

Leisure Activity Engagement as a Predictor for Quality of Life in Community-Dwelling Older Adults

Abstract

Introduction: Participation in leisure activities is greatly associated with the health and well-being of older adults. This study investigated the role of leisure activities in predicting the quality of life of community-dwelling older adults. **Methods:** In this descriptive and cross-sectional study, 141 older adults were selected by cluster sampling method from public places. Data were collected through demographic characteristics, leisure time activities, and Lipad QoL questionnaires. The questionnaires were completed through face-to-face interviews. A regression model was used for data analysis. **Results:** The mean age of older adult participants was 70.36 years (standard deviation = 8.99; range: 60–100 years) and 63.8% were male. The results also showed a low level of leisure time engagement and high level of QoL among older adults. The results of the current study indicated that education level and leisure time activity engagement were associated with a better QoL. **Conclusion:** According to the results of this study, engagement in leisure activities is related to improvements in the QoL of community-dwelling older adults. It is recommended that policymakers and families plan for and implement leisure time activities for older adults.

Keywords: Aged, health, leisure time, quality of life

Introduction

The world's population of older adults is growing dramatically, which is largely attributed to increased life expectancy and reduced birth and death rates.^[1] According to the last general census in Iran, the population of older adults increased fourfold between 1961 and 2016. Between 2006 and 2011, the average annual growth rate of the older population was 3.90%, compared to 1.29% for the entire population of the country.^[2]

A major component of an individual's health status, particularly the elderly, is quality of life (QoL). QoL is a comprehensive concept consisting of physical health, psychological states, level of independence, social communication, and environmental relationships.^[3] Aging is a period of life during which the elderly are subject to potential threats to their QoL, such as increases in suffering from chronic diseases, loneliness, and decreases in mental health.^[4] Therefore, it is essential to apply appropriate interventions to maintain and improve the level of health and QoL of older individuals.

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One impactful factor that affects QoL of elderly adults is how individuals participate in leisure time activities.^[5] Keeler *et al.* demonstrated that actively participating in leisure activities and doing exercises were associated with increased hope and life expectancy in older adults.^[6] In addition, Blane *et al.* found that leisure activities can significantly improve people's understanding of health, independence, lifestyle, life expectancy, and QoL.^[7] Leisure is considered to be a sociocultural phenomenon with economic, political, and social dimensions.^[8] Despite the benefits of leisure activities for the elderly, Rahimi *et al.* indicated that these individuals do not engage in leisure activities in sufficient quantities.^[9] One study found that 86.8% of the older adults rest during their leisure time rather than engage in activities such as reading. Only 2.2% of the participants read during their leisure time.^[10]

Various demographic factors affect the QoL of older adults. In some studies, age was reported among the predictors of decreased QoL,^[11,12] most likely as a result of the effect of age-related chronic conditions,^[13,14] however, such association was not confirmed in other studies.^[15,16] Regarding the gender,

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while some studies suggest that females have a lower QoL,^[17,18] others have reported contradictory findings.^[15,19] Income levels have also been reported to impact the QoL of older people.^[20] Furthermore, older adults who had a higher education level have reported better QoL compared to older adults with lower education level.^[19,21]

Given that previous studies have examined a restricted list of specific leisure activities and the information about the benefits of participation in leisure activities among Iranian older adults and its association with their QoL is scarce and limited, this study aimed to assess the rate of leisure time engagement in a wide range of activities and its relationship with QoL among community-dwelling older adults.

Methods

In this cross-sectional study, 141 older adults were selected from Abhar city, Iran, using a cluster sampling method. In the first phase, the city was divided into 5 clusters (north, south, east, west, and center), and then, public places (parks, mosques, and shopping centers) and health centers were identified in each cluster. Next, qualified individuals were selected from these places using convenience sampling method. The inclusion criteria of this study consisted of individuals 60 years or older willing to participate in the study and those able to answer the items of the questionnaire. Participants who reported having psychiatric problems (e.g., schizophrenia, dementia, anxiety, or depression) or mental disabilities were excluded from this study. Data collection was performed via face-to-face interviews by the researcher.

Sample size

Considering an alpha level of 0.05, test power of 80%, and the correlation coefficient between sports and outdoor leisure activity and health-related QoL in the elderly ($r = 0.24$), the sufficient sample size was determined to be 134 older adults.^[22]

Ethical considerations

This study was approved by the Qazvin University of Medical Sciences Ethics Committee (IR.QUMS.REC.1395.289). The participants were informed about the study aims and procedure before signing an informed consent form. They were informed that their participation was voluntary and all information would be kept confidential.

Measures

Demographic questionnaire

A demographic questionnaire was used to collect information about the older adults' age, gender, marital status, education level, economic status, and main source of income.

Leisure time questionnaire

A researcher-made questionnaire was used to quantify the leisure time activities of the participants.

This questionnaire was extracted from the literature (similar studies in Iran and other countries). It consisted of a 36-item Likert-type scale with answers ranging from 0 (not at all) to 4 (all of the time). The total test score ranged from 0 to 144. Higher scores indicated that the individual was more active in their leisure time.

For assessing the content validity of the measure, the questionnaire was provided to ten experts in the fields of gerontological nursing, educational nursing, and physical education. They were asked to assess and comment on the wording, item allocation, and scaling of the items. The questionnaire was revised according to their comments. The reliability of the questionnaire was assessed by evaluating Cronbach's alpha (0.78), indicating satisfactory internal consistency among the items. For assessing test-retest reliability, the questionnaire was completed by 10 individuals 2 weeks apart. The value (0.89) demonstrated that the measure had acceptable test-retest reliability.

Lipad questionnaire

The Lipad questionnaire was used to assess QoL of the participants. This questionnaire, developed by De Leo *et al.*,^[23] consists of 31 Likert-type items are scored from 0 (worst condition) to 3 (best condition). It examines the QoL of older individuals in seven dimensions, including physical function (5 items), self-care (6 questions), depression and anxiety (4 items), cognitive functioning (5 items), social functioning (3 items), sexual functioning (2 items), and satisfaction with life (6 questions). The questionnaire's total scores ranged between 0 and 93, with a higher score indicating a better QoL. The validity and reliability of the questionnaire were found to be acceptable in the Iranian population.^[24]

Statistical analysis

The data were analyzed by the Statistical Package for the Social Sciences, version 20.0 (SPSS Inc., Chicago, Illinois, USA). Quantitative variables were reported using means and standard deviations (SDs) and qualitative variables were presented in frequencies and percentages. The multivariate linear regression method (backward) was used to investigate the predictive factors of QoL among the older adults. Four assumptions including linearity, homoscedasticity, independence, and normality were checked before performing linear regression analysis. Statistical significance was set at $P < 0.05$ for all procedures.

Results

Table 1 describes the demographic profiles of the respondents. The mean (SD) of QoL and leisure time was 52.10 (SD = 16.51) and 73.49 (SD = 13.48), respectively. The respondents were predominately male ($N = 90$, 63.8%) and married ($N = 109$, 77.3%). More than half of the

sample ($N = 82, 58.2\%$) reported no formal education and a middle-range of income ($N = 81, 57.4\%$).

Table 2 depicts the percentage distribution by participants' leisure time activities. The majority of the older adults reported being involved in some leisure activities "sometimes" to "always," such as praying (95.0%), going to mosque or religious places (86.5%), attending religious programs (83.7%), sleeping (92.9%), watching TV (78.0%), and visiting friends or relatives (79.4%). The results also showed that the majority of them reported engaging in certain activities "not at all" or "rarely," such as driving (74.4%), group or individual exercise (86.5%), swimming (93.7%), going to cinema, theater or concert (95.7%), game playing (97.9%), painting (99.3%), participating in educational classes (99.3%), and reading books or newspapers (80.8%).

A multivariate linear regression method (backward) was run using seven predictors as independent variables consisted of age, gender, marital status, educational level, economic status, source of income, and leisure time engagement. Categorical variables were converted into dummy variables. The results indicated that the level of education and leisure time engagement were the strongest predictors of QoL among older adults. Compared to illiterate

participants, those with elementary ($b = 0.17, P = 0.001$), secondary ($b = 0.10, P = 0.030$), and academic ($b = 0.12, P = 0.01$) educational levels reported significantly better QoL. Furthermore, the results showed that spending more leisure time was associated with higher QoL ($b = 0.75, P = 0.001$) among the older participants [Table 3]. The study variables explained about 68% of the variance of QoL among the older adults.

Discussion

The present study was aimed to investigate the rate of leisure time engagement and its relationship with QoL in a sample of Iranian older adults. This study found a moderate level of QoL (ranging from 52.1 to 93.0) among older adults. This is consistent with previous national studies which have reported similar findings. For example, Hekmatpou *et al.* (2014) found moderate QoL among elderly women living in Arak, Iran,^[2] and Habibi *et al.* (2008) observed moderate levels of QoL among older adults in West of Tehran, Iran.^[19] While these studies were conducted with community-dwelling adults, other studies have found lower levels of QoL among older adults living in governmental and private nursing homes.^[17,19,20]

Findings from the present study indicated that QoL of older adults correlates positively with leisure time engagement, which is in line with previous studies.^[25-27] Leisure time increases QoL by reducing mental and psychological stress and increasing pleasure and vitality.^[28] It involves time to be relaxed and engaging in intended activities without any obligation or duty. Furthermore, participation in leisure activities improves the power to cope with age-related physical and emotional changes.^[29] Leisure activity participation provides happiness to the older adults and significantly improves QoL.^[30] In addition, participating in social activities during leisure time reduces the risk of dementia and anxiety and promotes the QoL of the elderly.^[31] In late life, leisure activity is an important part of daily lives and has an important role in providing cognitive stimulation. This is consistent with other studies reporting a reduced risk of cognitive impairment or dementia in those who engage in more leisure activities.^[32]

Education level was found to be a significant predictor of QoL. Specifically, older adults with higher education levels were more likely to have higher QoL, with the lowest levels of QoL found among illiterate individuals. This finding is consistent with previous national studies.^[19,21] It may be that well-educated people, particularly those with an academic education, have a greater awareness of health and its positive impacts on QoL.^[33] Furthermore, the majority of illiterate individuals also have lower economic status, resulting in exposure to additional stressors and lower QoL.^[34]

Based on the results of the current study, the majority of older adults spent their leisure time engaging in religious activities. These included going to the mosque and

Table 1: Demographic characteristics of participants

Demographic characteristics		Number (%)
Gender	Male	90 (63.8)
	Female	51 (36.2)
Marriage	Married	109 (77.3)
	Widowed/divorced	32 (22.7)
Educational status	Illiterate	82 (58.2)
	Primary	40 (28.3)
	Secondary	15 (10.7)
	Academic	4 (2.8)
Economic status	Poor	29 (20.6)
	Average	81 (57.4)
	Good	27 (19.1)
	Excellent	4 (2.8)
Main source of income	Personal	40 (28.4)
	Family	32 (22.7)
	Friends	1 (0.7)
	Pension from the government	68 (48.2)
	Charitable giving	49 (9.8)
Study variables	(Continuous variables)	Mean (SD), Range
Age (Year)	Age of subject	70.36 (8.99), 60-100
Quality of Life	Total QOL	52.10 (16.51), 13-109
	Physical	5.50 (2.00), 0-13
	Self-care	6.32 (3.74), 1-19
	Depression and Anxiety	6.84 (2.75), 0-12
	Cognitive	4.32 (4.24), 0-20
	Social	6.11 (2.65), 0-12
	Life Satisfaction	12.27 (3.93), 2-20
Leisure time	Score of leisure time	73.49 (13.48), 25-105

Table 2: Frequency and percentage of selected leisure time activities among participants

Activity	n (%)				
	Not at all	Seldom	Sometimes	Often	Always
Sleeping	3 (2.1)	7 (5.0)	38 (27.0)	78 (55.3)	15 (10.6)
Driving	101 (71.6)	4 (2.8)	8 (5.7)	7 (5.0)	21 (14.9)
Swimming	125 (88.7)	7 (5.0)	4 (2.8)	4 (2.8)	1 (0.7)
Group or individual exercise	91 (64.5)	31 (22.0)	12 (8.5)	5 (3.5)	2 (1.4)
Going to picnic	13 (9.2)	21 (14.9)	31 (22.0)	49 (34.8)	27 (19.1)
Visiting friends or relatives	7 (5.0)	22 (15.6)	45 (31.9)	43 (30.5)	24 (17.0)
Going to cinema, theater, or concert	131 (92.9)	4 (2.8)	5 (3.6)	1 (0.7)	0 (0.0)
Watching TV	8 (5.7)	23 (16.3)	64 (45.4)	41 (29.1)	5 (3.5)
Going to mosque or religious places	9 (6.4)	10 (7.1)	34 (24.1)	25 (17.7)	63 (44.7)
Praying	4 (2.8)	3 (2.0)	16 (11.3)	13 (9.2)	105 (74.5)
Attending religious programs	2 (2.1)	20 (14.2)	54 (38.3)	36 (25.5)	28 (19.9)
Game playing	136 (96.5)	2 (1.4)	1 (0.7)	2 (1.4)	0 (0.0)
Gardening	49 (34.8)	26 (18.4)	22 (15.6)	18 (12.8)	26 (18.4)
Painting	134 (95.0)	6 (4.3)	1 (0.7)	0 (0.0)	0 (0.0)
Participating in educational classes	138 (97.9)	2 (1.4)	0 (0.0)	1 (0.7)	0 (0.0)
Reading books or newspapers	101 (71.6)	13 (9.2)	16 (11.3)	6 (4.3)	5 (3.5)

Table 3: Predictors for quality of life among participants

Model	Unstandardized Coefficients		Standardized Coefficients	t	P
	B	SE			
Constant	-17.21	4.67		-3.68	0.001
Education (elementary)	6.33	1.83	0.17	3.44	0.001
Education (secondary)	7.35	3.51	0.1	2.09	0.03
Education (academic)	12.15	4.87	0.12	2.49	0.01
Leisure time	0.92	0.06	0.75	15.36	0.001

religious places (86.5%), praying (95%), and participating in religious programs (83.7%). Likewise, Asefzadeh *et al.* reported that 44.2% of the older adults in Qazvin city go to the mosque in their leisure time.^[35] Madah also indicated that Iranian older adults participated in religious gatherings more than Swedish individuals.^[36] The reason for these results may be due to the fact that religion is a major and integral part of Iranian culture.

According to the findings of the present study, 78% of the older participants reported that they spent some to most of their leisure time watching TV. Heidari *et al.* found that more than half of the older adults in their sample (55%) watched TV in their leisure time.^[37] Television is the primary and major source of entertainment and information for most individuals, including the elderly. Watching television is a low-cost activity and the most accessible easiest way of spending leisure time for most people.^[38]

The results of the study showed that only about 13.4% of the sample engaged in individual and group exercise. Likewise, Madah found that Iranian older adults had little interest in physical exercises.^[36] Rahimi *et al.* also found that doing exercise during leisure time is not a common activity among Iranian older adults, and a small number of these individuals do physical exercises independently.^[9] Barriers

to exercise include a lack of sports facilities, high costs, lack of awareness about the benefits of sports activities, and physical and mental disabilities.

The results of the study showed that only 19.2% of the participants read newspapers, journals, and books. This finding is in contrast with findings by Madah who showed that about 60% of the Swedish elderly read books and 81.3% of them read newspapers in the leisure time.^[36] Reading books and newspapers can be a positive activity to fill leisure time, as mental stimulation can prevent cognitive decline. Unfortunately, the high rate of illiteracy among Iranian older adults is a major barrier to benefiting from this activity. Other possible causes of this result are lack of interest, being unaccustomed to reading, and vision problems.

Limitations

One limitation of the study is that the sample included community-dwelling older adults, so the results cannot be generalized to institutionalized older adults or those in care facilities. The questionnaires were completed via self-report, so the mental condition of the older adults at the time of responding to the items of the questionnaires could have some influence on the results of the study. The

last limitation of the study was the lack of access to female participants due to their lesser presence in public places. In addition, some factors such as employment status, medical history, social relationship, residential type, and health-related lifestyle were not evaluated in this study. It is suggested that future studies consider the association between these factors and QoL among older adults.

Conclusion

The results of this study highlight the importance of engagement in leisure activities on improving QoL of older people. Hence, they should be encouraged to join in leisure activities to maintain and even improve their well-being. As health conditions may limit the participation of older people, it is suggested that policymakers use appropriate interventions to ensure that a variety of activities are available for this age group regardless of physical ability.

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Conflicts of interest

There are no conflicts of interest.

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