

DOES EXERCISE HAVE A SIGNIFICANT EFFECT ON THE QUALITY OF LIFE OF SEDENTARY ELDERLY? (USING SF-36 MODEL)

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Abstract

Aging is a sensitive and important period of human life and paying attention to the issues and needs of this stage is a social necessity and since attending sports activities is considered as an important context in the life of the elderly. The aim of this study was to evaluate the effect of exercise on the quality of life of sedentary elderly. This research is a descriptive and cross-sectional work that was done with a valid and standard quality of life questionnaire SF-36. Descriptive and inferential tests were used to analyze the data. SPSS software was used for data analysis in this study. The results showed that there was a significant difference between quality of life scales of sedentary elderly and active elderly ($P < 0.05$). The average result of the assessment of the quality of life of active elderly people is 71.24, and that of sedentary elderly people is 48.07. According to the findings, participation in physical activities improves the quality of life of the elderly. Officials and policy makers should plan and implement policies in order to raise the level of physical activity as an influential variable on the quality of life of elderly.

Keywords: Physical pain, Fatigue, Physical function, General health

INTRODUCTION

Over time, which brings new opportunities for the individual, it will also bring its own challenges and stresses (Taylor et al., 2019). Scientists believe that the elderly experience a lot of stress due to changes in living conditions, including coping with the environment and new friends, lack of emotional and social support, economic problems and feelings of homesickness. (Steffens, Beckenkamp, Hancock, Solomon & Young, 2018). In most elderly people, these stresses cause weakness in social interactions and quality of life, and ultimately their mental health. Quality of life has different dimensions and includes the physical, psychological, social and spiritual status of individuals. (Toscano, Carvalho, & Ferreira, 2018). One of the important dimensions of quality of life is physical health, this category is closely related to physical activity (Song, & Doris, 2019).

One of the factors that affects the elderly is the quality of life. Today, due to the increase in life expectancy and life expectancy index, a more important issue has been raised under the title of how to live life, in other words, quality of life, which is a basic indicator (Bakhshalipour, Khodaparast Sareshkeh, Zivdar & Toubia, 2016). The amount of pleasure that people get from their life and the amount of satisfaction that they have from being alive is the most important opportunity and potential for them to enjoy a happy life and physical

and psychological health (Mardani, Pedram Razi, Mazaheri, Haghani, & Vaismoradi, 2020). To this end, today the quality of life has been considered by welfare and social organizations, researchers in social sciences, health, psychology, medicine and physical education (Sepasi, Narimani, Mousazadeh & Taklavi, 2020). Despite the diversity in the concept of quality of life from the perspective of the individual and different social groups, there is general agreement on its definition and pattern. For example, according to the definition of the quality of life group of the World Health Organization, quality of life includes the dimensions of physical, mental and social health and even the relationship with the environment (darvishpoor, Alizadeh & ramzani, 2018). At the individual level, everyone tries to achieve various standards in the field of physical and mental health to achieve quality of life, one of which is participation in sports and recreational activities (Liang, Zhou, Wang, & Wu, 2018).

In order for people to have more physical and mental benefits from sports and recreational activities and increase the quality of life, they should be more engaged in physical activities (Bakhshalipour & Khodaparast Sareshkeh, 2019). Early studies on quality of life examined only material well-being, but subsequent research showed that only the material aspect was not

decisive, and other variables were added to quality of life (Khojasteh Rad, Mohammadkhah, Amjadi & Navabi, 2021). Regarding the role and effect of physical activities and sports on different dimensions of quality of life (health, job satisfaction, creativity, social relations and family relations), there is an undoubted positive effect of these activities and interventions on mental health and social development. Physical activity reduces depression, reduces anxiety, increases happy mood, increases social interaction, reduces cardiovascular risk factors, increases self-concept, lowers blood pressure and dozens of other positive effects (Ludvigsson, Peterson & Peolsson, 2019). On the other hand, exercise can improve a person's physical function and be an important factor in

MATERIALS AND METHODS

The research methodology used in this study is described below.

Research method

This study is descriptive and applied. Data were collected in the field and cross-sectionally over time.

Participants

The statistical population of the present study consisted of 200 elderly men With an average age of 68 years. Available sampling method was selected as a statistical sample based on Morgan table. Having at least 4 sessions of physical activity and sports per month was the criterion for selecting the active group and those who did not participate in any physical activity and sports per week were in the inactive group.

Procedure

The sampling method was shaped from a large nursing home. After selecting the samples and completing the consent form, the demographic characteristics of the subjects were calculated. Both groups then completed the SF-36 Quality of Life Questionnaire. All questionnaires were completed by both groups. Subjects participated in the study with informed consent and the elderly were assured that anonymity was taken into account in

maintaining a healthy life during the day and preventing injuries. In addition, regular exercise increases social communication, improves physical and mental health, and can play an important role in reducing the risk of developing chronic diseases (Esmail et al., 2020).

Exercise can also prevent physical fatigue by increasing cardiovascular function, central nervous system, immune system and endocrine system, and in addition, depressive symptoms are reduced and efficiency is improved (Vasiliadis & Bélanger, 2018). Therefore, in order to increase the quality of life satisfaction and improve the health level of the society, some researches have suggested that physical activity be used as a useful method to improve the quality of life of the society.

completing the questionnaires and confidentiality of information were taken into account.

Instruments and Tasks

Measuring the quality of life

The 36-item SF-36 questionnaire was used to measure quality of life. This questionnaire is the most widely used general tool for measuring the quality of life around the world (Khojasteh Rad, Mohammadkhah, Amjadi & Navabi, 2021), and this luck is due to its comprehensiveness and brevity. This questionnaire contains 36 questions in eight sections that include the dimensions of physical function, functional limitations due to physical problems, physical pain, general health, feeling of vitality, mental health, functional limitations due to emotional issues and social functioning. To the total scores of the eight dimensions of health, scores ranged from 0 to 100, with higher scores indicating better health status. The validity and reliability of this questionnaire has been proven in numerous studies (Ludvigsson, Peterson & Peolsson, 2019).

Data Analysis

Criteria and standard deviation were used to statistically describe the data, and as qualitative data, the Human Witney statistical test was used to analyze the data. Data analysis was performed using SPSS software.

RESULTS

Table 1. Demographic characteristics of the men

Variables	Groups	Frequency	Percentage
Marital status	Single	33	16.5
	Married	167	83.5
Education	Diploma	48	24
	College education	152	76
Age	60-63	92	46
	63-66	59	29.5
	66 and more	49	24.5

Table 2. Results of statistical test of variable quality of life

Variables	Groups	Mean	Mean Rank	P
Social function	active	71.21±25.67	81.97	0.001
	inactive	58.21±31.14	63.14	
Physical pain	active	79.32±31.69	89.21	0.001
	inactive	52.45±61.17	52.13	
Fatigue	active	61.74±31.61	93.12	0.001
	inactive	42.14±20.47	48.27	
Emotional health	active	71.18±31.68	89.17	0.001
	inactive	52.14±36.12	49.17	
Emotional limitations	active	68.18±21.13	98.14	0.001
	inactive	52.17±19	42.17	
general health	active	82.17±21.47	98.14	0.001
	inactive	52.17±19.64	36.47	
Physical function	active	72.14±22.13	92.14	0.001
	inactive	43.14±31.41	41.32	
Physical limitations	active	64.14±19.21	89.14	0.001
	inactive	32.14±24.64	41.36	
Quality of Life	active	71.24±21.36	92.14	0.001
	inactive	48.07±19.87	61.26	

Table 3 - Predicting the quality of life of the elderly from the regression model

step by step regression	Non-standard coefficients		Standard coefficient		
	B	SD.ER	BETA	T	P
Width of origin	2.96	0.34		6.32	0.000
Elderly active	2.29	0.21	0.24	5.21	0.000
Elderly inactive	2.06	0.24	0.21	4.01	0.000

DISCUSSION AND CONCLUSION

The purpose of this study was to examine the relationship between exercise and quality of life in sedentary elderly people. The results showed that exercise has a significant role on the quality of life of the less stimulated elderly. The results of this research are in line with the results of previous research by Fanda et al. (2013), Moghadam et al. (2013), Mirghforvand et al. (2013), as well as others. In a study by Fanda et al. (2013), entitled *The Relationship between Acquisition of Tennis Skills with Sleep Quality and Quality of Life*, which was conducted on 33 volunteer subjects 33 volunteers who played tennis for 2 hours, 2 times a week, 12 weeks. SF-36, Sleep Quality Index (PSQI), Beck Depression Inventory and Ability Test (TAT) were used as assessment tools in the study, concluding that there is a significant positive association between tennis training and sleep quality and quality of life.

Moghaddam et al. (2013), investigated the effect of aerobic exercise program on menopausal symptoms and quality of life of 50 non-athlete postmenopausal women with an average age of 45 to 60 years. Subjects performed aerobic exercise for eight weeks (two times a weeks). The results showed that eight weeks of aerobic exercise significantly reduces menopausal symptoms, physical, psychological, anxiety, depression and increases the quality of life of postmenopausal women. In the research of Mirghforvand et al. (2013), a study was conducted on the effect of aerobic exercise program (one times a weeks) on the quality of life of 54 healthy married menopausal and premenopausal women aged 45-60 years. They concluded that moderate-intensity aerobic exercise improved the quality of life of menopausal and premenopausal women (Mirghforvand, Alizadeh, Nejat & Asghari, 2014). Elderly athletes have a happier mood due to physical activity and more communication in a relaxed atmosphere with friends, acquaintances (Sepasi, Narimani, Mousazadeh & Taklavi, 2020). Considering the effect of exercise on the quality of

life factor, it can be concluded that this positive change was affected by increasing the level of physical activity. Since quality of life is one of the most important components of the overall concept of health, it can be one of the important consequences in health assessments both physically and mentally. Many studies have shown that exercise can have positive effects on quality of life and physical performance. Therefore, the significance of the physical function factor as well as the reduction of daily dysfunction and social function in this study can be derived from the improvement of the quality of life factor of the subjects. Quality of life has a broad meaning that includes all aspects of life and health is the center of gravity of quality of life (Liang, Zhou, Wang, & Wu, 2018).

Also due to the fact that health includes physical and mental dimensions. By exercising, people become more inclined to engage in healthy behaviors, such as avoiding tobacco and caffeine. Studies have shown that regular physical activity affects the emotional and cognitive functions of the brain, such as memory and learning, by affecting the secretion of catecholamines, endorphins, norepinephrine, serotonin and other neurotransmitters in the brain. Studies also show that exercise increases oxygen, brain glucose and blood flow, resulting in optimal brain function (Song, & Doris, 2019).

In general, sports activities cause physiological changes and reduce stress. On the other hand, human health is associated with variables that can affect the quality of life and lead to an increase in the quality of life of the elderly.

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CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

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