

# **The Relationship between Participation in Leisure-Time Physical Activity and Mental Health of Active Elderly in Tehran**

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**ABSTRACT:** The purpose of the present research is to study the relationship between participation in leisure-time physical activity and mental health of active elderly in Tehran. This research is applied based on the purpose and this considered based on methods of processing descriptive data which collecting data is carried out in the field method. 210 people were determined as the statistical sample due to the large volume of the population using the software to determine sample size. To collect the data of the research, standard questionnaires of the physical activity of Sharkly and general health of Goldberg were used. Cronbach's alpha coefficient was used to determine the reliability of the questionnaires which its value was estimated to be appropriate. Data collected was analyzed using descriptive and inferential statistical methods (tests of Spearman correlation coefficient, independent t and multivariate analysis of variance). The results showed that there was a relationship between participation in leisure-time physical activity and mental health of active elderly. Also, there is not a difference between elderly men and women in the sport participation. The other is that generally there is a difference between the mental health of men and women.

**Keywords:** Participation, Physical Activity, Mental Health, Active Elderly.

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## **INTRODUCTION**

Man grows in society and strongly has an influence from it because the relationship between the individual and society is real. That is, there is established a relationship between the individual and society that properties and effects of people affects in the society and naturally, social properties also affect the individual. In addition to these relationships, one needs to mobility for survival of the health (Sanei, 2004).

Movement and mobility are features of human life and they include motivation and originate in his nature and this is a factor for growth, health and vitality. Prohibiting the person from moving not only leads to growth but this also results in depression, abnormal behavior and loss of vitality life (Bakhshandeh, 2008). Based on the evidence, physical activity is one of the most important factors of personal and social health and those who neglect and easily ignore the issue; they have not learned the art of living yet (Gaini & Rajabi, 2004). Nowadays, regular physical

activity and proper nutrition to achieve mental health are a part of the national health objectives in developed countries and they insist on various statements on their effort and all people are encouraged to benefit from blessings, i.e., an increase of life expectancy and improvement of the quality of life by referring to these programs (Gaini & Rajabi, 2004).

However, some people have believed that they decrease their hours of working and they exercise to preserve the health, vitality and joy while it can be said that sports activities make that humans have a good feeling not only in their body, but also they generally have a good feeling from themselves (self-belief) (Tondnevis, 2002).

In this regard, many lifestyles have been changed in such a way that some sessions are devoted to the implementation of the exercise per week. This process of social policy is led to a movement in public interest in the creation and development of knowledge and more specific information about the various effects of physical activity and exercise on an individual's fitness and health. The effect of physical fitness and activity can lead to health, activeness and being dynamic and long life of the individual. In contrast, immobility usually leads to illness, inactivity and short life that changing the ratio is a causal chain which results in desirable and non-desirable results. Surely, the desired results, longevity and the quality of life improved are based on personal or social health although all the evidence available indicate the effect of physical activity in disease prevention and physical health promotion (Behpour, 1996).

Today, with respect to the importance of mobility as one of the essential needs of the living thing and also expanding car replacement rather than human that the promotion of physical weakness, mental health problems, away from morality and human values can be from the consequences, the need for physical activity is strongly felt (Mourão et al., 2013). Therefore, one for his body health should be unaware of sports and physical activity (McCauley, 2005). However, many studies and research have confirmed the effect of exercise in preventing these problems. There is no doubt that at present, the issue of physical activity has become a global phenomenon (Mourão et al., 2013).

Today, the phenomenon of physical education as an undeniable necessity and an essential foundation for all communities and dramatically and has become an increasing concern. The positive effects of this phenomenon are the health and physical and mental health, reduction of health care costs, increase of production and productivity of all citizens. The issue of physical education can be as a means of recreation and leisure and an effective tool for the prevention of social deviations especially drug addiction. This fact is fully accepted that sports activities for the public are useful and valuable. In other words, all persons who are in any age must do the activities so that they have a healthy body and happy and joyful spirit (Hosseini & Hosseinzadeh, 2011). Mental health is a basic human need which is crucial in sustainable development. The concept of mental health includes internal feeling of being good and confidence of his effectiveness, self-reliance, capacity, competition, dependence between employment and emotional and intellectual potential self-actualization. However, in view of the differences among cultures, providing a comprehensive definition of mental health is impossible. However, there is a general consensus over that mental health is more than the absence of mental disorders and what is certain is that maintaining mental health as physical health is important (Abdi et al., 2007).

Today, the elderly are important more than ever as people raised in human society. The most important reason for this issue is to increase the life of people in many countries of the world (the term life expectancy is used in Iran). Under international law, people over 60 years old are called the elderly. However, in many countries, 65 years old are called the beginning of aging, but however, most of these people are retired. In other words, they have more time compared to other members of society. Most elderly people are retired and only a few of them are working, but it should be mentioned that aging and retirement are not the end of life, but statistics show that most of them continue with fully healthy and some continue with some physical problems to live. Aging is the time that physical and psychological activities decrease and physical and mental illness may lead to feelings of depression in a person. Vulnerability factors such as physical and chronic disease, reduction of the power and the body ability, retirement, separation from family and friends, family death, illness and death of friends cause that the person feels sense of hopelessness, depression and futility more than before (Rasel & Ardalán, 2007). The issue of considering mental health is important from this perspective that elderly people are exposed to psychological trauma more than others as a result of uncertainty and intensive care due to old age and negative attitude about the lack of ability and sense of burden in these individuals are more than the others. Therefore, the purpose of the present research is to study the relationship between participation in leisure-time physical activity and mental health of active elderly in Tehran.

## MATREIALS AND METHODS

This research is applied and descriptive which collecting data is carried out in the field method. The study sample include all elderly men and women over 50 years in Tehran that they regularly benefit from leisure sports activities at least 6 months across the board. The sample was randomly selected by multistage clustering. The number of sample was considered using G\* Power and based on statistical method and power of test of 0.95 and 210 people.

To collect the data of the research, standard questionnaires of the physical activity of Sharkly (1997) and the questionnaire of general health of Goldberg were used. The questionnaire of individual information has included age, sex, education, occupation, income.

The questionnaire of physical activity of Sharkly includes 4 questions of 5 options and contains duration, severity, number of sessions and sports history. Scoring questions are based on a Likert scale. The internal consistency of the questionnaire was confirmed by Cronbach's alpha coefficient ( $R = 0.88$ ). Goldberg & Hillier questionnaire consists of four sub-scales which each scale includes 7 questions. The main purpose of this questionnaire is not to achieve a specific diagnosis in the hierarchy of mental illness, but the main purpose is the distinction between mental illness and health. Four subscales of general health questionnaire include: physical symptoms, symptoms of anxiety and insomnia, social dysfunction syndrome and symptoms of depression, that these four sub-scales are determined by factor analysis for responses. The questionnaire is scored based on the Likert scale (0-1-2-3) and the score of each person varies from zero to 84. The low score on this scale indicates high mental health and the high score indicates low mental health (Mirzaiean et al, 2011). The reliability of the questionnaire is reported 0.95 by Goldberg and Williams (1988) and the internal consistency of the questionnaire is reported 0.90 in the method of Cronbach's alpha. Also, in the present study, the internal consistency using Cronbach's alpha coefficient was reported 0.91 (Mourão et al., 2013).

After collecting data for analysis, descriptive and inferential statistics were used. In the section of descriptive statistics, indicators of mean, standard deviation, frequency, etc. were used and in the section of inferential statistics to verify hypotheses proposed and to investigate the relationship between variables, Pearson correlation coefficient was used. Also, in order to study the differences between male and female participants' physical condition, independent t-test is used and test of multivariate analysis of variance is used to compare mental health of men and women.

## RESULTS

**Table 1.** The results of Pearson correlation coefficient between the variables participating in physical activities and mental state.

Mental status	Group	Number of participants	The correlation coefficient	Sig	95% Confidence interval	
					Max	Min
Physical symptoms	Man	105	0.490	0.001*	0.03	0.778
	Woman	105	0.395	0.004*	0.24	0.645
Anxiety and insomnia	Man	105	0.361	0.034*	0.15	0.612
	Woman	105	0.312	0.048*	0.94	0.770
Social dysfunction	Man	105	0.450	0.002*	0.34	0.980
	Woman	105	0.334	0.029*	0.19	0.746
Depression	Man	105	0.415	0.008*	0.94	0.774
	Woman	105	0.583	0.001*	0.26	0.812

The results of the Table related to test of Pearson correlation coefficient above shows that:

There is a relationship between the participation in body activities and physical symptoms (men:  $p = 0.001$ ,  $r = 0.49$  and women:  $p = 0.004$ ,  $r = 0.39$ ), symptoms of anxiety and insomnia (men:  $p = 0.034$ ,  $r = 0.36$  and women:  $p = 0.048$ ,  $r = 0.31$ ), symptoms in social dysfunction (men:  $p = 0.002$ ,  $r = 0.45$  and women:  $p = 0.29$ ,  $r = 0.33$ ) and symptoms of depression (men:  $p = 0.008$ ,  $r = 0.41$  and women:  $p = 0.001$ ,  $r = 0.58$ ) in active elderly people.

**Table 2.** The results of independent t-test to compare the elderly male and female sports participation.

Variable	t	df	Sig.	Difference from mean	Standard error
sports participation	2.12	208	0.092	0.128	0.075

According to the results of independent t test, there is not a difference between elderly men and women in sports participation ( $p = 0.092$ ,  $t = 2.12$ ).

**Table 3.** The results of multivariate analysis test of variance to compare the mental health of active elderly men and women.

Name of test	Value	F value	Hypothesis of df	Error of df	Sig.
Pillais Trace	0.660	7.27	4	205	0.001*
Wilks Lambda	0.340	7.27	4	205	0.001*
Hotelling trace	1.93	7.27	4	205	0.001*
The highest square of RE	1.93	7.27	4	205	0.001*

Also, multivariate analysis of variance test results in the above table state that generally, there is a significant difference between mental state of men and women ( $p = 0.001$ ).

**Table 4.** The results of Turkey's test of track to study the status of differences in mental health of elderly men and women.

		SS	df	MS	F	Sig.
Physical symptoms	Group	74.16	1	74.16	6.93	0.002*
	Error	1430.2	208	6.875		
Anxiety and insomnia	Group	99.23	1	99.23	8.55	0.001*
	Error	982.8	208	4.720		
Social dysfunction	Group	0.386	1	0.386	0.250	0.618
	Error	321.4	208	1.545		
Depression	Group	83.04	1	83.04	7.71	0.001*
	Error	2541.7	208	12.22		

Given that in the results presented in Table 3, it was found that there was a difference between mental health of men and women, in order to study these differences for two to two, Tukey test was used that the results stated that among mental health of the elderly men and women, only between symptoms of social dysfunction, the difference was not significant, but in other variables (physical symptoms, symptoms of anxiety and depression), a significant difference was reported.

## DISCUSSION AND CONCLUSION

The general purpose of this study is to determine the relationship between the participation in leisure-time physical activity and mental health of active elderly in Tehran. According to the results, it can be said that there is a difference between the participation in leisure-time physical activity and mental health of active elderly. Descriptive findings showed that whatever the physical activity was increased on a regular basis, in all mental health factors, both women and men rather obtained better scores. This issue focuses on the effect of exercise on mental and physical factors, especially for elderly people. The findings of the present research are consistent with the findings of Hosseini and Hosseinzadeh (2011).

From other results of this study, no significant difference between the active elderly men and women's participation in physical activity can be mentioned. This finding is consistent with the results of the research of Soltani Samani (2013), Aminifard (2013) and Aqabeigi (2008). Soltani Samani (2013) concluded that there was not a difference on sports and recreational activities and family based on gender in State University of Shahrkord. Aqabeigi (2008) stated in his research that there was not a significant difference between genders of faculty

members and spending their leisure time and Aminifard showed that there was not a difference between the participation of men and women (Mourão et al., 2013).

On the other hand, this finding is non-consistent with the results of the research of Abkar (2009), Skibniewska et al (2004). Abkar (2009) concluded that there was a significant difference between leisure activities for boys and girls statistically. Skibniewska et al (2004) also concluded that there was a difference between leisure activities for boys and girls that girl students tended more to walk and boy students tended more willingness to exercise. The reason for this discrepancy can be expressed in such a way that this difference may be due to cultural differences that they are between two statistical study of the research (Hosseini & Hosseinzadeh, 2011).

Other results showed that there was a significant difference between mental health of men and women. Descriptive findings showed that the men benefit better mental health compared to women. These findings are consistent with the results of Bryant (2005), but they are not consistent with the findings of Mourão et al (2013). A possible reason for the lack of consistent information is different tools of the research or participants with special circumstances. Baker et al (2013) showed that with increasing the age, women have a greater reduction in bone mineral density compared to men. This reduction in bone mineral density can be attributed due to estrogen deficiency as a result of menopause. Also, the lack of gender equality in the provision of facilities leads to a reduction in the chance to participate in sports and physical damage. On the other hand, older women often mention to health motivation to the physical activity (Mourão et al., 2013).

According to the development trend of life of the elderly and the daily movement patterns, also reduction of movement activities, organs and muscles affect them and the serious lack of physical activity and physical weakness. To prevent and cope with such a condition, attractions and facilities for the democratization of sport among men and women (especially the elderly) are the powerful tools in this field. If you provide the best conditions and facilities for learning a particular sport, but the audience is not interested in them, no doubt spending energy, time and money will not have a result for you.

According to the results of research and studies that have been done in various fields of recreation, we find out that needs of humans due to changing conditions of cultural, political, social and economic are changeable. To follow the progress of science and the change of lifestyle, leisure time is also increased because many heavy and time-consuming responsibilities are not a responsibility for people anymore and mechanical and electronic machinery have this responsibility. Therefore, increase of leisure time of humans made physical education authorities as well as officials for providing welfare and public health think to consider such times effectively and usefully. Therefore, one way to provide such a service is knowledge regarding how to spend leisure time of the citizens, because costs and providing special facilities, without a deep understanding of the needs of the consumer society, in practice may lead to inefficiency. According to the results of the research of Atqia (2005), we can conclude that there are many large gaps between physical conditions and opportunities for women and men. For this reason, addressing about sports for men and women are very less especially for elderly women. Totally, according to the findings of the study, it was specified that regular physical activity for a special way and immediately had an impact on mental skills and mental health. Therefore, authorities should provide appropriate facilities for the elderly for further participation in activities related to leisure.

According to the present study, municipal authorities are recommended to create measures for spending leisure time of the elderly so that physical and mental aspects can be improved day by day. It is also recommended that affective barriers in the way of leisure activities are detected and some solutions are pursued to fix them by the authorities in physical education to develop sports and another is that it is recommended that ways to develop and encourage on sports for women interested especially, elderly women be opened.

#### **Conflict of interest**

The authors declare no conflict of interest

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