



EFFECT OF AEROBIC STEP TRAINING ON SELECTED PHYSICAL VARIABLES AMONG SCHOOL BOYS

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Abstract:

The purpose of this study was to find out the effect of aerobic step training on selected physical variables among school boys. To achieve the purpose of the present study, thirty school boys from Vetri Vikaas Boys Hr.Sec.School, Namakkal, Tamilnadu, India were selected as subjects at random and their ages ranged from 12 to 15 years. The subjects were divided into two equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 30) were randomly assigned to two equal groups of fifteen school boys each. The groups were assigned as control group and experimental group in an equivalent manner. The training group participated the training for a period of six weeks and the post-tests were conducted. The subjects were tested prior to and after the experimentation on physical variables. The variable to be used in the present study was collected from all subjects before they have to treat with the respective treatments. It was assumed as pre-test. After completion of treatment they were tested again as it was in the pre-test on all variables used in the present study. This test was assumed as post-test. The following statistical techniques were adopted to treat the collected data in connection with established hypothesis and objectives of this study. Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. It was observed that the six weeks of aerobic step training have significantly improved the selected physical variables of school boys.

Keywords: Aerobic step training, School Boys, Physical variables.

INTRODUCTION

Physical education is an essential and integral part of the total education program and makes significant contributions toward the achievement of desirable education and health out comes through the medium of physical activity quality. Quality physical education programs promote the physical growth and development of children and youth while contributing to their general health and well being. Ultimately, they should help young people keep physically fit and enjoys mans forms of physical activity during the school years and continuing throughout life. Aerobic fitness not only determines performance in a wide range of activities, but it is also a health-re- lated parameter. In a performance context, aerobic training aims to increase maximal oxygen uptake (VO₂max) or other indices of aerobic fitness (e.g. lactate / ventilator threshold, exercise efficiency). In children, it has been demonstrated that parameters such as cholesterol or fat mass are related to VO₂max. Consequently, for young people of low aerobic fitness, there are advantages to improve their aerobic power. In this population, short-term effects of training are expected in terms of performance or to reach health-related standards for aerobic fitness. Long-term effects of aerobic training may also be expected. Some authors have reported that children, with a higher level of physical activity, or who have been trained during

childhood, showed a higher level of physical activity and aerobic fitness in young adulthood.

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. An entrepreneurial woman by the name of Gin Miller is credited with bringing aerobic step to the masses when she finally succeeded in getting Reebok to listen to her idea of innovating step aerobics. Today, aerobic step is very popular in many gyms around the country, and classes for this exercise method are offered where there is a group exercise program.

METHODOLOGY

The purpose of this study was to find out the effect of aerobic step training on selected physical variables among school boys. To achieve the purpose of the present study, thirty school boys from Vetri Vikaas Boys Hr.Sec.School, Namakkal, Tamilnadu, India were selected as subjects at random and their ages ranged from 12 to 15 years. The subjects were divided into two equal groups. The study was formulated as a true random

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RESULTS

The descriptive measures and the results of analysis of covariance on the criterion measures were given in the following tables.

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

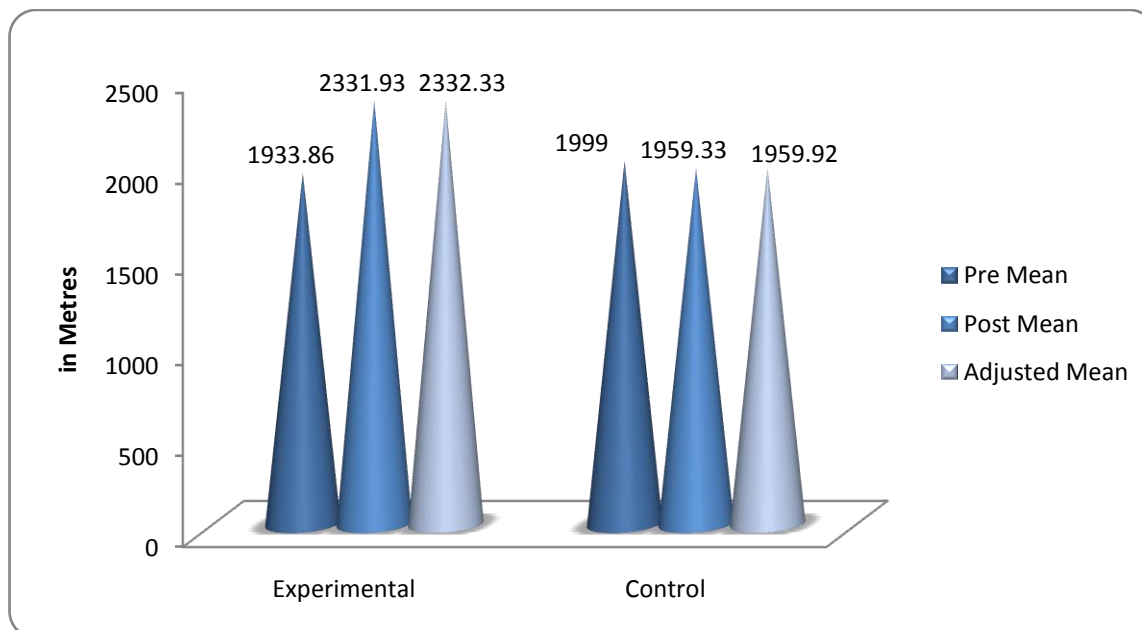


TABLE - II
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON FLEXIBILITY OF EXPERIMENTAL AND CONTROL GROUPS

	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 Mean	37.70	33.63	BG	124.05	1	124.05	7.31*
			WG	457.69	27	16.95	

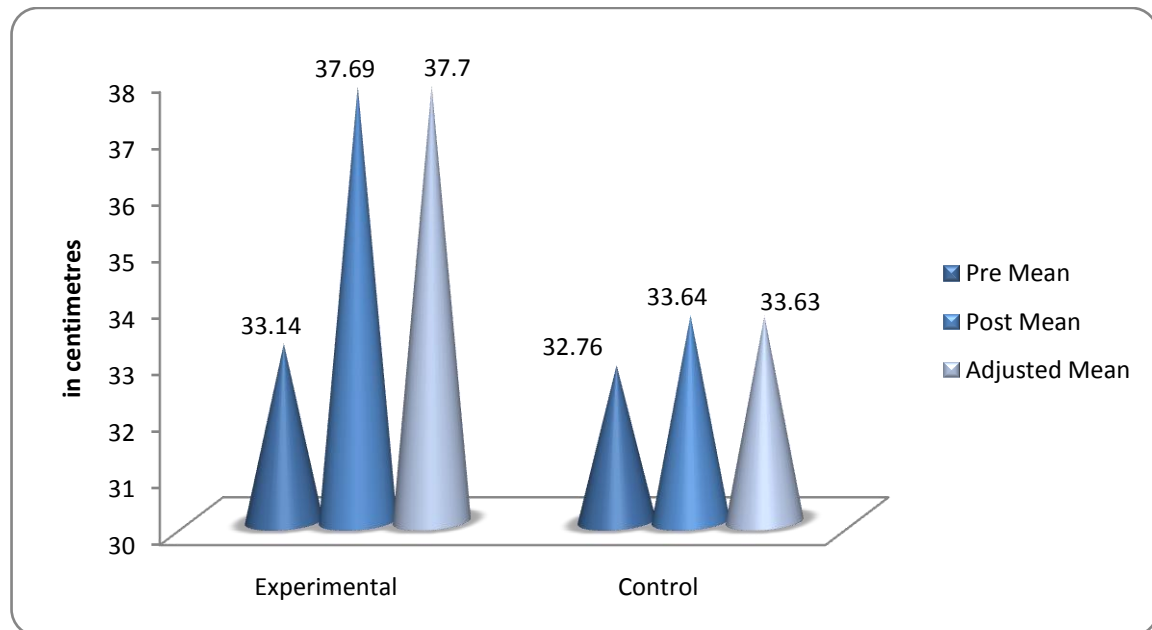
* Significant at 0.05 level

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

From the results obtained, the following conclusions were drawn:

1. It was observed that the six weeks of aerobic step training have significantly improved the selected physical variables of school boys.
2. The experimental group had achieved significant improvement on selected physical variables than the control group.

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