

Investigation the effect of exercise with Music on quality of life in elderly men supported by Social Security retirement center in Zanjan

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Abstract: Introduction: population structure in developed countries, indicating a significant increase in the elderly people in these countries, but even though Iran is as like as the industrialized countries in this issue, Iran is not still faced with the problem of population aging, however the planning and support of the elderly and their importance to the quality of life, of issues that can play an important role in their health plans. This study examined the effects of exercise on quality of life in elderly men with music in Zanjan. Materials and Methods: This study was a quasi-experimental study which the samples were obtained for elderly men (age>55 yr) that were member of the Social Security retirement center in Zanjan. The samples were 105 subjects (35 people in intervention group 1, 35 people in intervention group 2, and 35 people in control group 2). After completing the demographic questionnaire, they were given life in Nottingham. After the above steps to get tested first group exercise program that includes exercise variable was 8 weeks, by a trained nurse, the evening was a 30-minute exercise program designed to run every other day. Exercise program with gentle music playing in the second group of experiments examined. After exercise, the subjects re-average quality of life in the intervention group and control group 1 and 2 using the Nottingham questionnaire and were assessed using SPSS 18 software. To determine the scientific validity of the questionnaire, test and re-test correlations and the validity of the questionnaire was done. Findings: quality of life score before implementing an exercise program in the experimental group (1), 46.77 and 185.58 after the exercise program was employed. The results were statistically significant at the 95 percent confidence level ($p = 0.000$) and quality of life score before implementing an exercise program with music in the experimental group (2), 39.23 and 306.66 respectively after the application of exercise with music. The results were statistically significant at the 95 percent confidence level ($p=0.001$). The difference in quality of life between groups, sports groups and music groups along with exercise was significant at 95% confidence ($p=0.001$). Conclusion: The findings of the study it can be concluded that the use of a regular exercise program, live music with gentle, age-appropriate and accepted by the elderly age group, they can be used in various aspects of quality of life in this age group increased.

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1. Introduction:

Aging is a critical period of human life. Attention to the issues and needs of this stage is a social necessity. Due to the particular needs of this age, the health promotion behaviors and quality of life in the elderly is a very important issue that is often neglected [1]. Disability and the most common disability in old age are due to a combination of factors. It can be important factors include inactivity and low mobility. Healthy aging is a human right, and this adds to the importance of the phenomenon of aging and prevents problems. Today's statistics show that the number of elderly is increasing in the world [2]. In the elderly population than the birth rate and increased lifespan is rapidly increasing. Because of increasing life expectancy and life expectancy more importantly as a way of life, quality of life is passing. It has been established that the physiological transitive

Problems can occur in adults, reduction in quality of life during aging effects. Exercise is one of the most effective methods of prevention of disorders of old age. Exercise and movement will cause delay aging and elderly who do sports are more health and vitality. De Leo showed that in the seventh decade of life that begins in the digestive system disorders, feeding the elderly may be disrupted and this would decrease the quality of life [4]. According to researchers, people with multiple sensory are limited, which results in increased social status and dependence and ultimately reduce the quality of life. Always in the process of treatment and care of the elderly should be given to factors affecting their quality of life, naturally the care and treatment strategies that can be helpful to improve the quality of life of seniors.

According to statistics of the U.S. Department of Health and Human Services in 1996,

more than 60% of Americans do not exercise regularly, and 25% did not exercise at all [3]. Wood study showed that elderly people had a better quality of life in the daily activities independently [5]. One of the best ways to improve life and reduce dependency to drugs and treatments which impose substantial costs on is music. More than any other therapy, music therapy techniques combined with people's daily life and the need to feel they are synonymous. Such as sleep and food, reading in any location and venue will be seen and heard. But the tendency of human nature is for people interested in music that has fascinated music. Nature of the stimuli and rhythmic music is inextricable link with nature, the unity of the human quest. Listening and reading are the most popular style of music therapy in all conditions of life that simply seek profits, now your going to have to undergo a relaxed style or vibrancy and vitality of internal energy and excitement that we can be. Everyone is in a healthy condition, occasionally, by watching and reading this makes your feelings and would be cast out, bored and wandered about internal energy and the emotional state leads to optimal and the pressure decreases unwillingly. Many seniors have needs in improving physical function. These needs may include strengthening of motion in the joints, increase muscle strength, power and endurance, and enhance body after fracture or disease. The music can be fun and enjoyable ways to achieve these goals can be strengthened. For example, music can feel the pain associated with daily exercise, often coupled with the exercise of the mind away, and motivation needed to participate in such sports and activities provide the motor. Elevates handling and rhythmic music can help reduce arthritic fingers. Rhythmic activities such as exercise or parade can feel confident, happy and safe movements for independence in the elderly improve. Hitting the ground with music and dance that is bending and stretching muscles that regulate blood flow, muscle strength and physical ability is effective. Listen to the music playing, but not as much less of it, has a beneficial effect, it is very low cost and the elderly can do at work every day and pay the rest of it, is very important [6].

2. Methods:

This research is a quasi experimental study in 1391 to 90 115 people aged men over 55 years a member of the Social Security retirement center was made up of Zanjan. 105 elderly people from fully participating in the study, participants physically active, and the ability to perform normal daily tasks without dependence on others had, but none had a history of regular exercise. Non-selection criteria or exit from study for any particular disease which may have risk for doing sports and health activities were considered. Demographic characteristics of the

subjects at baseline and demographic data were collected by questionnaire. The quality of life in the intervention group and control group 1 and 2 Nottingham quality of life was measured with a questionnaire. The number of samples in group 1 involved only 35 patients were evaluated for their sports programs, group 2 samples of 35 subjects in the intervention group exercise program with gentle music playing, evaluate, or control group had 35 patients.

In order to implement an exercise program tailored to seniors, Athletic trainer, researcher monitored the evenings and on 30 minutes a day and 8-week fitness program designed to be run for groups 1 and 2. Implementation of the exercise program so that the program was divided into four parts, which include heating Exercise - Exercise and muscle strength and excellence of the rest.

10 minute warm-up period before exercise walking was the primary, during the first phase of the exercise, muscle strength was about 10 minutes and balance exercises done for 10 minutes and at the end of the rest period was inserted. Exercise leg muscle strength including bending and right, near and away from the trunk and extremities was rotate the neck and back.

During the exercise program specific physical problem did not occur for participants in Experiment 2 the same program. Moreover, in this group, along with athletic activities begin several gentle and fun tracks that are of interest and in accordance with the age of the participants was also aired. During the course of the underlying physical problem did not occur for the participants. Once again the quality of life of the subjects completed the exercise and control groups 1 and 2 are based on questionnaires completed Nottingham was analyzed by SPSS 18 software. Many researchers have measured the quality of life questionnaire Nottingham by many researchers in the country and we have to make it work. This means an international scale and its norm were investigated in Iran by Sadeghzadeh [7]. The questionnaire contains three parts: The first section includes 9 questions about the subjects' demographic information (age, sex, marital status and education level, monthly income, residency, how to do everyday things, having a specific disease at present, drug use, hours of listening to music). The second part consists of 38 questions that asked questions in the area (energy, pain, emotional reactions, sleep, social isolation - social activity) with grading scale were yes and no. The third section includes 7 questions on health, work, housework, social life, family life, sexual activity, interests, and if yes, was vacationing scale was used and for data analysis and statistical software SPSS version 18 statistical T-test and ANOVA and paired T evaluated independently.

3. Findings:

After analyzing the data, it was found that the pilot exercise, 28.6 percent of participants' age 50 to 60 years, 60% at age 60 to 65 years and 11.4% were older than 70 years. Of them 40% less than high school education, 20% secondary school, 17.1 percent and 22.9 percent of bachelor's degree or higher. 74.3 percent of the job before retiring employees and 25.7 percent was self-employed. Rate of 94.3 percent listen to music from time to time listen to the music player and 5.7 percent, respectively. 37.1% of subjects in the experimental group exercise with music at the age of 50 to 60 years, 40% at age 60 to 65 years and 22.9 percent were aged 65 to 70 year.

In terms of education, 51.4 percent less than the diploma, diploma, 14.3 percent, 22.9 percent and 11.4 percent of bachelor's degree or higher. 88.6 percent of the job before retiring employees and 11.4 percent was self-employed. Rate of 25.7 percent never listen, do not listen to music, 62.9 percent and 11.4 percent from time to time listen to the music player. First to compare the groups in terms of demographic variables, including age, education, income and occupational status were compared and the results of homology groups, no differences between the groups in terms of demographic variables showed ($p=0.021$). The analytical results showed that quality of life

questionnaire between quality of life and all areas in groups 1, there is a significant difference before and after exercise. So, in the areas of energy, pain, emotional reactions, sleep, physical activity and quality of life may be achieved ($p=0.000$) in the area of social isolation may be achieved ($p=0.027$) (Table 1). The results of the questionnaire showed that quality of life and all areas in between the two experimental groups, before and after exercise with music, there are significant differences, so that the overall quality of life and all areas of the value obtained ($p=0.000$) (Table 2). Confounding variables in comparison with sports and music, sports results are recorded in Table 3. Given the amount of say in the areas of energy (0.136) and pain (0.102), there is no significant difference between the exercises with music. Variables that impact the quality of life in those areas, when exercising with music intervention group were more and interventions to improve the quality of life is changing.

Comparison of quality of life for seniors in three categories (sports, exercise with music and control) using one-way ANOVA test results show that there is a significant difference between the three groups ($p=0.001$, $F= 7.581$). Results of LSD post hoc test showed significant difference between groups 1 and 2, groups 1 and 3 and groups 2 and 3.

Table 1: Comparison of quality of life before and after exercise independent variables

Dependent variable	Group	Average	SD	T paired test	Amount of probability
Energy	After the intervention	27.93	35.58	4.45	0.000
	Before the intervention	7.68	14.56		
Pain	After the intervention	33.55	34.02	5.43	0.000
	Before the intervention	6.58	7.94		
Emotional reactions	After the intervention	29.62	19.97	8.11	0.000
	Before the intervention	2.41	5.62		
Sleep	After the intervention	59.96	35.32	6.91	0.000
	Before the intervention	23.61	24.48		
Social isolation	After the intervention	10.05	21.62	2.51	0.017
	Before the intervention	0.91	3.76		
Physical activity	After the intervention	24.45	22.04	5.65	0.000
	Before the intervention	5.26	8.03		
Life quality	After the intervention	185.58	135.95	7.49	0.000
	Before the intervention	46.77	44.35		

Table 2: Comparison of quality of life before and after exercise independent variables with music

Dependent variable	Group	Average	SD	T paired test	Amount of probability
Energy	After the intervention	36.18	36.21	5.39	0.000
	Before the intervention	5.71	23.55		
Pain	After the intervention	43.25	31.70	6.93	0.000
	Before the intervention	43.25	31.70		
Emotional reactions	After the intervention	57.34	40.44	7.21	0.000
	Before the intervention	6.30	14.34		
Sleep	After the intervention	76.14	27.51	9.83	0.000
	Before the intervention	15.86	30.88		
Social isolation	After the intervention	55.36	46.22	6.99	0.000
	Before the intervention	3.69	8.25		
Physical activity	After the intervention	38.38	39.82	5.32	0.000
	Before the intervention	3.39	7.25		
Quality of Life	After the intervention	306.66	39.23	7.91	0.000
	Before the intervention	39.23	82.06		

Table 3: Comparison of the effects of independent variables on the dependent variables after training exercise with music and exercise

Dependent variable	Group	Average	SD	T paired test	Amount of probability
Energy	Exercise	20.25	26.89	1.41	0.136
	Exercise + Music	30.46	33.39		
Pain	Exercise	26.97	29.34	1.65	0.102
	Exercise + Music	39.32	32.88		
Emotional reactions	Exercise	27.21	19.85	3.28	0.102
	Exercise + Music	52.19	40.37		
Sleep	Exercise	36.04	30.83	3.19	0.002
	Exercise + Music	61.12	34.77		
Social isolation	Exercise	9.14	21.54	5.16	0.000
	Exercise + Music	51.66	43.72		
Physical activity	Exercise	19.18	20.08	2.36	0.021
	Exercise + Music	36.24	37.69		
Life quality	Exercise	137.80	109.54	3.49	0.001
	Exercise + Music	271.01	194.93		

Table 4: ANOVA table for comparison of three groups

Source of variation	Total square	df	Mean square	F ratio	Amount of probability
Among groups	74079.116	2	37039.558	7.589	0.001
Inside the group	49780.91	102	4880.47		
Total	571887.026	104			

4. Discussion:

After completion of the study, it was concluded that the implementation of a comprehensive exercise program for seniors with age-appropriate music and improve their quality of life is developed. In a survey by the Lord SR, Castal S in the year (2004) was conducted, showed that exercise increases muscle strength, balance, and ultimately the quality of life is enhanced [8]. In a survey by Leinonen and colleagues (2006) was performed on 633 Finnish elderly women in this study to measure the quality of life of elderly lipid test was used, The results showed that increased physical activity among the elderly, the elderly have reduced downtime and therefore has a positive impact on quality of life and independence of older adults [11]. In a survey by Mac Oltan and colleagues (2005) concluded that exercise was conducted on elderly quality of life of the elderly [12]. In a survey in the year (2010) by Andrea Trombetti and colleagues to explore the impact of music on exercise with multiple people were walking and balance showed that exercise with music by the elderly to prevent falls and improve balance and help make that walk [13]. In another study (2003) by Charles Emery and colleagues conducted in the case of short-term exercise and music on cognitive performance in a cardiac rehabilitation program participants were conducted. Study on 33 women with a mean age of 6/62 was done. Evidence of significant

improvements in the intervention group showed cognitive function and speech [14].

5. Conclusion:

Using an exercise program, and regular physical activity, and listening to the gentle music in the elderly people, you can increase quality of life in elderly people, successful aging process and helps paving the way for improving the quality of life in old age. It is recommended to exercise and physical activity for seniors with soft music playing, which is very low cost and the running cost to enhance the quality of life of seniors in institutions as a factor to be used.

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