




Original Article

How do Older Adults Spend their Leisure Time? A Population-Based Study in Yazd, Iran

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ABSTRACT

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Introduction: An important issue associated with old age is how to spend the leisure, which can help preserve independence, bring happiness and vitality and reduce mental disorders and indifference. Therefore, the present study aimed to investigate how older adults spend their leisure time.

Methods: The cross-sectional study was conducted with 270 elderly participants (> 60 years) in Yazd city, Iran from July to September 2019. The two stage sampling method was applied. A researcher-made leisure activity questionnaire was used for data gathering. The validity and reliability of the questionnaire was confirmed. The data were analyzed in SPSS using descriptive statistics and the non-parametric Mann-Whitney U-test, Kruskal-Wallis test and Spearman correlation coefficient.

Results: The mean leisure time of participants was 5.09 ± 3.54 hours. Most of the participants (74.4 %) spent their leisure time at home. Physical activity (25.2 %) and travel (33.8 %) were at a low level while religious activity (61.6 %) was the most frequent. Of the participants, 50.7 % were moderately satisfied with their leisure.

Conclusion: Considering the low level of physical activity and travel in older adults' leisure time, both the government and families are suggested to make the required plans to increase older adults' physical activity and time for travel.

Keywords: Aged, Leisure, Satisfaction

Introduction

Due to the prolonged life and increasing population of aged people in communities, it is of a great political and research-based importance to explore how this population spend their leisure. What older adults do during their daily life shows how we can possibly

change their life style to improve healthy behaviors (1). Leisure activities are an important aspect of behavioral potentials. They can even be considered at the core of the quality of life concept. The complicated nature of how to spend the leisure is

more manifest in older adults' daily experience (2). Knowing how this leisure time is spent is needed to better plan and manage the health measures required for this highly susceptible population (3).

Leisure means the time when a committed individual has nothing special to do, and can do whatever likes to do (4). Leisure as a socio-cultural phenomenon affecting the economic, political and social dimensions as a common theme of all classes of society (3). Older people have more leisure time than other age groups due to the special requirements of their age. Meticulous attention to mental, psychological, physical and other needs can help a lot to bring about peace in this stage of life. Many elderlies begin to suffer confusion and disorganization as soon as they enter old age (5). Appropriate entertainment and leisure activities in aging helps preserve independence, bring happiness and vitality, fill their free time and, thus, reduce mental disorders and perceived indifference (6).

Blane and Netuveli contended that leisure activities can have a significant effect on improving people's perceptions of their health, independence, lifestyle, life expectancy, and quality of life (7).

The significance of studying leisure activities of older adults lies in the fact that this population is highly at risk because it has just begun to experience retirement, loss of job, social and industrial support and may even experience emotional detachment from family (3). In countries such as the United States, leisure is considered the most important aspect of American seniors' health and the key to a healthy old age. Studies have shown that interventions that entailed an active participation of older adults in leisure and sports to prevent age-related functional problems proved effective (8). In a study in Qazvin, Iran, most of the older adults were found to believe their leisure time was wasted (9). In another study in Tehran, older adults showed not to have a satisfactory plan for leisure activities (3). In another study which compared older adults in Iran and Sweden, the majority (73.4 %) of the latter were found to be very satisfied with how they spent their leisure while the former expressed a moderate satisfaction (43.7 %). The frequency, type of social and leisure activities in the above-mentioned groups were culturally and environmentally different. The participation level of Swedish seniors was higher in group activities (e.g., attending training classes, recreational tours exclusively for seniors). Concerning group activities, Iranian older adults tended more to attend religious ceremonies or Quran-reading get-togethers (10). Also, age, gender, physical activity, socioeconomic status, education level, and disability are the most potent factors affecting how the Iranian elderly population spend their leisure (3).

The growing trend of the aging population, the complex aspects of their life, and the lack of studies on these issues draw attention to the essentiality of timely interventions to benefit the aged people. To improve their health condition and prevent the occurrence of chronic diseases and reduce the prevalence of specific diseases, the present study was

conducted to see how older adults spend their leisure time in Yazd.

Methods

Design and participants

The cross-sectional study was conducted on older adults in Yazd city, Iran in 2019. At a 95 % confidence level, $p = 40\%$ (from pilot study) and an estimated error of 0.06, the sample size was estimated at 270.

The sampling was done in two stages following a convenience method. In the first stage, Yazd was divided into 5 regions (municipal divisions) and a health center was randomly selected from each region. Then, 270 elderly participants (160 men and 170 women) were included in the study over two months through convenience sampling.

People ≥ 60 years who were able to speak, were literate and free from mental disorders entered the study.

Instrumentations

For data collection, a two-part leisure activity questionnaire was developed through a literature review. One part of the questionnaire explored demographic information (age, gender, number of children, marital status, education, occupation, accommodation type, partner in life (i.e., spouse, children, etc.), the main source of income, diseases and how to spend leisure (i.e., the time, place and satisfaction) with a total number of 13 questions.

We divided the age into three groups: young old (the age group 60-69 years), middle-old (the age group 70-79 years) and oldest old (the age group > 80 years).

The second part consists of 7 dimensions of leisure, each including different activities such as physical (going for a walk, swimming, solo and team sports), use of mass media (reading newspapers or books, communication via telephone, mobile phone and social networks, surfing the net, listening to the radio, watching movies or TV series, watching documentaries, watching the news and watching sport matches), religious activities (reading the holy Quran and religious texts, going to mosques and religious places, saying prayers, attending religious ceremonies, going to the cemetery), social activities (visiting friends and relatives, caring for grandchildren, doing charity work, dining out with friends, going out with friends), leisure (playing chess, mensh, etc., cooking for fun, solving crossword puzzles, writing poetry and literary texts, going to the cinema, concerts, theater, playing computer and mobile games, going to parties, playing or listening to music, painting, handicrafts, attending art classes, going to parks, going to shopping malls), housework (interior design, repair work, wash-ups, and gardening) and travel (domestic, city to city, foreign (pilgrimage-tourism)). All the items were rated on a 4-point Likert scale: 0 (never), 1 (sometimes), 2 (often) and 3 (always). The total score could range between 0 and 126.

To assess the face and content validity of the leisure activity questionnaire, it was provided to 7 experts (gerontologist and health education specialists). Their comments were used to revise the questionnaire.

Cronbach's alpha coefficient test was used to assess the reliability of the questionnaire. An estimated alpha of at or above 0.7 is interpreted as acceptable (11). The estimated Cronbach's alpha coefficient of the leisure activity questionnaire was 0.88.

Data analysis

Descriptive statistics (frequency, mean, standard deviation, maximum, minimum and percentage) and non-parametric Mann-Whitney U-test, Kruskal-Wallis test and Spearman correlation coefficient (to examine the correlations between demographic variables and leisure activity) were used for data analysis using SPSS software.

Ethical considerations

The present study was approved by the Ethics Committee of the Shahid Sadoughi University of Medical Sciences, Yazd (IR.SSU.SPH.REC.1398.111). Concerning the objectives of study and the procedures involved, sufficient explanation was provided to the participants and a written letter of consent was obtained from them. Participants were assured of the confidentiality of their personal information and that the results would be provided for them upon request. Participation in the study did not cost anything for the participants. This study did not contradict the religious and cultural norms. The anonymity of the responses was also guaranteed.

Results

The mean age of participants was 68.21 ± 6.42 years. Of all participants, 51.85% were female, 78.52 % were married, 37.78 % held an elementary school degree and almost half of the participants were retired. (Table 1)

The mean leisure time of participants was 5.09 ± 3.54 hours. Religious activities showed to be the most frequent leisure activity (61.6 %) whereas physical activity (25.2 %) and travel (33.8 %) were the least frequent. (Table 2)

About half of the participants were relatively satisfied with their leisure time, and most of participants (74.4 %) spent most their free time at home. (Table 3)

The young old (the age group 60-69 years) compared to the oldest old (the age group > 80 years) did more physical activities ($p = 0.004$), social activities ($p = 0.036$), recreation activities ($p = 0.015$) and house work ($p = 0.010$). The use of mass media ($p < 0.001$) and traveling ($p = 0.013$) prevailed more in male elderlies than the female. The rate of physical activities ($p = 0.016$), use of mass media ($p = 0.017$), recreation activities ($p =$

0.007) and house work ($p = 0.028$) was significantly higher in the married elderly. Also, the rate of physical activity ($p = 0.001$), use of mass media ($p = 0.001$), recreation activities ($p = 0.001$), house work ($p = 0.004$) and travelling ($p = 0.010$) was higher in more educated elderlies.

Spearman correlation test showed that as the length of leisure time increased, the use of media increased too ($r = 0.264$, $p = 0.001$). The same was true for social activities ($r = 0.147$, $p = 0.05$) and house work ($r = 0.122$, $p = 0.05$).

Discussion

With the increasing number of elderly population in the world and the problems created for them, it is important to study a number of issues related to them. One of these is how to spend leisure time in old age (10, 12). The present study aimed to explore how older adults in Yazd spend their leisure time.

The mean leisure time of participants was 5.09 ± 3.54 hours. Among the elderly population of Tehran 30% of the respondents, had 13-15 hours, and 5.7 % had 1-3 hours of leisure time (13). The long leisure time during this stage of life, as expected, reveals the need for a proper planning and interventions to let older adults spend their free time in the best way possible. The results revealed that increasing the length of leisure managed to increase such activities as using mass media and doing house work. It shows a significant lack of proper planning for older adults and their families to spend their leisure time optimally.

The majority of participants in this study spent most of their leisure time at home. About 90 % of older adults in a similar study in Shiraz admitted they spent most of their time at home watching TV or simply resting (14). The possible reasons can be the religious activities that are mostly done as solo work at home, different chronic diseases (e.g., skeletomuscular diseases) and the absence of anyone to chat with outside home.

Most participants spent their free time praying, watching the news, attending religious ceremonies, going to mosques or religious places. Among the different forms of leisure, physical activities and travelling were the least frequent while using mass media, social activities, recreation activities and house work were at a moderate frequency level, and religious activities stood at the top. It is mistaken to conceive that the older generation does not need to travel. Elderly people can get a good peace of mind while traveling. Their mind can rid of recurrent boring thoughts at least for a while. Older adults need to travel with families to be refreshed and retrieve their energy. Also, the movement requirements while traveling can be effective in keeping their body healthy.

Table 1. Demographic information of participants

Variables		N	%
Gender	Male	130	48.15
	Female	140	51.85
Age	60-69 years	164	60.7
	70-79 years	88	32.6
	> 80	18	6.7
BMI	Underweight	12	4.44
	Normal	78	28.9
	Overweight	128	47.4
	Obese	52	19.3
Marital status	Married	212	78.52
	Unmarried	58	21.48
Education level	Illiterate	29	10.74
	Elementary school	102	37.78
	Under high school diploma	41	15.19
	High school diploma	56	20.74
	Academic	42	15.56
Job	Retired	127	47.03
	Housewife	122	45.18
	Self-employed	21	7.77
Accommodation type	House with a courtyard	244	90.4
	Flat	26	9.6
Living status	With spouse	160	59.6
	With spouse and single children	54	20
	With married children	42	15.5
	With single children	14	5.2
Source of income	Current job	29	10.7
	Pension	162	60
	Supportive institution	8	3
	Spouse	71	26.3

Table 2. Distribution of mean and standard deviation of leisure time activities

Variables	Mean \pm SD	Possible range of score	Maximum	Minimum	Mean percentage of maximum score
Physical activity	2.52 \pm 1.98	0-12	10	0	25.2
Use of mass media	8.53 \pm 4.73	0-24	18	0	47.3
Religious activities	9.25 \pm 3.35	0-15	15	0	61.6
Social activities	5.90 \pm 2.82	0-15	13	0	45.3
Recreation activities	11.71 \pm 6.45	0-39	28	1	41.8
Housework	4.31 \pm 2.38	0-12	10	0	43.1
Travel	3.05 \pm 1.83	0-9	9	0	33.8

The overall studies on the elderly in Iran (3, 9, 15, 16) show that most of older adults' free time is spent at home watching TV. The results of similar studies in Spain and Korea showed that the most frequent hobby that older adults indulged in was watching TV (2, 17). It can be concluded that how to spend the leisure changes throughout life. As more and more disabilities arise in older adults' life, there are fewer facilities available for their physical exercises and sports. Among the most frequent causes of limited physical activities were

disinterest, high costs, and inadequate awareness of the benefits of sports. Older adults had TV easily available, thus, they tended to watch it at no cost. An investigation of pensioners in Tehran showed that those working at the time of data collection or those having a monthly salary more than 5 \$ USD (1\$ USD=287000 IRR), with a leisure longer than 3 hours (in 24 hours) tended to travel more. With the expanded urbanism, those with more free time can go for a walk. If those working do not have a strong will, they fail to do so.

Table 3. Frequency distribution of the leisure time activities

Dimensions	Activities	Never N (%)	Sometimes N (%)	Often N (%)	Always N (%)
Physical activity	Going for a walk	51 (18.9)	120 (44.4)	65 (24.1)	34 (12.6)
	Swimming	164 (60.7)	85 (31.5)	16 (5.9)	5 (1.9)
	Solo sports	181 (67.04)	73 (27)	11 (4.1)	5 (1.9)
	Team sports	208 (77)	46 (17)	8 (3)	8 (3)
Use of mass media	Book or paper reading	106 (39.2)	113 (41.9)	41 (15.2)	10 (3.7)
	Communication via telephone, mobile phone and social networks	85 (31.5)	89 (33)	61 (22.6)	35 (13)
	Surfing the net	178 (65.9)	69 (25.6)	20 (7.4)	3 (1.1)
	Listening to radio	88 (32.6)	102 (37.8)	52 (19.3)	28 (10.4)
	Watching movies and series	35 (13)	106 (39.3)	77 (28.5)	52 (19.3)
	Watching the news	32 (11.9)	80 (29.6)	74 (27.4)	84 (31.1)
	Watching documentaries	104 (38.5)	94 (34.8)	41 (15.2)	31 (11.5)
	Watching sport games and matches	130 (48.1)	75 (27.8)	42 (15.6)	23 (8.5)
	Religious activities	Reading the holy book and religious texts	33(12.2)	102 (37.8)	83 (30.7)
Going to mosques and sacred places		16 (5.9)	95 (35.2)	86 (31.9)	73 (27)
Prayers		3 (1.1)	33 (12.2)	74 (27.4)	160 (59.3)
Attending religious ceremonies		5 (1.9)	101 (37.4)	90 (33.3)	74 (27.4)
Going to the cemetery		14 (5.2)	120 (44.4)	77 (28.5)	59 (21.9)
Social activities	Visiting family and friends	17 (6.3)	124 (45.9)	88 (32.6)	41 (15.2)
	Taking care of grandchildren	44 (16.3)	117 (43.3)	67 (24.8)	42 (15.6)
	charity work	46(17)	162 (60)	42 (15.6)	20 (7.4)
	Dining with friends	93(34.4)	133 (49.3)	35 (13)	9 (3.3)
	Going out with family or friends	65(24.1)	131 (48.5)	55(20.4)	19 (7)
	Recreation	Board games	211 (78.1)	46 (17)	10 (3.7)
cooking		133 (49.2)	92 (34.1)	26 (9.6)	19 (7)
Crossword puzzle		196 (72.6)	53 (19.6)	14 (5.2)	7 (2.6)
poetry		231 (85.6)	32 (11.9)	6 (2.2)	1 (0.4)
Cinema, concert, theatre		226 (83.7)	41 (15.2)	3 (19.1)	0
Computer or mobile games		203 (75.2)	47 (17.4)	18 (6.7)	2 (0.7)
parties		45 (16.7)	147 (54.4)	63 (23.3)	15 (5.6)
Playing or listening to music		143 (53)	88 (32.6)	30 (11.1)	9 (3.3)
Painting		228 (84.4)	33 (12.2)	7 (2.6)	2 (0.7)
Handicraft		210 (77.8)	49 (18.1)	9 (39.3)	2 (0.7)
Attending artistic or technical classes		214 (79.3)	43 (15.9)	11 (4.1)	2 (0.7)
Going to parks		56 (20.7)	126 (46.7)	70 (25.9)	18 (6.7)
shopping		51 (18.9)	134 (49.6)	55 (20.4)	30 (11.1)
House work		Interior design	130 (48.1)	102 (37.8)	35 (13)
	Repair work	129 (47.8)	90 (33.3)	35 (13)	16 (5.9)
	Wash-ups	34 (12.6)	99 (36.7)	70 (25.9)	67 (24.8)
	Gardening	52 (19.3)	115 (42.6)	68 (25.2)	35 (13)
Travel	Domestic	37 (13.7)	145 (53.7)	66 (24.4)	22(8.1)
	City to city	63 (23.3)	147 (54.4)	47 (17.4)	13 (4.8)
	Foreign	124 (45.9)	123 (45.6)	18 (6.7)	5 (1.9)

About half of the participants in this study were relatively satisfied with their leisure time. In a similar study in Qazvin in Iran, most of participants believed their leisure time was wasted (9). Similarly, participants in Tehran did not report enjoying a satisfactory pattern of leisure activities (3). In another study which compared Iran and Sweden, the majority of older adults (73.4 %) in Sweden were very satisfied with the way they spent their leisure, but 43.7 % of those living in Iran expressed a moderate level of satisfaction (10). Factors contributing to the lower satisfaction of Iranian elderly with social relations than Swedish peers can be the expanded urbanization, lack of facilities and less familiarity with or attention to a healthy lifestyle. Among the other potential reasons are the lack of suitable facilities and recreations for older adults, costly amenities, the low income, lack of any regular plan, limited access to available facilities, lack of attention to the leisure requirements of older adults in decision-making, lack of policy-making and implementing appropriate programs, chronic diseases and the psychological, economic and the social consequences of this issue.

Therefore, we can expect that older adults' cognitive and functional condition is improved through simple and cost-effective entertainments such as chess, mensh, etc., crossword puzzles, painting, handicrafts, art classes, parks, green spaces and shopping malls, newspapers and books, communicating on phone, mobile phone and social networks, surfing the internet, the radio, movies and TV series, the news, documentaries and watching sports instead of wasting time. These are expected to significantly reduce disabilities in the elderly. It is noteworthy that most of these activities can be done by the older adults elderly without any particular facility or anyone's help. Only a number of simple trainings and motivating acts can make dramatic changes to how older adults spend their leisure.

Physical activity, social activities, leisure activities and house work decrease with the elderly's increase of age. In a study in Tehran, older adults' recreations, sports, social interactions and artistic skills decreased significantly with age (15). As people get older, they become more susceptible to physical and motor problems, social isolation, economic problems, and a loss of patience. It seems that older adults who have more children spend more time with their children and grandchildren, and are less involved in leisure activities. Planning for group activities instead of individual activities can be useful for this population.

The use of mass media and travelling were more common among men than women. A similar study of the Iranian elderly population showed that men's rate in paid activities was higher than women. In contrast, the rate of unpaid activities or voluntary

tasks was higher in elderly women than men. In other words, economic activities are more common in older men and social activities are more common in older women (18). A study of older adults in Tehran showed that women's participation in sports, recreations, cultural activities and mass media was significantly lower than men (15). These studies are consistent with the present findings. In explaining these gender differences, other studies raised factors such as social and psychological factors, different cross-gender roles, the impact of gender socialization process, heterogeneous lifestyles and different behavioral patterns which all point to the disparity in the working conditions of men and women, and women's higher level of susceptibility and attention to their own health and their family members.

The rate of physical activities, using mass media, recreations, and house work was higher in married older adults than the unmarried elderly. Similarly, in a study by Hosseini et al. in Tehran, the married elderly's participation in social interactions was higher than other age groups (15). The findings show that the married have a more purposeful and regular life than the single. They also enjoy higher spirits.

The more educated elderly had more physical activities, used mass media more, indulged in leisure activities, did housework and traveled. Thus, education can be considered a main factor that provides the necessary conditions for the prevention, control and even the timely treatment of some chronic diseases, and also an effective factor in choosing a job and take greater and broader responsibilities in life.

Conclusion

Due to the high average leisure time of participants, it is incumbent on all populations of society including families and especially the government to plan to improve different aspects of older adults' lifestyle, including their recreational activities. The aim should be to prevent the aggravation of older adults' problems and make more effective comprehensive plans for older adults at community. The planning should aim to improve older adults' physical and mental health.

We should help older adults do more physical activities in parks or travel more on one-day tours so as to meet their peers, communicate with them and enjoy a kind of support from outside their families. Providing sport facilities in parks (e.g., appropriate seats, pavement, special places to rest, easily accessible medical services) by the municipality and employing specialized staff in sport venues or parks can help improve older adults' leisure and physical activities. Policy-makers should be made aware of older adults' real needs, provide them with the facilities most needed and encourage them to participate more in sport

activities. This is a great step taken to the improvement of older adults' cognitive and functional abilities.

Older adults' perceived monotony and isolation can be reduced if appropriate strategies are employed to effectively plan for their leisure. It can help increase their satisfaction with how to spend their leisure as well.

Study limitations

As the participants of the study were limited to the elderlies in Yazd, which is a traditional and religious city, this should be addressed in generalization of the results. The cross-sectional nature of study and the self-reported data were the other limitations of the study.

Conflict of interest

The authors state that there is no conflict of interest with the present study.

Authors contribution

ZR, HR, and MN designed research; MN and ZR conducted research; SJ analyzed data; All authors contributed to the writing and approved the final manuscript.

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References

1. Fancourt D, Aughterson H, Finn S, Walker E, Steptoe A. How leisure activities affect health: a narrative review and multi-level theoretical framework of mechanisms of action. *The Lancet Psychiatry*. 2021; 8(4): 329-39.
2. Jeong E-H, Park J-H. The relationship among leisure activities, depression and quality of life in community-dwelling elderly Koreans. *Gerontology and Geriatric Medicine*. 2020; 6(4): 1-7.
3. Rahimi A, Anoosheh M, Ahmadi F, Foroughan M. Tehranian elderly people's experiences about leisure time activities and recreations. *Salmand: Iranian Journal of Ageing*. 2010; 5(1): 61-77. [Persian]
4. Arslantas D, Ünsal A, Metintas S, Koc F, Arslantas A. Life quality and daily life activities of elderly people in rural areas, Eskişehir (Turkey). *Archives of Gerontology and Geriatrics*. 2009; 48(2): 127-31.
5. Eftekhari Ardebili H, Khattei Deizabadi F, Batebi A, Shojaiezadeh D, Yazdani Cherati J. Frequency of functional and cognitive impairment and relevant factors in aging. *Journal of*

Mazandaran University of Medical Sciences. 2012; 22(96): 115-25. [Persian]

6. Abedi H, Lali M, Keyvanniya S, Nikbakht A. Life experiences of older people who are used to spend their time in parks. *Journal of Qualitative Research in Health Sciences*. 2020; 2(2): 184-93. [Persian]
7. Blane D, Netuveli G, Montgomery SM. Quality of life, health and physiological status and change at older ages. *Social Science & Medicine*. 2008; 66(7): 1579-87.
8. Adelirad F, Salimi MM, Dianat I, Asghari-Jafarabadi M, Chattu VK, Allahverdipour H. The relationship between cognitive status and retained activity participation among community-dwelling older adults. *European Journal of Investigation in Health, Psychology and Education*. 2022; 12(4): 400-16.
9. Asefzadeh S, Qoddoosian A, Najafipour R. How does the elderly spend their leisure time in Qazvin?. *Journal of Inflammatory Diseases*. 2009; 13(2): 84-7. [Persian]
10. Madah SB. The status of social and leisure time activities in the elderly residing in Iran and Sweden. *Salmand: Iranian Journal of Ageing*. 2008; 3(2):597-606. [Persian]
11. DeVellis RF, Thorpe CT. Scale development: theory and applications. 4th ed. Sage publications; 2021.
12. Jung MS, Kim H, Lee Y, Kim M, Chung E. Different effects of cognitive and non-exercise physical leisure activities on cognitive function by age in elderly Korean individuals. *Osong Public Health and Research Perspectives*. 2017; 8(5): 308-17.
13. Chamanpira M, Farahani A, Jalali Farahani M. The tehran older adults' leisure time and physical activity with emphasize of sport equipments provided by municipality in 2010. *Salmand: Iranian Journal of Ageing*. 2014; 9(3): 179-88. [Persian]
14. Safari M MF, Rostapour A. Investigating the status of leisure time and the ability of the elderly in Shiraz to perform daily life activities in 2005. *Hospital*. 2007; 7(1, 2):7-10. [Persian]
15. Hosseinizare SM, Tajvar M, Abdi K, Esfahani P, Geravand B, Pourreza A. Leisure spending patterns and their relationship with mental health in the elderly in Iran. *Salmand: Iranian Journal of Ageing*. 2020; 15(3): 366-79. [Persian]
16. Sharifian Sani M, Zanjari N, Sadeghi R. Time Usage Patterns of Iranian Older Adults and Its Association With Socioeconomic Factors. *Salmand: Iranian Journal of Ageing*. 2016; 11(3): 400-15. [Persian]
17. Conde MD. Leisure patterns and needs of the elderly in rural Galicia (Spain). *Educational Gerontology*. 2012; 38(2): 138-45.
18. Zanjari N, Sadeghi R, Delbari A. Analysis of gender differences in time use among Iranian older adults. *Salmand: Iranian Journal of Ageing*. 2019; 13(5): 588-603. [Persian]