ORIGINAL ARTICLE Received 25 December. 2016 Accepted 9 December. 2017

Vol. 7, Issue 1, 18-25, 2018

Academic Journal of Psychological Studies

ISSN: 2333-0821

ajps.worldofresearches.com

The Comparison of physical health, psychological health, social relationship and environmental condition in Active & Inactive Elderly People

Majid Vesalinaseh[*1], Mahmoud Sheikh[2], Rasoul Hemayattalab[2], Fazlollah Bagherzadeh[2]

1. Ph.D. in Physical Education & Sport Sciences, Faculty of Physical Education & Sport Sciences, University of Tehran, Tehran, IRAN

2. Assoc. Prof., Department of Motor Behavior, Faculty of Physical Education & Sport Sciences, University of Tehran, Tehran, IRAN

A B S T R A C T

The aim of this study was to compare the physical health, psychological health, social relationships and environmental condition of elderly people with different levels of physical activity in Tehran. This study was descriptive - analytical and causal - comparative, which was done through field. For this purpose, 272 resident of Tehran (124 men and 148 women) aged over 60 years were selected randomly in public places throughout the city and interviewed by Examiners. Participants must be able to do normal daily activities and did not have any illness or particular physical and motor disabilities. Global Physical Activity Questionnaire (GPAQ) was used to measure the level of physical activity. World Health Organization Quality of Life – 26 (WHOQOL-BREF) was used to assess quality of life aspects such as physical health domain, psychological domain, social relationship domain and environmental domain in older adults. The results showed that There is no significant different between aspects of quality of life in elderly people with different levels of physical activity. The results of this study indicate significant role of physical activity as a leisure & recreational activity in promotion of elderly quality of life.

Keywords: Physical Health, Psychological Health, Social Relationships And Environmental Condition, Quality Of Life, Physical Activity, Elderly People.

INTRODUCTION

It shows that aging has considerable growth in various countries and it is expected that the average age of men and women to be close quickly at 80 years old(Bloom, Canning, & Fink, 2010; Christensen, Doblhammer, Rau, & Vaupel, 2009). Statistical analysis showed that the growth trend of aging in Asia especially in Iran is far more than other countries(Bandeen-Roche et al., 2006). We have 6 million seniors live in Iran Who numbers in the next 12 years (in 1404) will increase to 16 million and by the year 1420 to 20 million. Iran is moving at high speed toward aging and this steep comprehensive a necessary planning for elderly people. The lack of planning and management for this Group will follow the psychological and economic costs for

[*] . Corresponding Author: Majidvesali@yahoo.com

DOI: In prossing

To cite this article: Vesalinaseh, M., Sheikh, M., Hemayattalab, R., Bagherzadeh, F. (2018). The Comparison of physical health, psychological health, social relationship and environmental condition in Active & Inactive Elderly People. *Academic Journal of Psychological Studies,* 7 (1), 18-25.

them and their families. Aging is associated with many problems. Illness, disability, loss of a partner, cognitive disorders and social problems of old age lead to decline their quality of lives (Netuveli & Blane, 2008; Ritch, 2012). In addition to, the physical and physiological problems that have been discussed very much in the research literature, weakness of cognitive and quality of life makes life more difficult for the elderly. They face by reducing time on social networks, social relationships and then caused by the depression(Moore & Blumenthal, 1998; Mundy, 1998).

By entering old age, physiological and psychological changes affect behaviors. With the aging, age-related changes in cognitive abilities and emotional, psychosocial, muscle strength and physical ability decrease their performance of daily life functional skills and quality of life(Bonder & Dal Bello-Haas, 2017). Now, one of the main concerns in the field of health officials is quality of life which is known as an index to measure health status in public health and medical research(Charles & Carstensen, 2010; Dustman, Emmerson, & Shearer, 1994). It is a main variable in the clinical trials and age-related researches(Felce, 1997; Ware Jr, 2000).

Maintaining a powerful and efficient years of life with aging is the real challenge, not just keep people coming longevity(Harman, 1994; Woodhall & Jablon, 1957). It seems that not only the regular physical activity increase the longevity in older adults, but also reduce their risk of chronic diseases and preserve their independence(Singh, 2002).

Maintaining independence in older people lives means to do their personal tasks and daily activities by themselves that improve their quality of lives and can help them to decline the social and economic costs(Lautenschlager & Almeida, 2006). Physical activity increases the quality of social life and decrease the cost of physical, psychological and cognitive disabilities in elderly people (Boutcher, 2000; J. Etnier & D. Landers, 1997; J. L. Etnier & D. M. Landers, 1997). In addition, exercise has direct and positive effect on reducing the depression (Blumenthal et al, 1999) and anxiety(Lavie, Milani, Cassidy, & Gilliland, 1999; Milani & Lavie, 2007).

However, the type and intensity of physical activity are the key elements in this regard. The World Health Organization with regard to the status of the elderly population and the current situation of society Announced that Seniors who have activities about 600 MET an higher are known as active people and whom that have sub-600 MET activities are known as inactive people. Therefore, when interpreting the results of studies which are related to the intensity of physical activity, it should be considered that the MET is an absolute unit of energy consumption. For using the MET as a relative intensity physical activity, the age should be considered. It is because that the maximal oxygen uptake would be reduced by increase the age. Studies in this field of research did not usually consider the physical activity level of elderly people or the unit energy consumption (MET) and age. Studies in the older adults due to the intensity of the activity levels are only on social variables, physical health and psychosocial development(Hu, Li, Colditz, Willett, & Manson, 2003) or on the health of inactive elderly people (Haskell, 1994). Other studies in seniors often have been investigated the effects of physical activity on physiological and health: for example; (Cruz, Saito, & Natividad, 2007; Yan, 2009), biomechanical factors(Zimmer, Martin, & Chang, 2002) and quality of life of elderly people with regardless of physical activity level(Badriazarin, 2013; Haywood, Garratt, & Fitzpatrick, 2005; Payne & Isaacs, 2017). Also, The effect of every kinds of exercises on mental health(Burich, Teljigović, Boyle, & Sjøgaard, 2015; Segal, Qualls, & Smyer, 2018) and quality of life(Haraldstad et al., 2017) have been studied in elderly who are living in nursing home, or researched the relationship between psychological variables with other variables such as; social, physical, gender(Hu et al., 2003), age and mental health(Leach, 2003) in older adults. Therefore, this study compares the aspects of quality of life such as physical health, psychological health, social relationships and environmental condition variables in the elderly people according to

their level of physical activity per unit of energy basis (MET).

The results of this study can help the hygiene and health authorities who are responsible the physical and mental health status of elderly people.

METHODOLOGY

This study was descriptive - analytical and causal - comparative, which was done through field. All citizens living in Tehran both women and men over 60 years old who were able to do normal daily activities and they did not have any particular physical illness or disability were considered as the statistical society.

The numbers of elderly people in Tehran according to the Census Yearbook of Tehran Municipality were 896825. The statistical sampling carried out by stratified cluster sampling Method regarding to the Tehran municipal divisions (classified in 22 districts, 122 districts and 354 neighborhoods). Using Cochran formula, the sample size was 384 people. The number of subjects of every 22 Metropolitan areas of Tehran was selected based on the percentage of frequency of elderly people who are living in every 22 Metropolitan areas. Then, 384 participants was questioned and interviewed. 12 female and male trained examiners identified the elderly people who were qualified and volunteers in the public places, mosques, gardens and shopping malls throughout the city. Examiners help them to complete the questionnaires. Finally, the data of 272 participants (124 men and 148 women) were collected and analyzed after omitting the incomplete documents. The rate of return of complete information on this research was reported 78 percent that is acceptable regarding to the large amount of gathering data. Then subjects were divided based on their physical activity level in two groups: 1) over 600 MET-minute physical activity and 2) lower 600 MET-minute physical activity. This classification of physical activity level in elderly people is published by the World Health Organization (2006).

Physical activity level was evaluated using the comprehensive physical activity questionnaire 26 (GPAQ). 26 (GPAQ) questionnaire measures the amount of physical activity of participants in three domains. These domains include: Activity at work, Travel to and from places and Recreational activities. This questionnaire calculates the intensity of physical activity by the metabolic equation and tells in terms of MET. This questionnaire assesses and calculates all physical activities that may be done during the day (WHO- comprehensive physical activity questionnaire, 2002). The World Health Organization Quality of Life-26 (WHOQOL-BREF) was used the quality of life. This questionnaire measured four broad areas that include physical health domain (7 items), psychological health domain (6 items), social relationship domain (3 items) and environmental domain (8 items).

A descriptive analysis of all variables was performed, using mean and standard deviation. The hypotheses were examined, using inferential statistics including analysis of variance and Eta squared coefficient. The data were analyzed using the statistical package SPSS, PC program, version 18 (SPSS Inc., USA).

RESULTS

Table 1 shows the number percentage of participants by physical activity level.

Table 1. The number and percentage of participants by physical activity level.

Physical activity	Number	Frequency percentage
Sub-600 MET-minute	174	63.97
above-600 MET-minute	98	36.03
Total	272	100

Table 2 reveals the result of one-way analysis of variance test of Scores of the quality of life domains such as physical health, psychological health, social relationships and environmental condition based on physical activity levels in older adults.

Table 2. The result of physical health, psychological health, social relationships and environmental condition in active and inactive elderly people.

		Physical activity (MET-Min per week)	Mean	SD	Squared Mean	df	F	Sig	η^2
Quality of Life	Physical health	Sub-600	60.15	10.29	31.40	1. 270	0.317	0.574	0.001
		Above- 600	60.85	9.35					
	Psychological health	Sub-600	58.33	12.94	21.81	1. 270	0.157	0.692	0.001
		Above- 600	57.75	9.60					
	Social relationships	Sub-600	58.14	15.63	462.79	1. 270	1.954	0.163	0.007
		Above- 600	60.83	14.98					
	Environmental condition	Sub-600	58.40	10.05	183.56	1.270	1.502	0.221	0.006
		Above- 600	56.71	12.53					

One-way analysis of variance test result shows that there is not a significant difference between the two groups of elderly people in quality of life.

Result do not show a significant difference between two groups of elderly in the physical health factor of quality of life (f= 31.40, sig=0.574). It seems that the elderly people in Tehran, regardless of the amount of daily physical activity have equal physical health ($p<0.05$). Eta squared coefficient size ($\eta^2=0.001$) represents very small effect.

Result shows that there is not a significant difference between the two groups of elderly people in the psychological health factor of quality of life (f= 21.81, sig=0.692). It seems that the elderly people in Tehran, regardless of the amount of daily physical activity have equal physical health ($p<0.05$). Eta squared coefficient size ($\eta^2=0.001$) represents very small effect.

Result do not display a significant difference between two groups of elderly in the in social relationships factor of quality of life (f= 1.954, sig=0.163, $p<0.05$). Eta squared coefficient size ($\eta^2=0.007$) represents very small effect.

Also, there is no statistical significant difference between elderly who have physical activity above 600 MET and those who have sub 600 MET in the environmental factor of quality of life (f= 1.502, sig= 0.221, $p<0.05$). Eta squared coefficient size ($\eta^2=0.006$) represents very small effect.

CONCLUSION

The results showed that there is no significant difference in quality of life between seniors who have physical activity above 600 MET and those who have sub 600 MET. These findings are inconsistent with other previous findings obtained in this area. Haywood et al. (2005) showed that seniors who were independent to do daily activities had better quality of life. It seems that there are numerous factors which affect the quality of life of elderly people

especially in megacities that is impossible to investigate and control all-round of them.

As the developing world countries like Iran, people especially the older adults do not have suitable facilities, they are forced to take second jobs after retirement to make money for their lives. These people work in low-position and with low-salary such as taxi drivers, Sentries of departments, gardens and factories and etc. As there is a heavy traffic and air pollution in Tehran, Their health and mental health placed at risk. Also, these activities cause to increase their physical activity over 600 MET without any relaxation, enjoyment or fun. Not only these boring and distressful activities have no positive effects on quality of their lives, but also cause to fatigue and some illnesses like back pain, headache and Asthma.

In the present study, with regard to the higher numbers of elderly people in the impoverished regions to the affluent areas, the selection's portion of poor subjects was much more than the rich participations. The physical activity of most of poor active subjects was in form of difficult and troubled job just for resolve their economic problems that could not help them to improve their quality of life. However, the very small portion of active participants of rich areas which had recreational activity was not able to change the survey results to the benefit of active older adults. In other words, we did not observe any significant differences between active and inactive elderly people in their quality of life.

No significant differences were observed between two groups in terms of physical health as one of the domain of quality of life. Badriazarin (2013) showed that the public health as one of the aspects of quality of life was better in elderly athletes than elderly non-athletes. Rejeski and Mihalko (2001) also explained that daily 20 to 30 minutes moderate-intensity exercise can raise the quality of life and wellness by improvement the disability, activity limitation and increase the social role. Badriazarin (2013) believes that applying the correct program of physical activity, has a significant improvement in the quality of life of elderly people. Based on research findings, we can conclude that just regular exercises and recreational activities among the elderly can improve their quality of life not any physical activity. However, as mentioned above most of active participants in this study do boring and compulsory activities to make money for their lives that make them even face with some diseases.

The results showed that there is not a significant difference between two groups in the psychological health of older adults. Lakka et al. (1994) and Gregory, Parker, and Thompson (2012) in their studies showed that physical activity can increase physical and mental health, happiness, self-esteem and decrease depression, anxiety throughout the life. However, as noted the physical activity of most active participants in this study was limited to dull and boring activities to provide the economic affairs of their lives. Hence, they have no chance to discharge their negative energy from their daily challenges and become relax mentally and psychologically. Hedayati (2015), in their study concluded that regular exercise program had positive effect on self-esteem and quality of life in elderly people. They expressed implementation of these programs in elderly care centers can improve the mental status of older adults. On the other hand, psychological and social characteristics which affect the quality of life are strengthened by regular physical activity from childhood to elderly(Payne & Isaacs, 2017). Therefore, mental status factor must be considered by whole activities through the different periods of life not just in the old age.

Social relationships improve the quality of life. Physical activity plays an important role for people to become socialized and it promotes their social relationships. However, due to the rapid growth of Internet and virtual networks even among the seniors (especially inactive seniors), social relationships have taken the different forms. People by establishing a lot of kind

of relationships with different people in these networks and reading various articles about social behavior, social information and etc. promote their social relationships. Therefore, it seems that inactive elderly can maintain and promote their social relationships as the same as active elderly by having more opportunities to join in the virtual networks. Therefore, it was not shown statistically the significant differences between two groups of older adults in this domain of quality of life.

Recreational convenient location near the people's living environment is one of the most important factors for recreational and physical activity. Usually, there are not enough recreational spaces around the living environment to perform a variety of exercises, running and walking in deprived areas in Tehran (where the largest sample size both active and inactive seniors is selected from in this study). In other areas where there are enough recreational locations, people especially the sensitive groups like elderly people and children should be prevented from physical activity because of air pollution. Furthermore, in poor areas, most of the elderly live in the very small and close apartments at the aggregate and crowded neighborhoods. Also, there are not enough space at home to do physical and enjoyable activity for the elderly people, such as gardening, games and doing activities with children or friends. Therefore, the poor living environment - in terms of the disproportion of recreational areas with population and rate of usage- does not create a suitable environment for active older adults to do exercise and recreational activity. On the other hand, the living environment for affluent active seniors includes the gathering at home or parks to enjoy some entertainment activities, as well as training in the gym together. However, the portion of these individuals in this study sampling is too small to be able to change the survey results to the benefit of active older adults in this variable of quality of life. Hence, there is no significant difference between two groups in terms of environmental factor as one of the domain of quality of life.

Although results in this survey are inconsistent with previous studies, it is not unexpected. It seems to improve the quality of life in elderly people cannot rely just to increase daily physical activity. It is needed to benefit from regular exercise and sport interventions to increase daily calorie intake and gain a feeling of vitality, wellness and freshness of physical activities.

REFERENCES

Badriazarin, Y. (2013). Compare the quality of life in elderly athletes and non-athletes in Tabriz. *Iranian Journal of Ageing, 8*(3), 74-82.

Bandeen-Roche, K., Xue, Q.-L., Ferrucci, L., Walston, J., Guralnik, J. M., Chaves, P., . . . Fried, L. P. (2006). Phenotype of frailty: characterization in the women's health and aging studies. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 61*(3), 262-266.

Bloom, D. E., Canning, D., & Fink, G. (2010). Implications of population ageing for economic growth. *Oxford review of economic policy, 26*(4), 583-612.

Bonder, B. R., & Dal Bello-Haas, V. (2017). *Functional performance in older adults*: FA Davis.

Boutcher, S. H. (2000). Cognitive performance, fitness and ageing. *Physical activity and psychological well-being*, 118-129.

Burich, R., Teljigović, S., Boyle, E., & Sjøgaard, G. (2015). Aerobic training alone or combined with strength training affects fitness in elderly: randomized trial. *European journal of sport science, 15*(8), 773-783.

Charles, S. T., & Carstensen, L. L. (2010). Social and emotional aging. *Annual review of psychology, 61*, 383-409.

Christensen, K., Doblhammer, G., Rau, R., & Vaupel, J. W. (2009). Ageing populations: the challenges ahead. *The Lancet, 374*(9696), 1196-1208.

Cruz, G. T., Saito, Y., & Natividad, J. N. (2007). Active life expectancy and functional health transition among Filipino older people. *Canadian Studies in Population, 34*(1), 29-47.

Dustman, R. E., Emmerson, R., & Shearer, D. (1994). Physical activity, age, and cognitive-neuropsychological function. *Journal of Aging and Physical Activity, 2*(2), 143-181.

Etnier, J., & Landers, D. (1997). The Influence Of Age And Fitness On Performance And Learning 699. *Medicine & Science in Sports & Exercise, 29*(5), 122.

Etnier, J. L., & Landers, D. M. (1997). The influence of age and fitness on performance and learning. *Journal of Aging and Physical Activity, 5*(3), 175-189.

Felce, D. (1997). Defining and applying the concept of quality of life. *Journal of Intellectual Disability Research, 41*(2), 126-135.

Gregory, S. M., Parker, B., & Thompson, P. D. (2012). Physical activity, cognitive function, and brain health: what is the role of exercise training in the prevention of dementia? *Brain sciences, 2*(4), 684-708.

Haraldstad, K., Rohde, G., Stea, T. H., Lohne-Seiler, H., Hetlelid, K., Paulsen, G., & Berntsen, S. (2017). Changes in health-related quality of life in elderly men after 12 weeks of strength training. *European Review of Aging and Physical Activity, 14*(1), 8.

Harman, D. (1994). Aging: prospects for further increases in the functional life span. *Age, 17*(4), 119-146.

Haywood, K., Garratt, A., & Fitzpatrick, R. (2005). Quality of life in older people: a structured review of generic self-assessed health instruments. *Quality of life Research, 14*(7), 1651-1668.

Hedayati, B. (2015). The effect of implementation of family-centered empowerment model on the self-esteem of the old people with hypertension. *Journal of education and health promotion, 4*.

Hu, F. B., Li, T. Y., Colditz, G. A., Willett, W. C., & Manson, J. E. (2003). Television watching and other sedentary behaviors in relation to risk of obesity and type 2 diabetes mellitus in women. *Jama, 289*(14), 1785-1791.

Lakka, T. A., Venalainen, J. M., Rauramaa, R., Salonen, R., Tuomilehto, J., & Salonen, J. T. (1994). Relation of leisure-time physical activity and cardiorespiratory fitness to the risk of acute myocardial infarction in men. *New England Journal of Medicine, 330*(22), 1549-1554.

Lautenschlager, N. T., & Almeida, O. P. (2006). Physical activity and cognition in old age. *Current opinion in psychiatry, 19*(2), 190-193.

Lavie, C. J., Milani, R. V., Cassidy, M. M., & Gilliland, Y. E. (1999). Effects of cardiac rehabilitation and exercise training programs in women with depression. *The American journal of cardiology, 83*(10), 1480-1483.

Leach, B. J. (2003). *Exercise Level and Age as Related to Self-perceived Physical Health, Mental Health, and Social Health in Older Adults.* University of San Diego.

Milani, R. V., & Lavie, C. J. (2007). Impact of cardiac rehabilitation on depression and its associated mortality. *The American journal of medicine, 120*(9), 799-806.

Moore, K. A., & Blumenthal, J. (1998). Exercise training as an alternative treatment for depression among older adults. *Alternative therapies in health and Medicine, 4*(1), 48-56.

Mundy, R. R. (1998). Exercise training as an alternative treatment for depression among older adults. *ONS Nursing Scan in Oncology, 7*(3), 9.

Netuveli, G., & Blane, D. (2008). Quality of life in older ages. *British medical bulletin, 85*(1), 113-126.

Organization, W. H. (2006). Global strategy on diet, physical activity and health: a framework to monitor and evaluate implementation.

Payne, V. G., & Isaacs, L. D. (2017). *Human motor development: A lifespan approach*: Routledge.

Rejeski, W. J., & Mihalko, S. L. (2001). Physical activity and quality of life in older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 56*(suppl_2), 23-35.

Ritch, A. (2012). History of geriatric medicine: from Hippocrates to Marjory Warren. *JR Coll Physicians Edinb, 42*(4), 368-374.

Segal, D. L., Qualls, S. H., & Smyer, M. A. (2018). *Aging and mental health*: John Wiley & Sons.

Singh, M. A. F. (2002). Exercise comes of age: rationale and recommendations for a geriatric exercise prescription. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 57*(5), M262-M282.

Ware Jr, J. E. (2000). SF-36 health survey update. *Spine, 25*(24), 3130-3139.

Woodhall, B., & Jablon, S. (1957). Prospects for further increase in average longevity. *Geriatrics, 12*, 586-591.

Yan, T. (2009). *Translating two physical activity programs for older adults into home-and community-based settings:"Active Start" and "Healthy Moves for Aging Well"*: University of Southern California.

Zimmer, Z., Martin, L. G., & Chang, M.-C. (2002). Changes in functional limitation and survival among older Taiwanese, 1993, 1996, and 1999. *Population Studies, 56*(3), 265-276.