



## Original Article

### Leisure Activities and Mental Health among Aging People in Tehran, Iran

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#### ABSTRACT

##### Article history

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**Introduction:** Leisure activities are common among the elderly, however the effect of such activities on their mental health is poorly defined and not underpinned by strong evidence. This study aims to determine the prevalence of leisure activities and its relation to mental health in the elderly.

**Methods:** A cross-sectional study was conducted and 400 community dwelling older adults 60 years and more with appropriate cognitive function (Abbreviated Mental Test score 7 and more), were recruited through multi-stage stratified cluster sampling in Tehran, Iran. Data was gathered by demographic questionnaire and General Health Questionnaire (GHQ). The primary outcomes to measure were the prevalence of leisure activities, and GHQ score in subgroups. Data were analyzed by Kolmogorov-Smirnov test, ANOVA, independent *t*-test and multiple linear regressions.

**Results:** Of participants 62% were in their 7th decade (60-74 years), 56% (224) were female with mean age of  $66.98 \pm 8.22$ , and 44% (176) male with mean age of  $66.98 \pm 8.22$ . GHQ scores showed 65% of participants had good mental health (0-23) and 35% had mental health problems (24 and more). Mean of GHQ score in participants ( $n = 377$ ) was  $21.8 \pm 11.37$  (0-28). watching television (77%), reading books (40.3%), walking (31.5%) and taking trip (36%) were more interesting leisure activities among older adults. Women, single, unemployed, alone and illiterate older adults had statistically significant ( $p \leq 0.05$ ) upper GHQ scores. Participating in active leisure activities such as taking trip and cultural classes, participating in non-government organization activities, going to parks and gym and walking had significant relationships with good mental health ( $p \leq 0.05$ ).

**Conclusion:** Encouraging older adults to participation in active leisure activities would be an effective intervention in mental health improvement. On the other hand understanding of relationship between type of leisure activities and mental health, provides evidence for policy makers and health care planners to offer and facilitate a context in which older adults can improve participation in active leisure activities.

**Keywords:** Elderly, Leisure Activities, Mental Health, Iran

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#### Introduction

Health is a well-established concept with multi dimensions. One of them is psychosocial dimension that is almost new issue but has been less acknowledged specially among older adults (1).

World Health Organization defines health as the state of physical, mental and social welfare and not absence of disease. In fact, this definition covers not only bodily growth and development but also mentally.

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Although health include three interconnected dimensions, but most of studies have been focused on physical issues with respect to epidemic disease (2).

As elderly population increases on the world, the attention of researchers have been attracted to the importance of mental health issues among them. One reason is that older adults experiences mental challenges during aging process and are vulnerable to mental health problems such as depression and anxiety. Preventive mental health interventions have proven to be beneficial in aging process and help them to independently live this course of life in the successful situation (3, 4).

These Interventions help older adults to be mentally stronger and able to meet mental health needs such as control of stress. Senior citizens need freshness and vitality for long living in dignity matter and independency. Aging means the older adults have more free time particularly after retirement and need recreation, entertainment and active life to shape vitality and provide satisfaction. Leisure activities are defined as preferred and enjoyable activities participated in during one's free time (5) and classified in intellectual, social, recreational, and physical categories(6).

It seems leisure activities have effect on individual wellbeing (6). Few evidence shows leisure activities increase self-esteem in aged population and prevent them from trivial sense of being uselessness and weakness(5). Ponde and Santana showed negative relationship between participation in leisure activities and anxiety and depressive symptom among women (7). Although prior researches such as Yin has revealed an association between participation in recreational activities and outdoor leisure, and health improvement and increasing life expectancy(8), little is known about the applicability of this association in Iranian older population.

Evidence illustrated that watching movies, sport games, natural documentaries from TV are common among Iranian older people (9, 10). Comparison cross sectional study among Iranian and Sweden older adults showed Swedish elders have more leisure time and prefer to experience more active leisure activities than Iranians counterparts (11).

Detecting the pattern of elders' leisure activities provides valuable information about characteristics of elderly life style. Indeed elucidating the association between leisure activities and mental health might help health policy makers to set effective and appropriate interventions to meet older people's mental health needs with focus on favorite recreational activities. Chang and Ye qiang believed involving in leisure activities may affect different aspect of wellbeing, and different types of leisure activities may provide different level of benefit for older adults (5).

The aim of this study is to examine possible relationship between mental health and leisure activities among elderly population.

## Methods

### Procedure

This study was conducted by descriptive analytical design in Tehran; the capital city of Iran. 400 community dwelling older adults 60 years and more with appropriate cognitive function (Abbreviated Mental Test score 7 and more) participated in the study. The sampling method was multi-stage stratified cluster sampling. Tehran is divided into 22 municipal districts and each district is composed of a number of regions and sub regions. We selected randomly one region from each district and one sub region from each region. Based on demographic data retrieved from regional authorities, the proportion of older people residents in every cluster was estimated. Randomly a household was marked on the map as beginning point for cluster sampling and individuals were selected from each family unit. Researchers considered  $p = 50\%$ ,  $d = 0.05$ ,  $\alpha \leq 0.05$  for representative cluster sample to determine the sample size.

### Measures

Data was gathered by demographic questionnaire and General Health Questionnaire (GHQ). The questionnaire includes 28 items regarding mental health and the higher score of GHQ is considered as more mental health problems (12, 13). Before data gathering the interviewer examined participants' cognitive function by Abbreviated Mental Test, with 7 as lower cut off point of normal cognitive function. In case of illiteracy, the interviewer assisted responder to complete the questionnaire. Written consent was obtained from all participants and the Ethics Committee of university of Social Welfare and Rehabilitation Sciences approved the study.

### Statistical analysis

With applying SPSS-IBM version 16, the results were analyzed via descriptive statistics, ANOVA, *t*-test and linear regression.

## Results

Of participants 44% (176) were male and 56% (224) were female; with 62% in the 7th decade (60-74 years) of their age. The mean age of females and males was  $66.98 \pm 8.22$  and  $68.61 \pm 6.71$  respectively. Table 1 illustrates the demographic characteristics of participants, mental health subscales and result of comparing mean of GHQ among variables of the study.

GHQ scores shows 65% of participants had good mental health (0-23) and 35% had mental health problems (24 and more). Mean score of participants ( $n = 377$ ) was  $21.8 \pm 11.37$  (0-28) (Table 2).

Multiple linear regression analysis was used to identify independent factors that were significantly correlated with GHQ (Table 3). Taking trip, participation in non-government organizations,

visiting relatives, age and gender were statistically significant factors associated with GHQ score.

**Table 1. The demographic characteristics of participants, mean score of mental health subscales and comparing total GHQ scores based on demographic characteristic**

Variable	Classification	N (%)	Mean Scores					p
			Anxiety	Depression	Social function	Physical sign	Mental Health(total)	
<b>Gender</b>	Male	176 (44)	7.52	4.65	3.80	3.40	19.38	0.001
	Female	224 (56)	8.46	6.35	4.47	4.48	23.77	
<b>Marital Status</b>	Married	336 (85.3)	7.98	5.58	4.18	3.86	21.51	0.140
	Single	58 (14.7)	8.80	6.13	4.30	4.85	24.07	
<b>Literacy</b>	Illiterate	61 (15.3)	11.84	10.02	5.38	5.66	32.89	0.001
	Only Reading	55 (13.8)	7.44	5.54	4.88	3.68	21.54	
	Primary	50 (12.5)	9.06	5.40	3.70	5	23.16	
	Secondary	30 (7.5)	9	4.88	3.54	4	21.42	
	Diploma	116 (29)	6.41	4.59	3.86	3.60	18.47	
	Graduated	88 (22)	7.14	4.37	3.86	3.02	18.29	
	Occupational Status	18 (4.6)	5.72	3.94	3.83	2.89	16.39	
Employee	53 (13.5)	8.02	3.81	2.81	4	18.44		
Self-employment	146 (37.2)	8.87	6.93	4.75	4.42	25.17		
Housewife	14 (3.6)	9.08	5.92	4.77	5.62	25.38		
Unemployed	25 (6.4)	10.16	8.64	4.72	4.16	27.68		
Pensioner	119 (30.4)	7.61	4.57	4.29	3.42	19.89		
Voluntary works	17 (4.3)	3.18	4.59	2.24	2.88	12.88		
<b>Living with</b>	No body	56 (14.3)	12.56	9.50	5.41	5.44	32.89	0.001
	Spouse	177 (45.3)	7.06	4.76	3.70	3.72	19.24	
	Spouse & Kids	72 (18.4)	7.16	4.13	3.71	3.46	18.46	
	Single Kids	67 (17.1)	7.64	5.19	4.29	3.77	20.98	
	Married Kids	17 (4.3)	8.88	9.50	6.44	5.56	30.38	
<b>Comorbidity</b>	Nothing	316 (81.9)	6.24	3.36	4.43	2.76	15.79	0.001
	At least one illness	70 (18.1)	8.52	6.15	4.38	4.33	23.39	

\* Total GHQ Score Test Result

**Table 2. Frequency of leisure activities in participants and mean scores of mental health**

Leisure time activity	Yes	No	Mean GHQ	Mean GHQ	p
	N (%)	N (%)	Yes	No	
Rip	141 (36)	231 (64)	17.69	24.19	0.001
Doing handmade arts	36 (9.2)	336 (90.8)	19.06	22.18	0.130
Taking artistic and cultural class	67 (17)	304 (83)	18.21	22.70	0.004
Participating in NGO activities	94 (24.1)	278 (75.9)	19.07	22.85	0.005
Going to parks	119 (30.4)	253 (69.6)	18.87	22.11	0.001
Going to gym	130 (33)	251 (67)	18.69	23.45	0.001
Walking	123 (31.5)	249 (68.5)	20.12	22.69	0.040
Religious Meetings	86 (22)	286 (78)	20.05	22.40	0.110
Visiting relatives	118 (30.1)	254 (69.9)	19.01	23.15	0.002
Reading books	158 (40.3)	212 (59.7)	23.31	19.79	0.002
Watching television	302 (77)	70 (23)	21.78	22.32	0.660
Listening to radio	65 (16)	307 (86)	21.90	21.91	0.971
Watching Satellite	145 (37)	227 (63)	22.97	21.27	0.103
Surfing Internet and web	53 (13.5)	319 (86.5)	13.76	23.08	0.001
Reading newspapers	110 (28)	262 (72)	20.49	22.45	0.160
Going to cinema or theater	18 (4.6)	354 (95.4)	17.61	18.12	0.100
Listening music	62 (15.8)	310 (84.2)	20.40	22.17	0.204

**Table 3. Comparing the predictive power of the independent variables of mental health in multiple linear regression models**

Constant		3.209	
Predictor	Situation	$\beta$	p
Trip	Do not trip	-0.127	0.012
Visiting relatives	Inactive	-0.133	0.009
Participating in NGO	Inactive	-0.157	0.005
Age	-	0.158	0.003
Gender	Male	0.267	0.001

### Discussion

The purpose of the study was to examine association between leisure activities and mental health among

Iranian elders. The findings of this study showed watching TV, reading books, walking and taking trip

were more interesting leisure activities among older adults. It means more participants prefer to have individualized activities and not to participate in group activities and most of their favorite leisure activities need not physical activities and were passive in nature. In other words, sedentary life style is common among subjects of the present study. These findings are consistent with result of Asefzade et al. (10). Maddah et al. in a study comparing leisure activities among Iranian and Swedish older adults showed Swedish elders prefer to participate in more active leisure than Iranians (11). Possible explanation may be safety issues as safer walk sides, greater access to exercise equipment, more interest and time to exercise, higher self-confidence, and well-informed about healthy effects of exercise for Swedish counterparts. Dergance et al. showed that cultural and perceptual factors have very important effect on participating Mexican and European Americans in active leisure activities, while self-consciousness, lack of knowledge, interests, companionship and enjoyment are the predominant barriers (14).

It is important that special care be taken in enhancing active recreational programs for older population with low-level activity in the community (11, 15). Although further empirical evidence are needed to exactly explain related reasons through elders' perception and experiences particularly through qualitative approach.

Reading books and newspapers were other frequent activities among all leisure activities in present study. Reading is very effective strategy in strengthening of cognitive function among older adults and is a preventive factors for Dementia and Alzheimer disease (15). Providing reading materials with large font, applying good color contrast between background and fonts, and managing vision deficiency among older adults could encourage them to reading.

Although present data indicated that most of community dwellers had no mental problems, but prevalence of mental health problem among participants was relatively high (35%). Females, singles, unemployed, illiterates and subjects living alone or with comorbidity were predisposed to mental disorders. Being female is the most predictive factor to have mental health problem that is consistent with Malakooti et al. findings (13).

In agreement with previous findings, the most protective activity was socialization as participation in NGOs' programs (5). As previous studies indicates (16), there was significantly a reverse association between taking trip, artistic training courses, participating in NGOs, going to park and gym, walking, visiting relatives, reading books and use of internet with mental problems score; individuals who do not have these kinds of leisure activities, suffer from mental health problems.

Although this study did not show the causal relationship between doing leisure activity and mental health, but provides evidence for policy makers and health care planners to offer and facilitate a context in

which older adults can improve participation in leisure activities. Establishing senior clubs and lifestyle centers with transportation facilities for older adults might be effective in this regard.

## Conclusion

Improved understanding of association among leisure activities and mental health in older adults, as such the study illuminated, will be important for planning effective community based health promotion interventions for older population. Acknowledging cost-effective leisure activities could help health care planners to set facilities, modify barriers, and encourage elders to participate in such the activities.

## Study Limitations

These results should be interpreted with caution. All participants were community dwellers with different health and physical activity levels and health care needs. Institutionalized and frail people may not, further, benefit from leisure activities, and their needs should be prioritized before designing healthy programs. The result of this study would hopefully direct health promotion planning toward healthier elders.

## Conflict of interest

The authors declared no conflicts of interest.

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