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Effects Of Aerobic And Resistance Exercises On Physical Fitness Components Of Pre Adoloscent Obese Boys

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Abstract:

Obese and overweight as strong difficulty they strain the health of people in the globe, many research present physical activity including aerobic and Resistant training can play an significant role in controlling body weight, for the reason of the study sixty pre adolescent obese boys (age group 9-14 years boys) were taken in the place of Karnataka, in this study which 60(N=60)subjects were randomly selected and equally divided in to four groups(15 subjects) and first group as aerobic, second group resistance training and third is both as selected, forth group as control group were tested at the beginning and end of 12th week experimental treatment, The collected data was a significance improvement in experimental groups,

Keywords: Aerobic training and resistance training, (cardio respiratory endurance, muscular strength endurance Flexibility, body composition)

Introduction :

Physical idleness can have sequence implication for people healthiness said the world health organization, approximately two million death per year are attributed to physical inactivity promoting WHO to issue a warning that a sanitary life style could very well be among the ten leading causes of death and disability in the world, Health and physical fitness have maintained the motto of a man from ancient times. These days' people become almost sedentary and physically inactive because of very limited movement caused by scientific innovation. Sixty to eighty percentages of people in the planet from both developed and developing countries lead to obesity because of sedentary lifestyles, making it one of the more serious and insufficiently addressed public health problems of our era.

Obesity:

Obesity is the word used for excessive overweight. Obesity is a heavy gathering of fat in the body's fat cells to such a serious degree that it rapidly increases the risk of obesity-associated diseases and mortality.

Aerobic based physical activity:

There are many types of activities that improve a person's physical fitness. The options range from traditional aerobics to alternative practices such as yoga and martial arts. Each activity has its own specific benefits and requires different kinds of equipment. The most important thing is doing some kind of activity on a regular basis.

The term aerobic factually means "with oxygen", but when applied to exercise, it refers to activities in which oxygen demand can be supplied continuously during performance. Aerobic performance depends on a continuous and sufficient supply of oxygen to burn the carbohydrates and fats needed to fuel such activities. the intensity or the energy requirement is within the capacity of the performer to sustain for longer than a couple of minutes.

Aerobic exercise strengthens the heart and lungs and tones the body. There are two types of aerobics: high-impact and low-impact. Both involve moving the body for at least twenty minutes in order to increase the heart rate to a point where the body is

burning fat. High-impact aerobics involves dance combinations and jumping movements, while low-impact aerobics uses similar movements without jumping. Low-impact aerobics is gentler to the joints because one foot is always touching the floor and therefore it is less likely to cause injury. An effective aerobic exercise should involve 5-10 minutes of warming up at an intensity of 50-60% of maximum heart rate, followed by at least 20 minutes of exercise at an intensity of 70-80% of maximum heart rate, ending with 5-10 minutes of cooling down at an intensity of 50-60% of maximum heart rate. Mendez (1553) in his book of Bodily exercise, states if people use exercise under the conditions which required, it deserves lofty praise as a blessed medicine that must be kept in high esteem

Resistance training:

Resistance training is also known as Strength training. It is a common component of sports and physical fitness programs for young people. Some adolescents and preadolescents may use strength training as a means to enhance muscle size and to simply improve appearance. Strength training programs may include the use of free weights, weight machines, elastic tubing, or body weight. In addition to the obvious goal of getting stronger, resistance training programs may be undertaken to improve long-term health. Studies have shown that strength training, when properly structured with regard to frequency, mode (type of lifting), intensity, and duration of program, can increase strength in preadolescents and adolescents.

Causes of Obesity:

Lack of physical exercise

Genetic Factors

Biological Problems

Life style and Environment

Psychological problems

Lack of Aerobic and resistance Exercise

Eating Disorders

Methods:

To achieve the purpose of this study sixty pre adolescent boys subjects were selected at randomly from high school place chikmaglure district, Karnataka, the age of the participants ranged between 9to14years, the selected participants were divided in to three experimental groups and control group, with fifteen participants (n=15) in each group, experimental group I (ATG=15) underwent aerobic training group II (RTG=15) underwent resistance training group III (ARTG=15)underwent concurrent aerobic and resistance training and group IV served as control group(CG=15)all the experimental groups underwent 12 weeks of training three sessions per week all the subjects were tested on selected variables prior to and immediately after the training period

Experimental design:

The study was formulated as pre and post test random group design, in which sixty subjects were divided into four equal groups. The training programme for each session lasted for sixty minutes totally including first ten minutes warm-up with dynamic stretching exercises and last ten minutes warm-down with static stretching exercises. After the initial measurements and before the initiation of the training periods, the subjects of all groups were instructed about the proper execution of all the exercises to be used during the training for all training regimens. After twelve weeks of training the post test was conducted.

Physical fitness components:

Cardio Respiratory Endurance Test :

Cardio Respiratory Endurance was tested with Cooper 9 Minutes Run & Walk Test. Cooper (1968) purpose of this training is to measure the cardio vascular endurance of the subject.

Muscular Strength and Endurance:

Modified sit-ups are a measure of abdominal muscular strength and endurance. The number of correctly executed sit-ups performed in 60 seconds was recorded as the score.

Flexibility test :

Flexibility test was measured by sit and reach test. This test involves sitting on the floor with legs stretched out straight ahead.

Body composition:

Body composition (particularly body fat percentage) can be measured in several ways. The most common method is by using a set of measurement calipers to measure the thickness of subcutaneous fat in multiple places on the body. This includes the abdominal area, the subscapular region, arms, buttocks and thighs.

Results:

Aerobic training significantly improved health related physical fitness on pre adolescent obese boys.

Resistance exercise significantly improved health related physical fitness on pre adolescent obese boys.

Combined Aerobic and Resistance exercise significantly improved health related physical fitness on pre adolescent obese boys.

Combined Aerobic and Resistance exercise training improved better than the health related physical fitness of pre adolescent obese boys.

Aerobic training improved better than the resistance training on health related physical fitness of pre adolescent obese boys.

Resistance training improved better than the control group on health related physical fitness of pre adolescent obese boys.

Conclusion:

General results indicate that regular aerobic and Resistance exercises is better training method to reduce body fat ,however the combined training is the most effect method to reduce body fat of pre adolescent obese boys.

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