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Effect of Exercise on Cardio Vascular Fitness of Middle Aged Men

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Abstract

The purpose of the study was to investigate the effect of exercise programme on cardio vascular fitness of middle aged men. To achieve the purpose of the study, 30 sedentary men were selected as subjects randomly from Tirunelveli District. The selected subjects were divided into two groups of 15each. Group I underwent physical exercise for six weeks and Group II acted as control that takes part in any physical exercise, other than regular activity. Physical exercise improves the functioning of the muscular, respiratory, circulatory, digestive and hormonal system. Regular practice of physical exercise helps to keep our body fit, controls cholesterol level, reduces weight, normalizes blood pressure and improves heart performance. Hence physical exercise was selected as independent variable and cardio vascular endurance were selected as dependent variable. Cardio vascular endurance were tested by using Coopers 12 min run/walk test. During the training programme the subjects underwent their training programmers for three alternative days per week up to 6 weeks. Every training session lasted for 45 to 60 minutes. Approximately including warming up and warming down. The data collected from the two groups were statistically analyzed for significance the analysis of covariance (ANCOVA) was significances, 0.05 levels of significances was fixed. The result of the study shows that there was a significant improvement takes place on cardio vascular endurance due to six weeks physical exercise training program. It is strongly recommended by the investigator that physical exercise is done for preventive measures of disease like, asthma, heart problems, cholesterol controlling etc, maintain good body posture and increase muscle mass, bone density.

Keywords: Physical Exercise, Cardio Vascular Endurance, Cardiovascular Fitness, Middle aged Men.

Introduction

It is estimated that by the year 2030, one out of five people in the United States will be older than, 65 and people aged 85 and older will be the fastest growing part of the population (Administration of Aging, 2003). At advanced age, physical activity frequently decreases because of changes in cardio vascular endurance, flexibility and strength, as well as in posture and gait (Singh, 2002). The number of inactive elders will increase dramatically, resulting in the incidence and prevalence of chronic illness and the risk of disability. Therefore, the demand on healthcare resources for the elderly as well as the expenses associated with caring for them are expected to increase as well as increase of the expenses associated with caring for the elderly. Healthcare providers and the general public will be forced to pay more attention to promoting healthy behaviors for sedentary men. Regular exercise is recognized as one of the important health behaviors. The benefit of exercise, especially for elderly people, is well documented as a means of preventing chronic disease (Pate, 1995), maintaining functional performance (Chandler & Hadley, 1996; Pate, 1995; Resnick, 2000), and enhancing mood and general well-being among the elderly (Blumenthal, 1999). At the same time, studies show that inactive older adults often are unable to perform activities of daily living, experience an increase in the incidence of falls, and also have more psychological health issues when compared to those who exercise regularly (Blumenthal, 1999; Chandler et al., 1996; Resnick, 1999).

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Methodology

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dependent variable. Cardio vascular endurance were tested by using Coopers 12 min run/walk test. During the training programme the subjects underwent their training programmers for three alternative days per week up to 6 weeks. Every training session lasted for 45 to 60 minutes. Approximately including warming up and warming down. The data collected from the two groups were statistically analyzed for significance the analysis of covariance (ANCOVA) was significances, 0.05 levels of significances was fixed.

Results

Table I. The summary of mean and dependent't' test for the pre and post tests on cardio vascular endurance of experimental and control group

S.No	Group	Number	Mean		t-value
			Pre Test	Post Test	
1	Experimental group	15	28.37	33.61	5.67
2	Control group	15	32.05	30.90	1.08

*Significant at .05 level (Table values required for significance at .05 level with df 14 is 2.14)

Mean values for the pre and post tests on cardio vascular endurance of experimental group and control group were graphically represented in figure I.

Figure I. Mean values for the pre and post tests on cardio vascular endurance of experimental group and control group

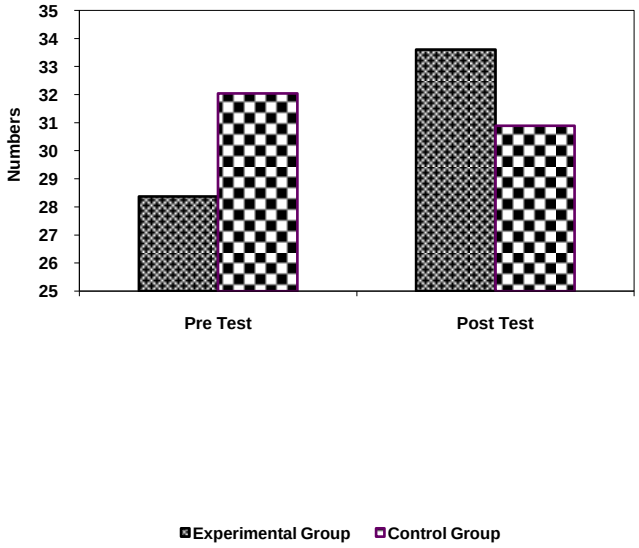

Table II. Analysis of covariance (ancova) on cardio vascular endurance of experimental and control group

S.No	Adjusted post test means		Source of variance	Sum of squares	df	Mean square	F - ratio
1	Experimental group	Control group	Between	167.73	1	167,73	92.34*
2	31.15	26.39	Within	49.05	27	1.82	

* Significant at 0.05 level (The table value required for significance at 0.05 level with df 1 and 27is 4.21)

Discussion

Table I indicate that the experimental group had significantly improved on cardio vascular endurance. However control group showed insignificant on cardio vascular endurance. Table II shows that, there is a significant mean difference exist between the adjusted post test means of experimental and control group on cardio vascular endurance.

Many physical fitness factors have direct relation with competitions whether the result may be success or failure. But each and every factor has different characteristics at the time of competition during the various situations especially at the critical stage in any level of sports. The systematic training helps to develop these kinds of fitness factors that may leads to better performance of sports and games.

Systematically designed training develops dependent variables are very importance quilts for better performance in almost all sports and games. Hence it is concluded that systematically designed training may be given due recognition and implemented properly in the training programs of all the discipline in order to achieve maximum performance.

Physical exercises have been studied in several laboratory-based research studies and have been documented to have various health benefits (ACSM, 2000). Epidemiological studies report that participating in a moderately active lifestyle combined with cardiovascular exercise can reduce an individual's risk of numerous chronic diseases. In addition, people who already have a chronic disease can enhance their ability to perform daily living activities through exercise (USDHHS, 2000a).

Exercise can enable adults to improve and maintain strength and agility, decreasing the risk of falling, and thereby allow older adults to continue living independently and experiencing a higher quality of life. Along with these benefits, physiological benefits of exercise include: increased stroke volume, increased blood flow and circulation, increased aerobic capacity, decreased stress and depression, decreased risk of injury, decreased fatigue, reduced chance of dying prematurely, reduced chance of developing diabetes/high blood pressure/colon cancer, helps build and maintain health bones, muscles and joints, and assists in weight control (CDC, 1999).

Hence it is concluded from the result of the study and also inferred from the above literature cited; the physical exercise should be considered properly when the person getting the middle age to maintain cardio vascular fitness, so that the person can lead a healthy life.

Conclusions

On the basis of the interpretation of the data, the following conclusions may be drawn.

1. There was a significant improvement takes place on cardio vascular endurance due to six weeks of physical exercise program.
2. There was a significant difference exists between experimental and control groups on cardio vascular endurance.

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