

Research Article

A Comparison of Loneliness of the Elderly Residing in Nursing Homes and Those Living With Their Families in Yasuj: A Case Study

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ABSTRACT

Background: Loneliness is defined as a set of feelings encompassing reactions to the absence of intimacy and social needs. It often appears as social isolation among the elderly population. The present study aimed to compare feeling of loneliness of the elderly residing in nursing homes and those living with their families in Yasuj, Iran.

Methods and Materials: The present comparative descriptive-cross sectional study was conducted on 70 elderly people aged between 60-90 (39 people living with their families and 31 people residing in nursing home) in Yasuj in 2014. Data were collected using a two-part questionnaire. The first part included demographic data and the second part which was measured by UCLA Loneliness Scale. Researchers surveyed the elderly. Statistical analysis was performed by SPSS software using chi-square, t-test and one-way and two-way ANOVA tests.

Findings: Overall, mean loneliness scores indicated significant feeling of loneliness among both elderly people living with their families and those residing in nursing homes. The results showed that mean loneliness scores was significantly higher for residents of nursing homes than the elderly living with their families ($P < 0.001$). In comparison between groups, loneliness scores showed no significant differences in demographic variables between two groups but in comparison within groups a significant increase of scores was observed in men compared to women living in nursing home.

Conclusions: The results of the present study showed that loneliness of the elderly residing in nursing homes is higher than those living with their families. Thus, the supervisors of nursing homes should pay attention to the elderly people's needs and provide general training to enhance the tradition of caring the elderly people by their families.

Keywords: Loneliness, Elderly, Nursing homes

INTRODUCTION

According to World Health Organization's definition, the elderly refers to the age from 60 onwards and it is the result of the natural aging process and leads to physiological, psychological and social changes in elderly people (2). Every year, the world population is increasing by 1.7%, while the world's population aged 65 years and older is increasing by 2.5%. According to the latest statistics from the Ministry of Health in 2011, 8.2% of Iran's population are people older than 60 years and it is estimated that this ratio will reach 10.5% in 2025 and 21.7% in 2050 (6). Due to the rapid increase in the elderly population, providing their health and welfare in the society gradually becomes more extensive (7).

Aging is a sensitive period of human life and it is socially necessary to pay attention to the problems and needs of this period (1). The results obtained from various studies indicated that 58% of people older than 65 years must be helped to do their daily activities (4, 3). In the process of treatment and care of elderly people, special attention should be paid to factors affecting the quality of their lives. Methods of care and treatment are useful when they promote elderly people's self-esteem and increase the quality of their lives (3). Protecting the elderly people should not only aim to increase their life expectancy (longevity), but, the concept of dynamic aging is an issue i.e. by increasing the quantity of elderly population, the quality of their life should also be taken into consideration (3, 5). With aging and the beginning of old age, people gradually lose some of their psycho-social and physiological functions (8). Elderly people with multiple physical and psychological problems are exposed to increased risk of chronic diseases and isolation and their individual independence is threatened. As a result, the risk of bringing them to special care centers for the elderly people is increased (9). Due to exclusion from social activities, elderly people are prone to depression and increased loneliness (8). Loneliness is a sad phenomenon that can be seen in various social groups to different degrees. This

phenomenon plays an important role in people's social interactions and it is one of the most serious and most common public and social health problems of the elderly (10). Evidence suggests that 20 to 40 percent of elderly people reported that they feel lonely (11, 12), and 5 to 7 percent reported severe or persistent loneliness (13, 14). Loneliness predicts depression (15, 16), sleep disturbance and daily malfunctions (17), decreased physical activity (18), impaired cognition and mental health (19). Scientific evidence suggests that loneliness is a predictor of death (-20-22). Loneliness is associated with low levels of well-being (23), and high levels of depression (24) in lonelier people. People who feel lonely are faced with emptiness, sadness and a lack of sense of belonging. Their social interactions, lifestyle, and health are affected in different ways (25). Scientific evidence indicates that loneliness is an etiological factor in health and welfare that has immediate and long-term serious mental health consequences. Dissatisfaction in relationship with others is associated with loneliness and could be considered as a failure to meet sense of belongingness (25). Studies found a significant negative correlation between loneliness, family structure and life satisfaction (26-29). Loneliness is associated with aging because of shrinking of social networks due to the loss of relatives and friends (30). This feeling is associated with decreased life satisfaction (31). Although several studies conducted on different aspects of elderly life in Iran and all over the world and they sometimes reported contradictory findings, considering the fact that because of the cultural conditions prevailing in Kohgiluyeh and Boyer-Ahmad province most elderly people live with their families, and there are strong emotional relationships between family members, and establishment of nursing homes has not a long-term history, no study has been conducted on loneliness of old people in this province. Therefore, the present study aimed to assess and compare loneliness of elderly living with their

families and those living in nursing homes in Yasuj.

METHODS AND MATERIALS

The present paper is a descriptive-cross sectional study conducted in Yasuj in 2014. The survey was carried out on all elderly men and women residing in nursing homes or living with their families in Yasuj who were qualified for the study and were willing to participate in the study. The population of the study had the following criteria such as being aged 60 and older, the absence of hearing and speech problems, awareness of space, time, objects and individuals, with no history of psychiatric hospitalization, absence of psychological therapy and grief experience during the past 6 months, lack of receiving any treatment disrupting mental ability, memory or thinking. The available participants included 70 individuals (39 people living with their families and 31 people residing in nursing homes). Furthermore, after receiving permission from the university's ethics committee and approval of Yasuj Welfare Organization and Yasuj nursing home officials, all participants wrote consent to participate in the research. In this study, demographic questionnaire and UCLA Loneliness Scale were used to measure the level of loneliness. The questionnaires were completed by the researcher in personal interviews.

In this research, data were collected using the following tools:

- 1- Demographic Profile questionnaire which was used for factors such as age, gender, educational level, number of children, marital status, and current residence status.
- 2- Russell loneliness questionnaire: UCLA Loneliness Scale (32) has twenty questions that the reader should respond to each question based on the four-point Likert scale including: "Never" (score 1), "Rarely" (score 2), "Sometimes" (score 3) and "Often" (score 4). The test scores range from 20 to 80. UCLA

Loneliness Scale was developed by Russell Ferguson for the first time. After editing it for three times, the final version of the scale was used for four groups including students, nurses, teachers and the elderly in different ways such as self-report and interview. The alpha was ranged from 0.89 to 0.94. In the elderly, the test was repeated one year later and test-retest correlation of 0.73 was obtained which is satisfactory. Davarpanah (33) translated the scale into Persian. He obtained Cronbach's alpha of 0.78 for this scale. Reliability coefficient of loneliness questionnaire used in this study was equal to 0.78 obtained from Cronbach's alpha formula.

Finally, the collected data were analyzed using SPSS software and statistical tests such as chi-square, independent t-test, one-way and multi-way ANOVA tests

Findings

The present study was conducted on 70 elderly participants (43 men (61.4%) and 27 women (38.6 percent)). The average age was 69.1 years and the elderly aged between 60 and 85 years old. The majority of them (58 people, 82.9%) were illiterate, 15 individuals (21.4%) had no children, 30 participants had 1 to 4 children (42.9%) and the remaining had 5 or more children. 54.3% of the elderly were couples and the remaining participants had not husband or wife. 55.7% of them lived with their families and 44.3% resided in a nursing home.

Comparison of demographic information related to elderly living with families and residing in nursing home using the chi-square test indicates that there was no significant difference in age, gender and educational level between the two groups. While there was a significant difference in marital status and number of children between the two groups so that the maximum single (38.7%) as well as "with no children" participants (48.39 %) were in the group of elderly residing in nursing home (Table 1).

Table 1: Comparison of demographic characteristics between elderly residing in nursing home and those living with their families

Variable		Living with family	Residing in nursing home	Degree of freedom	Chi ²	P
		Frequency (percent)	Frequency (percent)			
Gender	Female	16(41.03)	11(35.48)	1	0.22	64
	Male	23(48.97)				
Age	>= 70	19(48.7)	15(48.39)	1	0.001	98
	< 70	20(41.3)	16(51.61)			
Marital status	Single	0.00	12(38.7)	3	20,4	0.001
	Married	27(69.23)	11(35.49)			
	Widowed or divorced	12(30.77)	8(25.8)			
Educational status	Illiterate	30(76.92)	28(90.32)	1	2.2	0.14
	Literate	9(23.08)	3(9.68)			
Number of children	0	0.00	15(48.39)	2	35.7	0.001
	1-5	15(38.46)	15(48.39)			
	5 and more	24(61.54)	1(3.22)			

Kolmogorov-Smirnov test indicated that data obtained from Loneliness Scale of the participants had a normal distribution. As a result, parametric tests were used for data analysis.

The mean raw loneliness score of all elderly participants was equal to 13.23 ± 47.59 . Comparison of the mean raw loneliness score between the two groups represents that this score in the elderly residing in nursing home (11.55 ± 58.03) was higher than those living with their families (7.23 ± 39.27) and independent t-test showed this significant difference ($.001, t = 7.9 \geq P$). In linear regression model, only gender was correlated to the raw loneliness score and other demographic variables such as age, education, number of children and marital status were not correlated to this score (Table 2). However, due to significant difference in some variables between the two groups as well as the correlation between gender and loneliness, ANCOVA test was conducted. In this test, after eliminating the effects of other variables, the results also showed the impact of habitat on loneliness and the research hypothesis based on the higher score of feeling loneliness among the elderly living in nursing homes compared to those living with their families was accepted.

Table 2: Regression model to determine correlations between variables and raw score of loneliness in elderly participants

Model	Standardized beta coefficient	T	P
Age	0.05	6	0.56
Gender	0.22	2.37	0.02
Number of children	-0.19	-0.66	0.51
Marital status	01	1.05	0.3
Habitat	0.53	4.1	0.0001

In comparison between groups in terms of age group, although loneliness score from elderly under the age of 70 and 70 years and older who were residing in nursing home was higher than elderly people living with their families, the difference between groups was not significant. In

addition, feeling score in the elderly residing in nursing home was higher than elderly people living with their families in both female and male groups. However, the raw score of loneliness was not significantly different between the two groups in terms of gender. Score of loneliness was a little

higher for illiterate elderly residing in nursing home compared to illiterate elderly living with their families. This score was higher for literate elderly living with their families than literate elderly residing in nursing home, but in comparison between groups, there was no significant difference in the raw score of loneliness between the two groups in terms of educational level. Raw score of loneliness for all groups with different numbers of children in elderly residing in nursing home was higher than those living with their families. However, in comparison between groups, there was no significant difference between the raw score of loneliness in terms of the number of children

between the two groups. Although, loneliness scores in terms of marital status was higher in elderly residing in nursing home, there was no significant difference between the raw score of loneliness in terms of the marital status between the two groups in comparison between groups. Factorial design showed that the difference in loneliness scores between the two groups in terms of age, gender, educational level, number of children and marital status was associated with habitat and not with variables of age, gender, educational level, number of children and marital status (Table 3).

Table 3: Comparison of loneliness scores between the elderly residing in nursing home and those living with their families in terms of the variables

Score of loneliness Variable		Living with family		Residing in nursing home		df	f	P*
		mean	Standard deviation	Average	Standard deviation			
Age	< 70	38.35	7.34	56.75	10.8	1	38.35	0.1
	>= 70	40.26	7.18	59.40	12.55			
Gender	Female	41.12	8.13	49.00	9.13	1	0.4	0.6
	Male	38.00	6.41	63.00	9.70			
Educational level	Illiterate	39.06	7.50	40.00	6.63	1	0.77	0.54
	Literate	59.39	11.22	45.32	5.85			
Number of children	0	0.00	0.00	58.93	11.01	1	0.8	0.93
	1-4	41.93	8.68	49.3	12.57			
	5 or more	37.62	5.76	39.04	9.04			
Marital status	Single	0.00	0.00	58.33	12.28	1	0.39	0.77
	Married	38.40	6.33	58.90	1.62			
	Widow or divorced	41.25	8.93	56.37	11.42			

*** Multi-way analysis of variance**

In comparison within groups in terms of age group, although the mean loneliness score for age of 70 and older was higher than that of ages under 70 years in both groups, independent t-test showed no significant differences between the two age groups. In comparison within groups in terms of gender, the results showed that the loneliness score for elderly women living with their families was higher than that of men, but this difference was not significant. This score in elderly men residing in nursing home was higher than that of women and independent t-test showed a significant difference between the genders in this group ($p < .001$). The mean score of loneliness in educated elderly living with their families was higher than illiterate elderly, but independent t-test showed no significant difference in score of loneliness within the groups. In the elderly living in nursing homes this score was higher for illiterate elderly than that of literate ones. However, this difference was not significant. As the number of children increased, score of loneliness was decreased in both groups of living with family and residing in nursing home. However, comparing in-group scores of loneliness in terms of number of children showed no significant difference within the two groups

of living with family and residing in nursing home in terms of this variable using one-way analysis of variance (Table 4). In-group comparison in terms of marital status using one-way ANOVA showed that although the mean score of loneliness was higher for elderly widows living with their families, this difference was not significant. This score was less for elderly widows living in nursing homes than the other two groups, but no significant difference was observed between the 3 groups (Table 4).

Table 4: In-group comparison of loneliness score in terms of the variables between the two groups of living with family and residing in nursing home

Habitat	Variable		mean	Standard deviation	Statistic*t **f	Significance level
Living with family	Age group	< 70	38.35	7.34	-0.80	0.77
		>= 70	40.26	7.18		
Residing in nursing home	Age group	< 70	56.75	108	- 0.60	0.48
		>= 70	59.40	12.55		
Living with family	Gender	Female	41.12	8.13	1.30	0.18
		Male	38.00	6.41		
Residing in nursing home	Age group	Female	49.00	9.13	- 3.90	0.001
		Male	63.00	9.70		
Living with family	Educational level	Illiterate	39.06	7.50	-0.33	
		Literate	59.39	11.22		
Residing in nursing home	Educational level	Illiterate	40.00	6.63	2.1	0.09
		Literate	45.33	5.85		
Living with family	Number of children	0	0.00	0.00	3.40	0.07
		1-4	41.93	8.68		
		5 or more	37.62	5.76		
Residing in nursing home	Number of children	0	58.93	11.01		
		1-4	49.30	12.57		
		5 or more	39.04	9.04		
Living with family	Marital status	Single	0.00	0.00	1,20	0.20
		Married	38.40	6.32		
		Widow or divorced	41.25	8.93		
Residing in nursing home	Marital status	Single	58.33	12.28	0.10	0.90
		Married	58.90	1.62		
		Widow or divorced	54.57	11.42		

* t: Independent t test

**f: One-way analysis of variance

DISCUSSION

Loneliness explains individuals’ cognitive awareness of weaknesses in their personal and social relations which lead to the feelings of sadness, emptiness or sorrow and regret. In fact, loneliness can be defined as an inability in establishing and maintaining satisfactory relationships with others which is likely to lead to experience of sense of deprivation.

According to the results of the present study, there is a significant difference in loneliness between the elderly living with their families and those residing in nursing home. The present study

confirmed the results of the previous studies (34-40) and also indicated that scores of loneliness is significantly higher for elderly residing in nursing home than those living with their families. Jones and Victor examined the loneliness in rural and urban elderly population and also showed that the elderly who live with their spouses and families experience less loneliness compared to those who live alone or with other people but their spouses (41). High feeling of loneliness in the elderly residing in nursing home may be due to their social isolation. Inability to achieve emotional or social supports that comes with a wide range of anxiety gradually causes individuals to doubt their

ability to create social relations, to lose required sureness to engage in social situations, and not to be able to meet their social needs. The result of such a situation is to dive more deeply into unpleasant feeling of loneliness. Residing in nursing home causes the elderly people lose their useful and effective relations with relatives and friends. Consequently, material and psychological supports are also reduced that is associated with high feeling of loneliness in elderly residing in nursing homes. Furthermore, individuals residing in these centers lose their ability to dominate their lives and cannot make decisions. In these circumstances, they find themselves powerless, passive and dependent, reach emptiness and feel lonely.

According to the findings of the present study, gender was significantly correlated with the total raw score of loneliness in the elderly. In comparison within the groups, there was a difference in score of loneliness between elderly females and males residing in nursing home. Jacobsson and Hellberg's studies are in line with our results of the present study; they examined the quality of life loneliness and fear in elderly Swedish people and found that loneliness is associated with gender (42). In line with our results of the present study, Hazer and Boylu examined factors affecting loneliness in the elderly and found that men felt lonelier than women but no significant correlation was shown between them (43). Higher level of loneliness in men than in women may be due to the fact that before residing in nursing home, men, particularly in Iranian culture, had more social activities than women and consequently they had broader relations. Moreover, men were usually head of household and most important decisions in families were made under their supervision. By residing in nursing home, on the one hand, the amount and the quality of these relations will be reduced and on the other hand, almost all previous situations i.e. independency, decision-making and leadership will be lost. Thus, it can be said that higher level of loneliness in elderly male residing

in nursing home compared to that of women can be due to this fact that men feel to lose a lot of things by living in a nursing home. However, studies have shown that men mainly know their wives as their source of support while women mostly know their children, family members and friends as their source of support. Therefore, perhaps reliance on less sources of support plays a role in higher loneliness in men because when men lose their wives they think that they have lost their support and because they cannot find a replacement, they feel lonely (44).

The findings obtained from the present study also confirm the studies in this field (45-47) and represent an increase in loneliness as the age increase but it will not reach to a significant level. Hematti believes that elderly in different age groups have different perceptions about how to communicate with people and this factor can affect their feeling of loneliness (48).

On the other hand, there was no significant correlation between loneliness and literacy. According to the research conducted by Babak in Isfahan, elderly graduated from high school and lower showed a higher prevalence of depression compared to those with academic education (49). In Sohrabi's study, poor mental state was obtained in illiterate and low-literate people (50). Given that educational level is of social factors affecting mental health, its impact on people's loneliness seems probable. Educational level probably leads to creation of a strong communications network and more and social links for the elderly that will make them feel less lonely.

Raw score of loneliness was reduced by increasing number of children but this trend showed no significant difference. The quality of social relationships play more important role in the incidence of loneliness than amount of social relationship. In other words, loneliness in elderly people is not related to number of relations with children and friends but refers to the expectations and satisfaction with these relationships. Prevalence of loneliness is higher in elderly people whose expectations of meeting their

children and friends are not met and are not satisfied with these relations (50). In this study, there are two possibilities in nursing homes and homes. The first possibility is that children do not meet the expectations of older people and the second possibility is that the expectations of both groups are met. The first possibility is stronger and maybe that is why number of children did not affect scores of loneliness in both groups.

In line with our results, it seems that elderly couples feel less lonely than elderly single, elderly divorced or widows. In other words, the elderly who recently lost their spouses felt lonelier. However, this difference was not significant in the present study. These results are consistent with Ekwall et al's study (52). Jones and Victor also showed that loneliness is associated with being a widow, especially for those who recently lost their spouses (52). The difference between the present study and their study may be due to smaller sample size that led to not showing effects of variables well.

Results of the present study showed that loneliness in elderly residing in nursing home is higher than elderly people who live with their families. However, elderly people who live with their families reported loneliness as well. The results also showed that men feel lonelier than women and loneliness is not correlated with other demographic variables. Therefore, living with family cannot be effective in reducing loneliness alone. In fact, elderly should not be neglected and abandoned by their families. They also need social support. Therefore, the authorities should have programs for the elderly's leisure time. Nursing homes should not be considered as physical care centers but they should pay attention to mental health of elderly more than physical care and have mental health programs for them. Public training for families to pay attention to mental health of elderly and especially not forgetting the elderly in nursing homes and meeting them frequently can also help to reduce loneliness in old people. Due to the small sample size used in this study because of the small size of Yasuj nursing home at the

time of our study, it is recommended to conduct this research on larger samples.

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