



Effect of Aerobic Training on Selected Physical Variables among College Men

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Abstract

The purpose of the study was to find out the effect of aerobic training on selected physical variables among college men. To achieve the purpose of the present study, thirty men from Thanthai Hans Roever College, Perambalur, Tamilnadu, India were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects (N=30) were randomly assigned to two equal groups of fifteen subjects each. Pre test was conducted for all the subjects on selected physical variables. This initial test scores formed as pre test scores of the subjects. The groups were assigned as Experimental Group I and Control Group in an equivalent manner. Experimental Group I was exposed to aerobic training and Control Group was not exposed to any experimental training other than their regular daily activities. The duration of experimental period was 6 weeks. Endurance and flexibility was assessed by cooper's 12 minutes run and sit and reach test respectively. After the experimental treatment, all the thirty subjects were tested on their physical variables. This final test scores formed as post test scores of the subjects. The pre test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences. In all cases 0.05 level of significance was fixed to test hypotheses. Analysis of covariance (ANCOVA) was computed because the subjects were selected random, but the groups were not equated in relation to the factors to be examined. It was observed that the six weeks of aerobic training have significantly improved the selected physical variables among college men.

Keywords: Asana, Pranayama, Meditation, School Boys.

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Introduction

Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements of fitness (flexibility, muscular strength, and cardio-vascular fitness). It is usually performed to music and may be practiced in a group setting led by an instructor (fitness professional), although it can be done solo and without musical accompaniment. With the goal of preventing illness and promoting physical fitness, practitioners perform various routines comprising a number of different dance-like exercises. Formal aerobics classes are divided into different levels of intensity and complexity. Aerobics classes may allow participants to select their level of participation according to their fitness level. Many gyms offer a variety of aerobic classes. Each class is designed for a certain level of experience and taught by a certified instructor with a specialty area related to their particular class. The aerobic step is a device which allows you to do aerobics exercises for the purpose of getting a cardio-respiratory reaction from the concept of lifting your body weight. While this concept has been around since the 1950s, it was not until the 1980s that aerobic step came

into being in an organized fitness setting and, thus, mainstream popularity.

Methodology

The purpose of the study was to find out the effect of aerobic training on selected physical variables among college men. To achieve the purpose of the present study, thirty men from Thanthai Hans Roever College, Perambalur, Tamilnadu, India were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects (N=30) were randomly assigned to two equal groups of fifteen subjects each. Pre test was conducted for all the subjects on selected physical variables. This initial test scores formed as pre test scores of the subjects. The groups were assigned as Experimental Group I and Control Group in an equivalent manner. Experimental Group I was exposed to aerobic training and Control Group was not exposed to any experimental training other than their regular daily activities. The duration of experimental period was 6 weeks. Endurance and flexibility was assessed by cooper's 12 minutes run and sit and reach test respectively. After the experimental treatment, all the thirty subjects were tested on their physical variables. This final test scores formed as post test scores of the subjects. The pre test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean

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selected random, but the groups were not equated in relation to the factors to be examined.

Results

Table I. Computation of mean and analysis of covariance on endurance of experimental and control groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	1933.86	1999.00	BG	31817.63	1	31817.63	2.45
			WG	362507.73	28	12946.70	
Post Test Mean	2331.93	1959.33	BG	1041230.70	1	1041230.70	114.49*
			WG	254626.26	28	9093.79	
Adjusted Post Mean	2332.33	1959.92	BG	951111.45	1	951111.45	100.90*
			WG	254505.29	27	9426.12	

* Significant at 0.05 level

Table value for df 1, 28 was 4.20, df 1, 27 was 4.21

The above table indicates the adjusted mean value on endurance of experimental and control groups were 2332.33 and 1959.92 respectively. The obtained F-ratio of 100.90 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant

difference among experimental and control groups on endurance. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted mean values of endurance of both experimental and control groups are graphically represented in the figure I.

Figure I. Shows the mean values on endurance of aerobic training and control groups

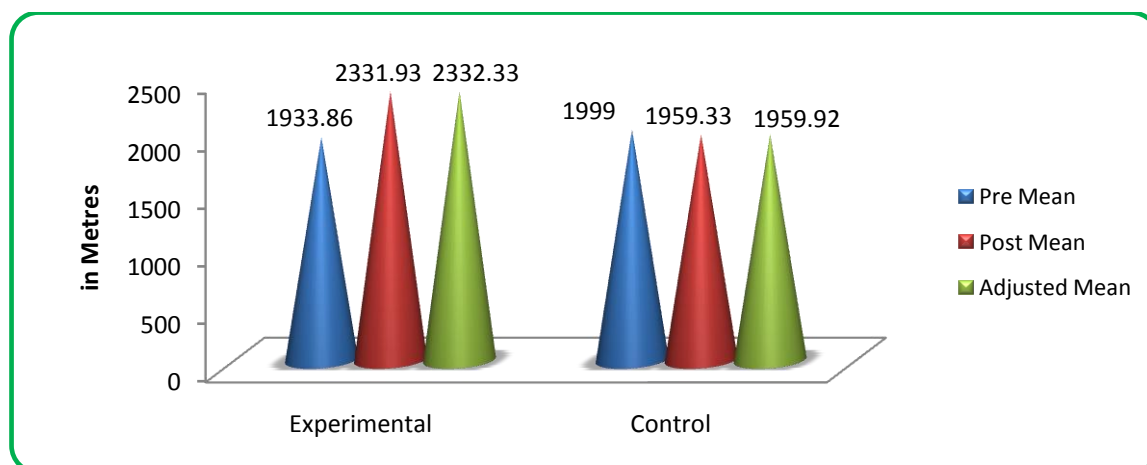


Table II. Computation of mean and analysis of covariance on flexibility of experimental and control groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	33.14	32.76	BG	1.08	1	1.08	0.03
			WG	790.11	28	28.21	
Post Test Mean	37.69	33.64	BG	122.81	1	122.816	7.46*
			WG	460.60	28	16.45	
Adjusted Post	37.70	33.63	BG	124.05	1	124.05	7.31*

Mean			WG	457.69	27	16.95	
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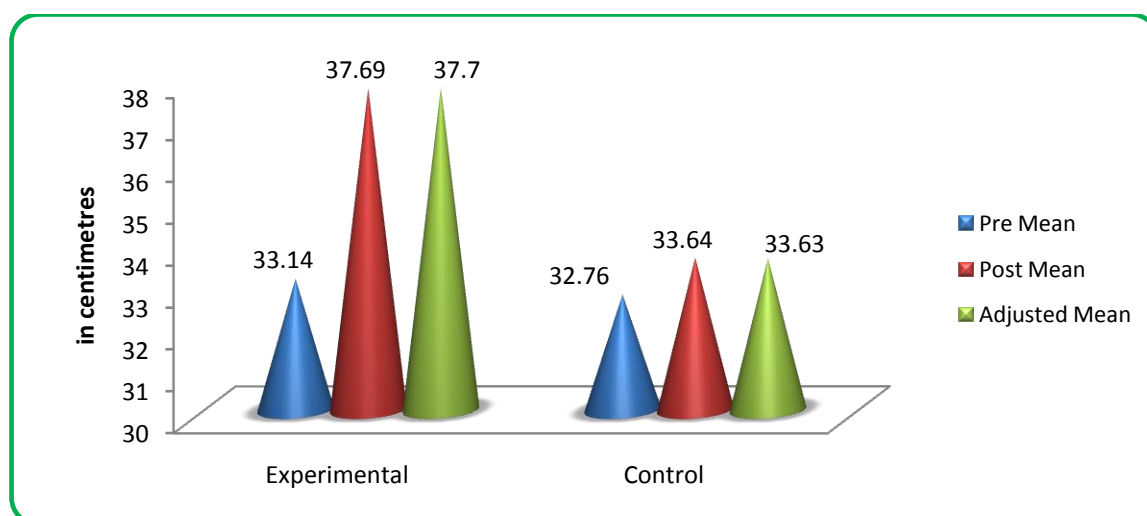
* Significant at 0.05 level

Table value for df 1, 28 was 4.20, df 1, 27 was 4.21

The above table indicates the adjusted mean value of flexibility of experimental and control groups were 37.70 and 33.63 respectively. The obtained F-ratio of 7.31 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference

among experimental and control groups on flexibility. The above table also indicates that both pre and post test means of experimental and control groups also differ significantly. The pre, post and adjusted mean values of flexibility of both control and experimental groups are graphically represented in the figure II.

Figure II. Shows the mean values on flexibility of aerobic training and control groups



Conclusions

1. It was observed that the six weeks of aerobic training have significantly improved the selected physical variables among college men.

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