208	0.204	2.32					
the model								
* Significant at 5% level								

Note: The reference categories were age 60-64, being married, and illiterate.



makers, especially in developing countries as communities in transition, consider this new agenda in their programs, pay more attention to nursing homes, improve their services and provide financial supports with

them to improve HQoL of elderly.

demographic characteristics including: Residency $(p<0.001,\ t=5.46)$, Spouse status $(p<0.001,\ t=5.35)$, Economic status $(p<0.001,\ t=3.65)$, Age $(p<0.001,\ F=5.21)$, Marital status $(p<0.001,\ F=18.02)$, and Education $(p<0.001,\ F=11.03)$.

In multivariate regression analysis found that there was a meaningful relationship between SF-36 total score of participants with their Residency (p<0.001), Education (p=0.005) and Marital status (p=0.003) (Table 3). The score were higher among those having education greater than the primary level. Also married participants had a higher average score of HQoL.

Discussion

This study aimed to study the HQoL of the elderly using the standard instrument, SF36. Although this study focuses on elderly at the local level, it sheds light on future research on geographical and socio-cultural meanings of elder care at local, regional, and national levels in Iran.

In general, based on the findings of the present study we might conclude that HRQoL in participants, particularly residents in nursing home, was rather poor; even when compared with other studies like a study conducted by Tajvar et al. (2008) on 400 elderly in Tehran, the capital of Iran, that showed the mean scores for the SF-36 subscales ranged from 53.5 to 70.0. Although our study sample was small and the results could not be generalized to entire elderly population in Iran. To explain such findings one might argue that the most (62.30%) elderly participated in this study were without pensions and often their income does not adequately cover their living expenses. It is noticeable that most of the people in the North of Iran are farmer and when they reach to older age and be not able to work more, they become more economically dependent.

Our results showed significant relationship between residency of elderly and their total HQoL, which is similar to the results of the studies conducted by Lee and Shinkais (2003) & Mokhtari and Ghasemi (2011). Also we found that residents living in nursing home had lower score in all domains of SF-36 and its 8 domains. As others mentioned desirable HQoL in the elderly occurs when they are supported by their spouse, children, and relatives. They mentioned that one of the most important factors affects mental health of elderly, is living in their own home, and even some elderly express that they would like to die in it (Lee & Lee, 2009; Fassino et al., 2002; Nilsson et al., 2004). Decreased availability of family caregivers providing day-today care for their elderly family members as a result of urbanization and transformation in family structure from spread family to nuclear family, women more engagement in the labor force, along with the development of residential care services facilitates the utilization of a variety of forms of residential care in recent years (Bockerman & Johansson, 2011). So it is advisable that health policy

The results of this research showed a significant relationship between the marital status and HQoL, which is in accordance with a study conducted by Lee and Kom (2007). They found that married participants had a higher average score of HRQoL than the singles, divorced, widows and widowers. Since one of the potential health threatening risk factors in the elderly is loneliness, providing them with support and empowering them to face appropriately with this factor seems to be necessary. It seems counseling services could promote coping skills of elderly who miss their partners as a result of divorce or dead. In some traditional families in Iran, second marriage especially for women, when she widow or divorced, is a taboo and these families prefer women didn't get married again and continue their life for training their children. When these women reach to old age if their children leave home due to marriage, they may be lonelier which affects their HQoL. Changes in such wrong believes which neither has been confirmed by the most Iranian's religious "Islam" nor is logical, need to comprehensive efforts and improvement of universal education with assistance of religious leaders, nongovernmental organizations and other gate keepers.

In accordance to earlier studies (Tsai et al., 2004; Guler & Akal, 2009; Johnston, 2004), present study showed a relationship between education as a significant positive contributor and overall HQoL. According to Lasheras et al. (2002) lower educational level is associated with unhappiness, poor social relationships, poor self-assessed health, and sensory problems among the elderly. Education is an important indicator that may directly or indirectly influence HRQoL through its association with higher social class and economic status.

Despite some studies which show the older the people, the poorer HQoL they had (Tu et al., 2006; Rocha et al., 2002), in multivariate analysis there was no such association between age and HQoL of participants. It is probably that we investigated the HQoL of elderly on a base of questionnaire, and we did not measure other important dimensions of HQoL, such as health status of participants according to clinical and para clinical findings whereas elderly people experience diseases and impairments that threaten their quality of life (Carriere & Legare, 2000; Luleci et al., 2008).

Conclusion

Researchers and practitioners working with elderly people should be sensitive to the particularities of the specific context and population they work within .The results of this study have implications for policy and practice. This study emphasize the importance of planning programs to increase elderly people's social



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assistance, and improve medical, health and counseling services for them. It is recommended that all relevant stakeholders consider this fact in their interactions with elderly, prioritization in health promotion programs and resources allocation. Also there is further need to improve and strengthen formal care in the nursing home and reorienting health services both in the community and homes for the elderly.

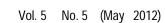
From limitation of our study was we neither detect health-related behaviors like physical activity, smoking habits, alcohol use nor participants' chronic diseases. Another limitation of this study included that it was designed to be a cross-sectional and the authors recommend that the research model be tested in future studies using a longitudinal design and with a larger number of participants, because doing so may clarify the relationship between underlying variables and the HQoL among elderly people. To fully understand of elderly people's HQoL, non-structured interviews administrated by an experienced interviewer are needed.

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