Prev Care Nurs Midwifery J (PCNM)
https://doi.org/ 10.61882/pcnm.15.1.19

PCNM. 2025; 15(1): 22-29
Peer-Reviewed | Open Access

Preventive Care in Nursing and Midwifery Journal

Original Article

Comparison of the Quality of Life of Elderly Men and Women Residing in Nursing Homes in the City of Zanjan

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Received: 20 Jan 2025 **Accepted:** 10 Feb 2025 **Published:** 28 Feb 2025

Article Info

Keywords:
Quality of Life
Nursing Home
Elderly People

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How to Cite This Article:
Pourrahimi A , Keshavarz Afshar M , Dezhgam N, Rohani B , Taghiloo H, Comparison of the quality of life of elderly men and women residing in nursing homes in the city of Zanjan Prev Care Nurs Midwifery J. 2025; 15(1): 22-29

Abstract

Background: Quality of life serves as a helpful indicator for identifying the health and well-being of elderly people and also a criterion for evaluating the efficacy of the quality of care provided.

Objectives: The present research aimed to determine and compare the quality of life in elderly men and women residing in nursing homes.

Methods: This cross-sectional study was conducted on 110 elderly men and women residing in nursing homes in Zanjan province. Sampling was carried out through a convenience sampling method. The tools used in this study comprised a demographic information questionnaire and the Leiden-Padua (LEIPAD) Quality of Life Questionnaire. Data were analyzed using SPSS 20 software. The mean (standard deviation [SD]) and frequency (percentage) were used for descriptive statistics, and the independent t-test was employed for inferential statistics.

Results: The majority of elderly people participating in the study were male (60.9%). Their mean (SD) age was 77 (5.9) years, and their mean (SD) length of stay in the nursing home was 14.38 (3.7) years. The mean (SD) quality of life score for all elderly people investigated was 44.32 (13.90) out of 93. Moreover, the mean (SD) quality of life score was significantly higher in men (51.86 [12.45]) compared to women (32.58 [5.10]) ($p < 0.001$).

Conclusion: Based on the results obtained, the quality of life among elderly people residing in nursing homes in Zanjan was found to be poor to moderate. Hence, it is recommended that relevant authorities and stakeholders consider implementing financial support and programs aimed at improving the quality of elderly people's place of residence, in order to enhance their quality of life and the quality of care provided.

Implications of this paper in nursing and midwifery preventive care:

- The results of this study can be employed in the design and implementation of preventive care programs aimed at enhancing the physical and mental health, strengthening social relationships, and improving their living environment of elderly people residing in nursing homes.
- Nurses can identify risk factors associated with low quality of life, such as chronic diseases, depression, loneliness, and lack of physical and social activity, and develop appropriate preventive interventions for each individual.

Introduction

The rapid increase in the number of elderly people is a global phenomenon, with declining fertility rates and rising life expectancy contributing to the growth of the aging population relative to the younger population [1]. It is estimated that by the year 2030, elderly people will comprise 21% of the total global population [2].

According to the 2015 United Nations projections, Iran's population growth is anticipated to gradually decline between 2011 and 2050. Concurrently, life expectancy is expected to rise to 79 years by 2050. Furthermore, the proportion of elderly people in Iran is projected to reach 14.4% by 2030 and 31.2% by 2050. These figures surpass the global elderly population ratio forecasted for 2050, which stands at 21.5% [3].

The shift in family structure from extended to nuclear, coupled with increased longevity and the non-acceptance of elderly people within families, has precipitated changes in the lifestyle of this age group. Quality of life and subsequent mental well-being are integral components of the aging process [4]. In recent years, living with an enhanced quality of life has become a primary and major health concern. Quality of life, as a multidimensional concept, is defined as individuals' perception of their position in life concerning the culture and value systems in which they live, their goals, expectations, standards, and priorities [5].

Due to their unique circumstances, including extensive life experiences, advanced age, and specialized skills, elderly people possess a distinctive quality of life that differs from other age groups [6].

Furthermore, examining the quality of life of individuals, particularly elderly people, can be taken into account as a key indicator and a beneficial method for assessing public health and well-being [7].

More than half of the elderly population experience difficulties in performing basic activities of daily lie, such as bathing, dressing, and eating, as well as other activities, including cooking, administering medication, utilizing currency, and performing household chores or lifting objects, with a disproportionate amount of disability being observed among older age groups [8].

Moreover, given economic, social, and other challenges faced by elderly people, there is an increasing trend toward institutionalization in nursing homes, leading to a shift in care provision toward nursing homes [9].

Studies have revealed that elderly people residing in nursing homes report lower quality of life and higher levels of loneliness compared to those living at home [10,11]. Additionally, research indicates that the decline of traditional support and the absence of alternative support systems diminish the mental and social well-being of elderly people. Consequently, individuals with reduced social support experience lower levels of mental and social health [12]. Approximately 20% of European elderly people reside in nursing homes for a long-term period. Thus, considering the unique circumstances of this population and their need for care and maintenance, nursing homes are essential, and ensuring the quality of care in these facilities is of paramount importance [13].

Enhancing the quality of life is regarded as the ultimate goal of elderly care in nursing homes. Nevertheless, various studies have demonstrated that elderly people residing in nursing homes experience a lower quality of life compared to those living at home, with their lives often characterized by despair and a lack of meaning [10,14].

Emotional challenges (feelings of rejection, loneliness, anxiety, social comparison, despair, sadness, and fear of the future), personal challenges (feelings of belonging to a personal environment and limited recreational activities), and social challenges (feelings of pity from others, absence from social gatherings, and reduced family connections) are among the reported challenges and problems faced by elderly people in nursing homes [15].

As indicated by the results of a study, the quality of life is higher in men than in women and decreases with increasing age. However, the quality of life status has been shown better among married elderly people [16].

According to the results of another study, women's quality of life is lower than that of men in terms of

education level, socioeconomic status, and familial support [17]. While addressing the quality of life of all elderly people is a crucial aspect of the healthcare system, those residing in nursing homes, being the most vulnerable segment of the elderly population, are prioritized [18].

A review of existing studies indicated that despite research pertaining to the quality of life of elderly people in the country, there is a dearth of studies focusing on the factors associated with the quality of life of those residing in nursing homes. Identifying gender-based differences contributes to the advancement of knowledge and a better understanding of the disparities in the dimensions of quality of life between elderly men and women in specific settings, such as nursing homes. These disparities may stem from various factors, including biological, social, cultural, and psychological variations. Attention to gender-specific differences and the unique needs of each elderly person should be taken into consideration when providing preventive care in nursing for both elderly men and women.

Objectives

This study aimed to determine and compare the quality of life of elderly men and women residing in nursing homes in Zanjan, Iran. The findings are intended to provide a foundation for designing and implementing gender-specific interventions aimed at improving the quality of life for institutionalized older adults.

Methods

Study Design and Setting

This cross-sectional study was conducted on 110 elderly residents from the "Bagh-e-Mehrabani" and "Narges" nursing homes in Zanjan Province, Iran, between June and August 2019.

Participants

A total of 141 elderly people were under care in these two centers. Of them, 31 were excluded from the study due to severe hearing impairment, severe dementia, or unwillingness to cooperate. Ultimately, the study continued with 110 elderly participants, comprising 67 males and 43 females.

The inclusion criteria for participants included age over 60 years, being conscious, and having the physical ability to cooperate in completing the questionnaire.

Sampling Method

Participants were selected through a convenience sampling method from June to August 2019.

Data Collection

The tools used in this study comprised a demographic information questionnaire and the Leiden-Padua (LEIPAD) Quality of Life Questionnaire. The demographic information questionnaire encompassed age, gender, duration of residence, pre-residence occupation, medical history, family relationship status, satisfaction level, education level, and place of residence. This questionnaire was completed through interviews with the elderly participants.

The necessary permissions for data collection were obtained. After coordinating with and obtaining approval from the directors of the "Bagh-e-Mehrabani" and "Narges" nursing homes, the researcher introduced themselves to the study participants and, considering the participants' comprehension level, explained the study's objectives. Given that the majority of the study participants were illiterate, the researcher proceeded to complete the questionnaires. Following the collection of the distributed questionnaires, the data were entered into SPSS version 20.

Variables

The study variables included demographic characteristics (age, gender, duration of residence, pre-residence occupation, medical history, family relationship status, satisfaction level, education level, and place of residence) and quality of life dimensions (Physical functioning, self-care, depression and anxiety, mental functioning, social functioning, sexual functioning, and life satisfaction).

Measurement Tools

The LEIPAD Quality of Life Questionnaire was developed under the auspices of the World Health Organization (WHO) and researched by De Leo et al. in Padua and Brescia in Italy, Leiden in Netherlands, and Helsinki in Finland [19].

This questionnaire assesses the quality of life of elderly people across 7 dimensions: Physical functioning (5 questions), self-care (6 questions), depression and anxiety (4 questions), mental functioning (5 questions), social functioning (3 questions), sexual functioning (2 questions), and life satisfaction (6 questions). The questionnaire comprises 31 questions on a 4-point Likert scale (ranging from zero to three points). The questionnaire has a minimum score of zero and a maximum score of 93. Higher scores represent better quality of life. Ghasemi et al. calculated and confirmed the content validity and reliability of this questionnaire among Iranian elderly people, reporting a reliability coefficient of 0.83 using Cronbach's alpha [20].

Additionally, this questionnaire has been translated and standardized by Davami and Hesamzadeh, with its validity and reliability confirmed. They reported a reliability coefficient of 0.874 using Cronbach's alpha [21].

Statistical Methods

Following the collection of the distributed questionnaires, the data were entered into SPSS version 20. The normal distribution of quantitative data was assessed using skewness and kurtosis. The quantitative data in this study exhibited a normal distribution. An independent t-test statistical analysis was employed to compare the elderly people's quality of life based on gender. The significance level in this study was set at less than 0.05.

Results

A total of 141 elderly people were under care in these two centers. Of them, 31 were excluded from the study due to severe hearing impairment, severe dementia, or unwillingness to cooperate. Ultimately, the study continued with 110 elderly participants, comprising 67 males and 43 females (Table 1).

Table 1. Demographic Information of Elderly Participants Under Investigation

Variable		Bagh-e-Mehrabani n (%)	Narges n (%)
Gender	Male	67 (100)	-
	Female	-	43 (100)
Pre-residence occupation	Unemployed	-	43 (100)
	Employed	67 (100)	-
Medical history	Diabetes	7 (10.44)	4 (9.30)
	Cardiovascular disease	59 (88.05)	26 (60.46)
	Psychiatric disorders and	61(91.04)	37(86.04)
	Other	(40.29) 27	13(30.23)
Family relationship status	Moderate	13 (19.40)	4 (9.30)
	Good	54 (80.60)	39 (90.70)
Satisfaction level	Moderate	32 (47.8)	30 (69.8)
	Low	35 (52.2)	13 (30.2)
Education level	Literate	4 (5.97)	2 (4.65)
	Illiterate	63 (94.02)	41 (95.34)
Place of residence	City	45 (67.16)	32 (74.41)
	Village	22 (32.83)	11 (25.58)
Age	Mean (SD)	78 (5.6)	76 (6.2)
Duration of residence	Mean (SD)	15.32 (4.2)	13.45 (3.2)

The mean (standard deviation [SD]) quality of life score for all study population was 44.32 (13.90). The mean (SD) quality of life score for elderly men (51.12 [86.45]) was significantly higher compared to elderly women (32.58 [5.10]) (p<0.001). Additionally, there were significant differences in quality of life scores between elderly men and women in the domains of physical functioning, depression and anxiety, cognitive functioning, social functioning, life satisfaction, and quality of life (p<0.001). However, no significant differences were observed in the domains of self-care (p=0.076) and sexual functioning (p=0.962) (Table 2).

Discussion

The current study aimed to determine and compare the quality of life in elderly men and women residing in nursing homes in Zanjan in 2019. The results demonstrated that the mean quality of life overall

score among elderly people residing in the nursing homes investigated was lower than the mean score obtained by the LEIPAD questionnaire. The findings suggested that the mean quality of life score was higher in elderly men compared to elderly women. In this regard, conflicting results have been reported [22]. Nevertheless, this finding is consistent with the results of studies conducted by Maghsoudi et al. and Shokouhi et al. [10,11]. The concept of quality of life is a multifactorial one, and one of the important factors in this regard is the cultural context. Therefore, it seems that in the cultural context of Iran, and due to some culture-related gender discriminations and high psychological pressures on women, men experience a higher quality of life than women in old age [11]. Meanwhile, some studies have also reported no significant difference in quality of life between the two genders of elderly people [23].

Table 2. Comparison of Mean Scores of Quality of Life (QoL) Dimensions in Elderly Women and Men (N=110)

QoL Dimensions		n	Mean	SD	*Significance
Physical functioning	Male	67	8.56	2.23	> 0.001
	Female	43	2.83	1.83	
Self-care	Male	67	12.38	7.05	0.076
	Female	43	10.32	3.29	
Depression and anxiety	Male	67	10.82	2.65	> 0.001
	Female	43	2.97	1.01	
Cognitive functioning	Male	67	6.61	3.06	> 0.001
	Female	43	3.16	1.64	
Social functioning	Male	67	3.50	1.30	> 0.001
	Female	43	6.25	1.11	
Sexual functioning	Male	67	0.08	0.41	0.962
	Female	43	0.09	0.29	
Life satisfaction	Male	67	9.88	1.96	> 0.001
	Female	43	6.93	1.07	

Physical functioning exhibited a significant difference between the two genders in elderly people, with men reporting higher levels of physical functioning compared to women. It appears that variations in biological characteristics between the two genders likely exert differential effects. Elderly women are more prone to osteoporosis and muscle weakness compared to elderly men. Consequently, studies have indicated a higher fear of falling among women [24]. Therefore, the observed gender difference is justifiable.

In the present study, elderly men and women did not exhibit a significant difference in the self-care dimension. Conversely, in a study, Prochota reported that elderly women scored higher in self-care compared to elderly men [25]. Furthermore, in a study conducted by Aliasquarpoor and Eybpoosh, elderly men and women showed a significant difference in the self-care dimension of quality of life, with elderly men demonstrating better self-care [26]. In explaining this issue, it can be stated that considering the direct correlation between increased age and decreased quality of life in the elderly population [26], and given that the mean age of elderly men and women in the present study did not differ significantly, the lack of significant difference in the self-care dimension between the two genders in the present study may be due to the absence of a notable difference in their mean age.

The present study revealed that elderly men experienced more severe anxiety and depression. Several studies have indicated that the prevalence of mental disorders increases with age in the pre-elderly period, with a higher frequency observed in females [27]. Consequently, evidence suggests that the incidence of anxiety and depression in women is 1.5 times higher than in men [28]. However, such assurance is not provided regarding elderly people. In other words, the prevalence rates of depression and anxiety among different genders in elderly people differ from those in younger age groups [29]. Anxiety and depression in older ages may be either consistent or reversed between the two genders [27]. Therefore, the findings of the present study appear to be consistent with existing findings.

The quality of life in the dimension of cognitive functioning was statistically different between the two genders. Men tend to report higher cognitive functioning than women. According to the theory of fluid and crystallized intelligence, cognitive functioning, such as non-verbal reasoning, memory, and processing speed decline with age. While cultural knowledge, also known as crystallized

intelligence, tends to increase with age [30], there is evidence indicating that the rate of brain atrophy is higher in elderly men compared to elderly women. Consequently, women are predicted to exhibit less age-related cognitive vulnerability than men [31]. Nevertheless, the results of some studies demonstrate no significant differences in cognitive functioning between the two genders in elderly people [30]. Considering that lifestyle and diverse life experiences can be an effective component in cognitive functioning [32], and given that these components are dependent on the social context, it is likely that the reason for the discrepancy in the results of the present research with other studies is the existence of this discrepancy.

The current study demonstrates that there is no significant difference in sexual functioning between the two genders in elderly people. According to a report, widowed men engage in more sexual activity than widowed women. Additionally, the report indicates that elderly women are more likely than elderly men to express a lack of sexual desire [33]. Generally, the decline in sexual functioning with increasing age is likely a natural and physiological issue due to decreased sexual hormone levels in both genders [34]. A crucial point to consider here is the subject of social context. Social context can significantly influence sexual functioning [35].

No significant difference was observed in life satisfaction between elderly people of both genders. The level of life satisfaction among elderly men and women may vary, with reports indicating both higher life satisfaction in elderly women compared to men, and vice versa [36]. One limitation of the present study was the small sample size. Therefore, it is recommended that a study with a larger sample size be conducted in the future. Given the study design, the findings of this study should be generalized with some caution.

Conclusion

The quality of life among elderly people residing in nursing homes in Zanjan ranged from poor to moderate. There were significant differences between the two genders in terms of depression and anxiety, cognitive functioning, physical functioning, social functioning, and life satisfaction. However, no significant differences were observed between the two genders in terms of self-care and sexual functioning. Hence, it is recommended that relevant authorities and stakeholders consider implementing financial support and programs aimed at improving the quality of elderly people's place of residence, in order to enhance their quality of life and the quality of care provided.

Ethical Considerations

This study received approval from the Ethics Committee of Zanjan University of Medical Sciences (Approval Code: IR.ZUMS.REC.1398.041). All procedures were conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

Prior to participation, informed consent was obtained from all elderly participants. They were assured of the confidentiality and anonymity of their data. Participants were also informed of their right to withdraw from the study at any stage without any consequences.

Acknowledgments

This article has been extracted from a research project (code: A-12-972-5.3019) approved by Zanjan University of Medical Sciences. The authors would like to thank all elderly people participating in this study, as well as the managers and staff of the "Bagh-e-Mehrabani" and "Narges" nursing homes, for their cooperation in this research.

Conflict of Interest

No conflict of interest.

Funding

The Vice-Chancellor for Research and Technology of Zanjan University of Medical Sciences financially supported this research.

Authors' Contributions

Study concept and design: Pourrahimi A. and Keshavarz Afshar M.

Acquisition of data: Pourrahimi A. and Keshavarz Afshar M.

Analysis and interpretation of data: Taghiloo H. and Rohani B.
Drafting of the manuscript: Dezhgam N. and Taghiloo H.
Critical revision of the manuscript for important intellectual content: Taghiloo H. and Dezhgam N.
Statistical analysis: Taghiloo H. and Rohani B.
Administrative, technical, and material support: Taghiloo H. and Pourrahimi A.
Study supervision: All authors

Artificial Intelligence Utilization

The authors declare that no generative AI technologies were used in the creation of this manuscript.

Data Availability Statement

The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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