Research Article

The Relationship Between Chronic Diseases and Quality of Life of Elderly Residing in Nursing Homes Across Guilan

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Abstract

Background: Elderly's quality of life involves many factors, among which chronic diseases are of the most important. On the other hand, elderly residing in nursing homes are a group of elderly, who need special attention.

Objectives: the present study was conducted to investigate the relationship between chronic diseases and quality of life for elderly residing at nursing homes across Guilan province, Iran.

Methods: This descriptive-correlational study was conducted on elderly residing in nursing homes across Guilan province, during year 2016. Through a stratified random sampling approach, 180 elderly, aged 60 and older were selected from nursing homes. The data gathering tool was SF36 quality of life questionnaire, demographic information checklist and records of engaging with chronic diseases attained via face-to-face interviews. In order to analyze the gathered data, SPSS 16 Software, Pearson correlation, analysis of variance (ANOVA), and t test were utilized. Significance level was set at P < 0.05.

Results: Mean and standard deviation of the quality of life scores for the elderly residing in nursing homes was 62.6 (± 25.30). In all sub-scales, mean quality of life was significantly different from chronical diseases (P < 0.05). This research further indicated that mean quality of life was significantly related to age and marital status (P < 0.05).

Conclusions: The present research showed that an increase in the number of chronic diseases results in a reduction in the elderly's quality of life. As such, it is necessary to undertake training programs in communities and modify lifestyle to maintain and even enhance elderly's quality of life.

Keywords: Elderly, Quality of Life, Chronic Diseases

1. Background

Aging is a general phenomenon, which starts right at the point of fertilization and continues all along life, so that every single living creature will normally experience senescence (1). Senescence is a sensitive period in humans' life, and it is a social necessity to consider particular issues and demands raised within this period. Today, with its different dimensions (e.g. mental, social, cultural, doctrinal, and economic), senescence is among serious and challenging issues for every community, particularly for families in developing countries. According to the literature, health expenses are three to five times greater for elderly, when compared to others, and the growth in the number of elderly along with continuous and rapid advancements in medical technologies could increase the load of health expenses associated with long-term care, not only for the elderly themselves, but also for their family members and care-givers (2). In developed and developing countries, the ages of 65 and 60, respectively, are considered as the elderly thresholds.

However, UN considers people aged 60 and above as elderly (3). In 2006, total population of elderly around the world was reported as 687,923,000, with the figure estimated to reach 1,968,053,000 by 2050. Furthermore, based on this report, currently, elderly comprise 8% of total Iranian population, with the population of Iranian elderlies predicted to increase to 26,393,000 (26% of predicted total Iranian population at that year) (4). Referring to the official report of the 2011 general census of population and housing, 6,205,998 Iranians (8.2% of total population) are 60 years old or older, with the total population of Guilan province being 2,480,874, of which 286 789 (11.5%) individuals comprise the group with an age of 60 or above (5).

Today, quality of life is one of the most important issues when it comes to health care, so that enhancement of in-

dividuals' health level is one of the greatest health goals and is recognized as one of the most important factors affecting people's life, especially that of elderly, in the recent years (6). Health is the core to quality of life and since quality of life cannot be fully considered in the health care system, people tend to study the concept of health in relation to quality of life, which is defined as health-related quality of life. Health-related quality of life is a modern index for providing health, medical, and care services to different groups of populations, especially the elderly (7). Identification of common diseases among elderly makes it possible to undertake adequate planning to significantly reduce associated expenses and take effective steps towards enhancing elderly's quality of life and provide them with an active and successful old age (8). From a relevant point of view, chronic diseases affect all aspects of life. The methods by which a chronic disease could be managed, could enhance the patient's satisfaction with the provided care and their quality of life (9). Sari (2013) indicates that mean score of overall quality of life (56.7 ± 10.8) of elderly has an average status, and gender, education, residence time, previous residence status, and life composition have, respectively, the largest contributions in the determination of overall quality of life (10). Habibi (2012) indicated that the mean of overall quality of life over the studied sample was 57.43 ± 22.80, and found this to be significantly related to gender, education level, and present economic and health statuses, so that 82% of cases had at least one chronic disease (11). Esmaeili Shahmirzadi (2012) reported that 92% of elderly are engaged in a minimum of one chronic disease and significant differences were observed in average scores along all aspects of elderly's quality of life between elderly, who were engaged with at least one chronic disease and those, who were not engaged with such a problem; in conclusion, the higher the number of chronic disease, the lower will be the quality of life (12). Uzturk (2011) expressed a significant difference in the number of chronic diseases, types of chronical diseases, educational status, and marital status. The research revealed that, among the male and female elderly engaged with one chronic disease, there are significant differences in terms of the number of chronical disease, types of chronical disease, physical movement level, functional level, and quality of life (13). Konagaya (2010) conducted a research in Japan where he stipulated that chronic diseases tend to adversely effect elderly's quality of life, with the quality of life being affected by temporal fluctuations. Different effects of chronic diseases on subscales of quality of life are ranked. As such, evaluation of elderly's quality of life would be a multidimensional evaluation (14). Since increasing number of elderly will lead to serious problems and issues for the society, it is necessary to pay special attention to elderly and their special circumstances, so as to provide them with mental and physical health. Recognition of characteristics of the community of elderly, considering differences in their living conditions, could provide a basis for enhancing their quality of life. Furthermore, considering the fact that the number of places where elderly are provided with nursing services is increasing and that a general cultural trend is developing toward further assigning nursing homes for taking care of elderly, indicates further necessity of undertaking such studies (4).

Considering the importance of discussing elderly's quality of life in every culture, and also due to greater vulnerability of the elderly, as compared to other age groups, the present study aimed at investigating the relationship between chronic diseases and quality of life for elderly residing at nursing homes across Guilan, as the oldest province in Iran, to provide the basic information for policy makers in this filed.

2. Methods

This descriptive-correlational study was carried on 180 elderly residing at nursing homes through simple stratified random sampling approach, across Guilan province, Iran. A total number of 1200 elderly were considered as the research population; this sample resided in a fulltime scheme, at four large nursing homes such as Rasht, Lahijan, Some'eh Sara, and Asten-e-Ashrafieh cities. Samples were randomly selected with respect to the number of elderly hospitalized at the nursing homes. The questionnaire used in this research comprised of 3 sections. The first section asked for demographic information, such as age, gender, education level, marital status, and income. The second section included a checklist (Adopted from Health care for the elderly: a manual for primary health care workers - Eastern Mediterranean Region) of chronic diseases, such as abnormal blood pressure, cardiovascular diseases, brain infarction, diabetes, cancer, respiratory diseases, urinary incontinence, loss of or reduction in sense of sight, attenuated hearing, movement disorders due to different types of arthritis, orthopedic diseases, different types of mental disorders, and dental problems, which were extracted by referring to the elderly's medical records and then registered on the aforementioned checklist (15). The third section of the questionnaire was a standard questionnaire on quality of life and had 2 subscales of overall physical health and mental health, with the corresponding information obtained via face-to-face interviews. The questionnaire on quality of life (SF-36) had 36 questions, including 8 sub-scales, with each sub-scale composed of 2 to 10 statements. Two major sub-scales of this questionnaire included physical health subscale (as a combination of physi-

cal functionality, role disorder due to physical health, pain, and public health sub-scales) and mental health sub-scale (as a combination of role disorder due to emotional health, energy/fatigue, emotional well-being, and social functionality).

Range of scores associated with the questionnaire was 0 to 100, with scores, greater than 50 interpreted as high quality of life and scores lower than 50 being indicative of low quality of life.

Based on the classification proposed in "Health care for the elderly: a manual for primary health care workers" (15), edited for Eastern Mediterranean Region and published by Welfare Organization of Iran, chronic diseases are classified to 12 common diseases among the elderly. All subjects were grouped in 3 categories, elderly engaged with one, two, and three or more chronic diseases, respectively. The inclusion criteria was a minimum of 6 months of fulltime hospitalization at the corresponding nursing home, ability to communicate, no significant hearing loss, no loss of consciousness (unawareness about time, place and person), lack of low mental capability, and tendency towards providing the required information.

Data gathering was undertaken following the approval of corresponding authorities and obtaining permission from officials of the nursing homes as well as gaining patient satisfaction while considering ethical issues at all stages of the research. In order to avoid bias in data gathering in this study, one of the members of the research team attended at beside of the units understudy and filled the questionnaires via face-to-face interviews. In order to analyze the gathered data, SPSS 16 Software, Pearson Product-Moment Correlation Coefficient (PMCC), ANOVA, and t test were utilized. For all tests, a $P < 0.05$ was taken as the significance level.

3. Results

Demographic findings of this study are presented in Table 1.

This study indicated a negative significant relationship between the number of chronic diseases and two overall dimensions of physical health and mental health, on one hand, and quality of life, on the other hand ($P < 0.05$) (Table 2).

4. Discussion

The present study was conducted to investigate the relationship between chronic diseases and quality of life of elderly residing at nursing homes across Guilan province, Iran. Accordingly, the elderly's overall quality of life score

was found to be 62.66 ± 25.30 and average score over all sub-scales of quality of life was evaluated to be above 50.

The highest and lowest scores among sub-scales of quality of life were those of pain (73.63 ± 25.51) and physical functionality (54.58 ± 40.68), respectively.

Regarding the relationship between demographic variables and the elderlies' quality of life, the present study suggests a linear and negative significant relationship between age and quality of life ($P < 0.05$, r = -0.545), indicating that quality of life score tends to decrease at older ages.

Ulker et al. (2016) used SF-36 as a tool to investigate elderly residing at nursing homes in Turkey and reported a reduction in quality of life with age (16). Khazaei Jalil et al. (2015) and also Naseh et al. (2014) reported similar results (1, 17). However, in the research by Khushemehri et al. (2012), no significant relationship was found between age and quality of life of elderly, which is against the results of the present study (18). This difference could be a result of the different settings and environments wherein elderly from the industrial community of Alborz province and those of non-industrial community of Guilan province live, and it seems that, regardless of age, elderly from industrial communities are more prepared to reside at nursing homes.

A significant relationship was found between average quality of life and marital status, so that average quality of life was reported to be higher among divorced elderly (82.12 ± 21.74), as compared to other elderly ($P < 0.05$).

In the research by Arastoo et al. (2011), who studied elderly residing at Kahrizak nursing home (Tehran, Iran), the relationship between quality of life and marital status was evaluated to be significant, with married elderly possessing the highest average quality of life (19). In addition, the research by Khushemehri et al. (2011) and Jadidi et al. (2015) also indicated the significance of this relationship, with the research by Jadidi indicating the lowest quality of life score for elderly residing at nursing homes, whose wives had passed away (18, 20). Results of the present study showed a negative significant linear relationship between the number of chronic diseases and quality of life of elderly residing at nursing homes ($P < 0.05$, r = -0.657). As such, one can infer that, as the number of chronic diseases with which elderly are engaged increases, their quality of life decreases. In the research by Yanmei et al. (2014), who applied SF-36 as a research tool in elderly residing at Tangshan, China, chronic diseases were introduced as important factors contributing to reduced quality of life for the elderly (21). In the research by Konagaya et al. (2010), who studied a sample of Japanese elderly, chronic diseases were proposed as a factor contributing to reduced quality of life for the elderly (14). Furthermore, the results obtained in

Table 1. Distribution of Demographic Characteristics of the Researched Elderly (N = 180)

Variable	Status	Absolut Frequency	Relative Frequency
Age	Young elderly (60 - 74)	83	46.1
	Old elderly (75 - 100)	97	53.9
Gender	Male	61	33.9
	Female	119	66.1
Education level	Illiterate	159	88.3
	Middle school	17	9.4
	Intermediate diploma	2	1.1
	Graduate	2	1.1
Marital status	Single	28	15.6
	Married	12	6.7
	Widow	121	67.2
	Divorced	19	10.6
Economic status	Poor	153	85
	Intermediate	35	13.9
	Good	2	1.1
Previous job	Housewife	51	28.3
	Public employee	5	2.8
	Labor	18	10
	Farmer	76	42.2
	Self-employed	8	4.4
	Other	22	12.2
Number of chronic diseases	No chronic disease	45	25
	One chronic disease	33	18.3
	Two chronic diseases	32	17.8
	Three or more chronic diseases	70	38.9
Rating of quality of life	Low quality (< 50)	72	40
	High quality (> 50)	108	60

Table 2. Correlation Between the Number of Chronic Diseases and Dimensions of Quality of Life (Physical Health and Mental)

Statistical Relationship	Quality of Life	Physical Health	Mental Health
Number of chronic diseases			
PMCC	-0.657	-0.668	-0.609
P value	P < 0.05	P < 0.05	P < 0.05

the research by Esmaeili Shahmirzadi et al. (2012), who considered the effect of chronic diseases on quality of life of elderly in eastern Tehran by using SF-36 as a research tool indicated a statistically significant relationship between chronic diseases and all sub-scales of quality of life for the elderly ([12]). In another research conducted by Zahmatkeshan et al. (2012) across the city of Bushehr, a significant relationship was found between physical and mental dimensions of quality of life and the presence of chronic diseases ([6]). To sum up, no research was found on possible rejection of the relationship between chronic diseases and quality of life.

Results of the present study showed a statistically significant relationship between elderly's quality of life and chronic diseases. Therefore, investigation and control of chronic diseases along with managing other factors contributing to quality of life are very necessary. Regarding the

limitations of this research, one can refer to possible structural differences in factors contributing to quality of life for those elderly residing at nursing homes versus those not-residing at such places. As such, it does not seem reasonable to generalize the results of the current study to the entire community of elderly across the province.

Accordingly, it is recommended to undertake an equivalent study on the elderly across the province, who reside at places other than nursing homes, so as to compare the qualities of life between these two groups of elderly to better assess the role of chronic diseases in overall quality of life. This research showed that an increase in the number of chronic diseases tended to reduce elderly's quality of life. As such, it is necessary to undertake training programs in communities and modify lifestyle to enhance the elderly's health level and their quality of life.

Acknowledgments

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