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The Effect of Aerobics in the Elderly

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Abstract: Physical inactivity is a very important risk factor for cognitive activities in old age and for Alzheimer's disease. Exercise and sports activity have been introduced as one of the ways to prevent the decline of cognitive function in old age. The positive effects of exercise on physiological factors are not hidden to anyone, and the findings regarding its effect on psychological factors are expanding. Performing physical activity stimulates the growth rate and reduces factors that disturb human health. Evidence supports the effectiveness of physical activity and exercise. Aerobics is an aerobic and group exercise that develops most of the fitness factors such as strength, endurance, flexibility, coordination, agility, balance, balance, and reaction speed. This exercise strengthens memory and the presence of the mind because the athlete has to memorize a series of movements in a chain, which causes the brain to be used during the movements. Aerobic exercise helps the elderly to burn more calories and lower cholesterol levels. And lowering their blood pressure, in addition to helping them move their joints, improve heart health and increase their overall energy levels. This study has investigated the effect of aerobics in old age and a questionnaire (WHOQOL-BREF) has been used. results show. The validity and reliability of the questionnaire were measured through "Cronbach's alpha", Cronbach's alpha obtained above (0.89) showed a high correlation of questions.

Keywords: Aerobics, Elderly, Cronbach's Alpha

1. Introduction

For more than 40 years, an aerobic exercise called aerobics or rhythmic movement has become increasingly popular in most societies, especially among women. In 1969, a man named Jacki Sorenson invented this physical activity in the United States. He was a famous artist who believed that this method of aerobic exercise was the best way to achieve the desired physical fitness. He called this technique Jazzercise or Dancercise, now known as aerobics and another form of rhythmic movement. The roots of this type of sport are related to the rhythmic local and traditional performances of European societies. Thus, although the sport is modeled on European societies, the sport has become widespread in the United States [1, 2]. Performing body movements in this sport, with Happy and rhythmic songs are performed. In fact, the beat of the song in this type of exercise is used as a guide for counting the number or intensity of physical movements. Because aerobic exercise somehow develops and increases cardiovascular capacity, it has been introduced as an attractive and popular sport [3]. Physical activity in the elderly is associated with playing a role in the prevention of some cancers as well as reducing the risk of heart disease, high blood pressure, osteoporosis, obesity, type 2 diabetes, arthritis and abnormal cholesterol. Older adults who maintain high levels of cardiovascular endurance, strength, and flexibility are also less dependent on long-term care. Sedentary lifestyles contribute to disability, early death, and reduced quality of life. Educating the elderly on the positive aspects of their lives, including cardiovascular activity, muscle strength and flexibility, is a challenge for health fitness professionals. Awareness should be directed to the fact that chronological age does not really indicate the quality of health. By using water sports, the elderly become more active, healthier and more independent, and as a result, their length of stay in independent and assisted living types increases. In addition, physically active people recover more quickly from mild depression, and physical activity is strongly associated with good mental health as people age. Depression is related to low levels of neurotransmitters that are naturally produced through exercise. Increasing strength and balance in older adults through the use of water exercise allows people to go about their daily activities longer.

continue By maintaining these important life skills, people tend to have an improved outlook as they remain independent and active, and by maintaining independence and staying active, they will have a better outlook on life. Aerobics increases metabolism and normalizes heart rate by regular blood pumping. It also increases good cholesterol in the body. Regular aerobics allows the heart to remain strong and normal in any situation, whether at leisure or during peak physical activity. Studies confirm that people who exercise or maintain a daily fitness program that includes aerobics do better in fighting off invasive diseases. They have a stronger defense system to ward off diseases. Aerobic exercise improves cardiovascular fitness by increasing the body's capacity to use more oxygen. These exercises help to increase the size of the heart chambers, which increases the capacity of the body. Respiratory balance and body endurance are also increased with the help of aerobics. Over time, a person will be able to increase the amount and speed of the activities performed. Each activity provides its own benefits for the body. For example, running and walking will have limited benefits compared to swimming. Moderate to low-intensity aerobic exercise burns calories and helps with weight loss. Aerobic exercise is always an important part of a weight loss and weight management plan for weight gain. Regular aerobic exercise has shown positive results by reducing the risk of high blood pressure, diabetes, breast and colon cancer. It also helps reduce the risk of heart attacks. It helps control cholesterol by increasing levels of good cholesterol (HDL) and lowering bad cholesterol (LDL). The general health of people with arthritis and other problems can be improved by low-level aerobic exercise such as walking and swimming. Walking is the simplest and most common aerobic exercise. The intensity can be adjusted according to the person's age and fitness level. This work can be done in any place and can be continued for old age as well. Cycling is also a popular aerobic sport that attracts most people. This exercise can be done with a regular bicycle or with a stationary cycle. It is suitable for people who suffer from arthritis and are overweight. Ski machines, stairs and steps are devices that provide a good aerobic exercise. They are available at fitness centers. The choice of the device should be done according to the person's ability. Swimming is a useful aerobic exercise for a healthy person. People who suffer from bone problems and hearing disorders should avoid swimming. The human body needs a certain amount of energy in the body to function. Every action that the body performs, such as breathing, sweating, metabolism and other normal functions, requires energy. The energy or calories required for the overall functioning of the body is known as BMR or basal metabolic rate or calories required per day. Aerobics and healthy food help the body receive useful vital energy. Fitness and health are the main goals of aerobic exercise. These two are often related to each other. Aerobics helps to control stress, anxiety and depression and provides a better life for a person. It can also help to increase the life span of people. Social interaction during aerobics is helpful in controlling emotional stress. Distraction from routine daily tasks during exercise relaxes one's mind. Aerobics is not only useful, but also a lifesaver for everyone.

2. Materials and Methods of Work

2.1. Introduction to Aerobics Classification

Aerobics is a form of aerobic exercise. Generally, activities with a long duration and relatively low intensity. Aerobics is a set of complex and coordinated movements that accompanies music [4].

Aerobics is divided into several groups:

High impact aerobics: includes old aerobic movements with jumping and jumping. These moves were invented by a Canadian dancer. Although performed on the technique, they were found to cause injuries such as knee pain, leg pain, and Achilles tendon strain and low back pain [5]. Low impact aerobics: includes non-jumping or controlled jumping and does not mean that the work pressure is low; It reduces pain and strain in the legs, knees and buttocks. This method is very common and one foot is always resting on the ground and the arms move more at the lower level. The heart rate in this case is between 60 and 75% of the maximum heart rate, ie it is a normal heart rate for endurance or aerobic exercise and can be performed for different people. Fat burning is best done this way, because the body's main source of energy in this type of aerobics is fat [6, 7].

2.2. WHOQOL - BREF Questionnaire

Measures four areas of physical health, mental health, social relations and environmental health with 24 questions. In addition, the questionnaire has two other questions that do not belong to any of the areas and assesses the state of health and quality of life in general. This questionnaire has 26 questions. After performing the necessary calculations in each area, a score equal to 4-20 for each area will be obtained, in which 4 signs are the worst and 20 signs are the best condition of the desired area. These scores can be converted into scores with a range of 0-100 [8, 9]. The four subscales of this physical health questionnaire include (psychological, social relations, environmental dimension and status, each of which has several expressions; each of them includes specific questions [10].

The relevant subscales and expressions are:

1) Physical health: includes daily life activities, dependence on drugs and medical assistance, energy and fatigue, mobility, pain and discomfort, sleep and rest and work capacity, and questions (3, 4, 10, 15, 16)., 17, 18) and the maximum and minimum for this subscale are equal to 35 and 7.
2) Mental health: includes physical image and appearance, negative principles, self-esteem, personal beliefs, religion, thinking, learning, which includes questions (5, 6, 7, 11, 19 and 26) and the highest and lowest scores. It may be equal to 30 and 6 for this subscale.
3) Social relations: includes personal relations, social support and sexual activity, which include questions (20,

21 and 22) and the maximum and lowest possible score for this subscale is equal to 15 and 3.

4) Environmental health: includes financial resources, freedom, physical and health security, social care, opportunities to access information and leisure that questions (8, 9, 12, 13, 14, 23, 24, 25) And the maximum and lowest possible score for this subscale is 40 and 8.

Due to the complexity of scoring the 26-item WHOQOL-BREF questionnaire, we fully explain it here. You must first give each of the 26 questions a score of 1 to 5. For ease of scoring, these scores are entered as numbers in the questionnaire itself.

3. Research Results

A questionnaire form (WHOQOL-BREF) was used to assess the quality of life in both physical and mental dimensions. To evaluate the tool and use an experimental sample in a small sample of 17 people, then information was collected and a questionnaire was completed. Then, the validity of the questionnaire was assessed by examining the Cronbach's alpha coefficient. The validity and reliability of the questionnaire were measured through "Cronbach's alpha". The Cronbach's alpha obtained above (0.89) showed a high correlation between the questions.

4. Conclusion

Aerobics is an effective means of preventing depression, and impatience, because the body produces the hormone endorphins, which stimulates vitality, concentration of the mind, and increases mental creativity. Aerobics is an activity that uses large muscles for at least 12 minutes in a rhythmic manner. And rhythmic. This activity is performed when the speed and intensity of the exercise is tolerable and the body's need for oxygen increases for some time. From a medical point of view, this exercise trains the cardiovascular system, respiration and receives oxygen with high speed and efficiency and delivers it to different parts of the body. Blood sugar will control blood pressure and reduce excess body weight. Aerobics is an effective tool to prevent depression, impatience, impatience, because the body produces the hormone endorphins and causes vitality, concentration of the mind and increased mental creativity. The study looked at the effect of aerobics on aging and used a questionnaire (WHOQOL-BREF). results show. The validity and reliability of the questionnaire were measured through "Cronbach's alpha", Cronbach's alpha obtained above (0.89) showed a high correlation of questions.

5. Discussion

Due to retirement and reduced source of income, the elderly is more exposed to financial problems and subsequent mental health problems such as depression and anxiety [11, 12]. Exercise improves the flexibility and mobility ability [13], improves cognitive performance and improves psychological and functional adaptation [14], which has a significant contribution to the quality of life of the elderly [15]. The results of a review of a study showed that doing aerobic exercise not only helps to maintain health, but also It also has favorable effects in strengthening the brain power of the elderly. Aerobic exercise is any type of activity, such as brisk walking, that increases the heart rate and strengthens the heart over time. Improving cardiovascular health can also protect the brain by reducing the risk of heart disease and stroke. At the same time, cardiovascular diseases are known as a cause of problems in mental functions. Creating aerobic blocks and building regular and legal chains, and coordination of athletes in the correct and timely execution of each block, in order to maintain order and coordination, causes more concentration, successive recall of techniques and order. They are the ones who have made this sport a memory enhancer and mental game. This aerobic sport, which is accompanied by music, increases the hormone of happiness, and takes people from stress and anxiety to temporary happiness and mental peace. Aerobic exercise and stretching did not help to prevent the formation of amyloid masses that cause Alzheimer's, but aerobics could strengthen the memory of patients. Regular exercise can be effective in reducing the breakdown of the memory center in the brain. Especially in those who have the early symptoms of Alzheimer's. Exercise can have an effect especially on those who are in the early stages of Alzheimer's. Regular exercise program in elderly care centers can be used as a method to promote health and improve the quality of life of the elderly. Therefore, we recommend paying attention to regular and appropriate sports programs for the elderly, along with other care programs.

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