



Relationship between feeling of loneliness and activities of daily living among the elderly

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Abstract

Loneliness is a widespread phenomenon that affects the physical and mental health of the elderly. One of the main issues for the elderly is keeping the independence in daily living activities. Thus, this study was carried out to investigate the relation between the level of loneliness and Activity of Daily Living (ADL) in the elderly. This correlational study included 120 elderly aged more than 60 which were selected using convenience sampling. Data collection instruments were the UCLA-LS (University of California, Los Angeles) 37-item loneliness questionnaire and 20-item activity of daily living questionnaire. The mean score of loneliness and ADL in the elderly participated in this study was 75.4 ± 23.9 and 62.4 ± 15.7 , respectively. A significant relationship was observed between loneliness and ADL. This study also showed a significant relation between loneliness and demographic factors such as marital status, education level, living arrangement, having close friends, hearing impairment, and using aiding devices. Regarding the growing population of the elderly in Iran and the role of loneliness in activity of daily living, the supporting and consultation role of nurses along with the ordered and organizational programming from health and wellness improving organizations is highlighted.

Keywords: Activities of daily living, Aged, Loneliness

Introduction

Nowadays, as life expectancy of human beings expands and the natural process of aging sets out, individuals gradually lose their physical, psychological, physiological, and social functions [1]. These conditions gradually lead to isolation, hopelessness, and feeling close to death and eventually giving rise to the feeling of loneliness [2]. Many old people experience loneliness in different

populations [3]. The core of the issue lies mostly in the emotional disorders, feeling of isolation, and loneliness. Evidence shows that loneliness is a widespread phenomenon [4]. In fact, 25 to 50% of the population over 65 is affected based on age and gender [5]. This is crucial because of the fact that the population over 60 will hit about 10 million by 2020 and over 26 million by

2050 [6]. In 2006 [7], the United Nations estimated the total number of the elderly in the world as 700 million, which is expected to be doubled within 40 years. Although Iran is transitioning in the current situation from young to middle-age population, it will soon join the nations with aging demographic composition.

Peplau [2] regarded loneliness as an unpleasant feeling as a result of deficiencies in social connections of the individual and inability to make good relationships with others. Sullivan [2] stressed the necessity of establishing interpersonal relationships because it is rooted in basic human needs, and incompetence on satisfying the need for intimacy or interpersonal closeness would give rise to loneliness.

Framrakman [8] provided evidence to support the theory of Sullivan, also noting that all human beings are afraid of being alone, deeming the threshold of loneliness affected by the person's developmental history. Henrich [9] argued that loneliness can be accompanied with psychosocial problems such as low self-esteem and competence as well as psychiatric disorders such as anxiety and depression. This not only leads to poor performance in activities of everyday life, but also gives rise of feelings of hopelessness and emptiness. Hence, the issues of the elderly involve loneliness requiring special attention [10].

The mental health professionals believe that retirement and unemployment, leading to isolation of the elderly, can leave negative effects on morale and general health. Hence, the ability of many elderly in carrying out the activities of everyday life can affect their independence and efficacy. On the other hand, experts believe that any effort leading to the elimination of loneliness among the elderly will lift the mental barriers and improve self-esteem [2].

One of the main issues of the elderly in order to maintain and improve health and quality of life is keeping independency in activities of daily living and providing conditions to be able to actively survive. Hence, it is obvious that

higher independence would promote human dignity and expand social interactions and lower loneliness [11]. With regard to the nature of chronic diseases associated with aging, which limits the physical activity of the elderly usually after the age of retirement, about 25% of people are unable to perform daily activities independently, while 10% of them are entirely dependent [12]. Therefore, the definitions, given by the World Health Organization, point to the most important component of health over aging seniors as independence until death [10]. The results of various studies have shown that the elderly independence is a multidimensional concept, which should be surveyed on their specific conditions and relations [7].

Meanwhile, functional independence goes beyond the self-care, pointing to the active participation of the elderly in daily activities as reaffirmed by several studies technically known as up and kicking. Independent performance and independency in activities of daily living are important so that some of the elderly consider it equivalent to health and safety [13]. One of the best strategies to evaluate the functional independence of the elderly is to assess the level of activities and the means of life, which can provide necessary information for proper planning in accordance with the needs of the elderly at health care centers [11].

These results could be a step taken in making decisions to determine the cost of caring for the elderly at health care centers and hospitals, improving the quality of life and health of the elderly, and keeping their human dignity. Therefore, this study was conducted to determine whether the loneliness of the elderly is correlated with the activities of daily living.

Method

This was a correlational study carried out on a sample of 120 elderly selected through convenience sampling at health and wellness centers in Gonabad city, Iran,

2012. The elderly people aged above 60 were enrolled in the study upon their written informed consent. Since we have no estimate of the study variables (relationship between loneliness and activities of daily living), the sample size was calculated through a pilot study (20 individuals) using the formula for calculating the sample size at confidence level of 95% and test power of 80%. Accordingly, the sample size of this study was obtained to be 120 participants.

After obtaining a written statement of objective from the School of Nursing and Midwifery in Gonabad and delivering it to the related centers including Hospitals 22th Bahman and 15 Khordad, Bidokht, health centers One, Two, Three, and Fayazbakhsh as well as health care centers at Bagh-e Asia and Biland all affiliated to the Gonabad University of Medical Sciences, the researcher began to collect data. After explaining the research goals and obtaining the consent of participants, the individual characteristics were evaluated through 11 questions as interview lasting for 15 to 20 minutes. At the next stage, the information about loneliness and activities of daily living of old people were completed in the questionnaires.

The UCLA loneliness questionnaire contains 37 questions in three dimensions of Family state (16 items), communication with friends (11 items), and emotional state (10 items). The items were scored based on a 5-point Likert scale. The options included never (zero), very low (one), low (two), moderate (three), high (four), and very high (five). Some of the questions were scored in reverse on the basis of content. The scores ranged from 0 to 185. The validity of the scale was approved based on the content validity and the reliability was confirmed through Cronbach's alpha in the study of Alamdarloo et al. ($r=0.92$) [12].

The scale of Katz activities of daily living is an instrument assessing 19 activities of daily living. Each statement of activities entails 4 degrees including absolutely independent, relatively independent, relatively dependent, and absolutely dependent, where the maximum

and minimum scores were 76 and 19, respectively. Although there are no official report on the validity and reliability of this scale, it has been employed frequently for evaluating the functional capabilities of the elderly in clinical and home environments [13].

However, Fathi et al [14] reviewed in a research the Katz' scale, designing a new version called "independence of daily living activity". It contains 20 questions on 5 degrees namely not doing, absolutely dependent, relatively dependent, relatively independent, and absolutely independent. Each activity scored from 0 to 4. The total score ranged from 0 to 80. The test-retest indicated the reliability coefficient of 0.90. In order to investigate the content validity for the activities of daily living questionnaire, the items were submitted to ten experts whose opinions were applied to the context. This study adopted the revised version of Katz scale designed by Fathi [14].

Data were analyzed using SPSS 14. Using the Kolmogorov-Smirnov test, the normal distribution of quantitative variables was determined. To describe data, descriptive statistics such as mean and standard deviations (SD) were used. Moreover, the data were analyzed through analytical measures such as chi-square. The confidence level of 95% and test power of 80% were considered for all the tests.

Results

The mean age of participants was 69.4 ± 7.5 years in range of 60 to 88. Moreover, 62.5% of the participants were female. 35.8% of participants were using aiding devices such as a cane. Other individual characteristics of the participants are given in Table 1. The mean score of daily living activities in the elderly was 62.4 ± 15.7 . Moreover, 1.6% of the elderly were unable to perform their activities of daily living. In addition, half of the old people who were doing the daily activities were absolutely independent (Table 2).

Table 1 Profile of the elderly living in Gonabad

Personal Information	Frequency	Percentage
Gender		
Female	75	62.5
Male	45	37.5
Marital status		
Single	3	2.5
Married	78	65
Widow	38	31.7
Divorced	1	0.8
Education level		
Illiterate	57	47.5
Elementary	41	34.2
Secondary	5	4.2
High-school	11	9.2
Higher education	6	5.0
Satisfaction with living Place		
Positive	13	10.8
Negative	107	89.2
Living place		
Rural	65	54.2
Urban	55	45.8
Living arrangement		
With husband	41	34.2
With children	17	14.2
With husband and children	37	30.8
With relatives	1	0.8
On one's own	24	20
Having close friends		
Positive	82	68.3
Negative	38	31.7
Using an aiding device		
Yes	43	35.8
No	77	64.2
		Mean±SD
Age		69.4±7.5

Table 2 Distribution of the level of independence in the elderly able to perform daily activities in Gonabad

Daily activities	Magnitude (%)	Mean±SD
Absolutely dependent (17-33)	5 (4.2)	30.6±2.3
Relatively dependent (34-50)	20 (16.7)	43.7±5.9
Relatively independent (51-67)	33 (27.5)	59±5.2
Absolutely independent (68-80)	60 (50)	74.8±3.8
Total	118 (98.4)	52.02±4.3

The mean score of loneliness among the elderly in Gonabad was 75.25±23.9. The majority of the elderly felt loneliness at moderate to high levels (72.5%), while 27.5% of the elderly felt

low levels of loneliness. The highest mean score of feeling of loneliness among the elderly was obtained in relation to friends, followed by emotions and family (Table 3).

Table 3 The mean score of loneliness and its relationship with daily activities of the elderly

Feeling of loneliness	Mean± SD	Daily activities	
		p-value	R
Family state	36.9±18.3	0.015	0.222
Communication with friends	48.4±23.9	0.111	0.146
Emotional state	38.3±13.9	0.312	0.093

The Spearman's test was employed to determine the relationship between loneliness and activities of daily living among the elderly in Gonabad. The results indicated that there was a significant relationship between loneliness and daily activities ($p=0.003$). Among the dimensions of loneliness, family state showed a significant correlation with the daily activities ($p=0.015$). The statistical tests showed that the level of loneliness in the elderly is in a significant relation to age, gender, education, marital status, living arrangement, having close friends, and using an aiding device ($p<0.05$). Furthermore, there was a statistically significant relationship between the daily activities of the elderly and variables of age, marital status, living arrangement, and using an aiding device ($p<0.05$).

Discussion

This study aimed to determine the relationship between loneliness and the activities of daily living among the elderly. The results indicated that there was a significant correlation between the level of loneliness and activity of daily living. In other words, as the level of loneliness in the elderly increases, they show lower levels of activities of daily living such as dressing,

outdoor work, etc.

The results also showed that the feeling of loneliness in the elderly under the subject of study was high (75.25±23.9) and the majority of the elderly felt moderate to high levels of loneliness. These findings are consistent with those obtained by Hacıhasanoglu [15] who found a relationship between loneliness and daily activities in Turkey. In the current study, the mean score of loneliness was obtained as 59.51±4.44. The mean score of loneliness in the Adams's study [9] was 38.57±8.7. This confirms that loneliness is a widespread phenomenon as the claimed prevalence rate of 25 to 50% of the population over 65 based on age and gender. The fact that the feeling of loneliness in this study was found to be higher than that reported in other studies might be due to the lifestyle of participants and also the fact that general features of life after retirement are different in Iran compared to other countries.

In the examination of the relationship between loneliness dimensions and daily activities, there was a direct relationship between the family state dimension and daily activities. Nevertheless, loneliness in the dimensions

of communication with friends and emotional state was not related to activities of daily living. This could be due to the fact that majority of participants lived with their family members (spouse and children) whom might be helpful with daily activities.

The results also showed that 1.6% of the elderly were too unable to perform their daily activity which is consistent with the findings of Hacıhasanoğlu [15], who reported 2% of the elderly were completely dependent. Given that the elderly examined in this study were selected from a normal population of the elderly, it can be argued that most of the participants were adequately capable in mobility, because the elderly with severe disabilities are kept normally at centers such as hospitals and nursing homes.

In addition, half of the elderly, who were able to do daily activities, were absolutely independent. Hacıhasanoğlu [15] reported that 83.5% of participants were absolutely dependent. The Masoumi's [16] study revealed that 86.6% were absolutely independent, 10.3% in need of help, and 2.1% absolutely dependent. Similarly, Joghatayi [17] examined in a study the health status of the elderly in Kashan and found out that the majority of participants (81.7%) were completely independent in their daily activities, while 13.3% needed help with their activities and 5% were absolutely dependent. The reason for these findings, which are consistent with the findings of this study, is probably attributed to the matter that the elderly living socially inside the family are respected emotionally by the family members and hence, they are freshly spirited and vibrant and capable to take care of themselves.

The findings of this research also showed there was a significant relationship between loneliness and demographic variables such as age, sex, education, marital status, living arrangement, having close friends, and using aiding devices. In fact, as the age increased, higher rates of loneliness occurred. Moreover, the mean score of loneliness was higher in women than men, which is consistent with the findings reported by Sheikholeslami *et al.* [18], Jakobsson *et al.* [19], and Ekwall *et al.* [20]. However, the

findings of this study were inconsistent with those obtained by Hazer [21], as the results of the latter study showed that loneliness was higher in men than women, although it was not a statistically significant relationship.

The findings also indicated a statistically significant relationship between marital status of the elderly and loneliness, i.e. the highest feeling of loneliness was found in the participants whose spouse passed away or they got divorced. A similar finding was obtained in case of the variable of living arrangement, i.e. the elderly who lived alone reported more loneliness compared to those lived with spouse, children, and relatives. This indicates that family and friends can be supportive for the elderly, resulted in the improvement in their mental conditions. Moreover, having a close friend and making monthly income for the elderly had a significant relationship with loneliness. The results of Jones *et al.* [18] study on the relationship between loneliness and hearing impairment are consistent with those of the current study. This is probably because of the decreased communication of the elderly with their environment.

In the study by Masoumi *et al.* [16], there was a statistically significant correlation between the two variables of daily activity and age, which was consistent with the findings of the present study. In a research conducted by Moeini *et al.* [9], daily activities showed a significant relation to having roommates and using aiding devices, which was consistent with the findings of this study. However, other demographic variables showed no statistically significant correlation with activities of daily living in the current study.

Conclusion

The results of this study suggested that lowering the feeling of loneliness can be an important factor in reducing the activities of daily living among the elderly. Making intervention against the feeling of loneliness can be effective in improving the health and increasing independency in daily activities among the elderly. The results of this study

can be beneficial for improving the educational programs designated by health care providers and rehabilitation centers in order to prevent the feeling of loneliness in the elderly, promote the functional independence and ultimately, avoiding the potential consequences of dependency in the elderly.

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Contribution

Study design: KhM

Data collection and analysis: KhM, RN, TGh

Manuscript preparation: MB

Conflict of Interest

"The authors declare that they have no competing interests."

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