



Effect of Aerobic Training on Strength Endurance among Ball Badminton Players

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Abstract

The purpose of the study was to find out the effect of aerobic training on strength endurance among ball badminton players. To achieve the purpose of the present study, thirty players from Rayalaseema College of Physical Education, Proddatur, Andhra Pradesh were selected as subjects and their age shall ranged from 18 to 25 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 players each. The groups were assigned as aerobic training group and control group in an equivalent manner. The experimental group were participated the training for a period of six weeks to find out the outcome of the training package. The initial and final scores in strength endurance were put in to statistical treatment using ANCOVA to find out the significant mean differences. Practicing Aerobic training significantly improved strength endurance of ball badminton players with 0.05 level of confidence.

Keywords: Aerobic Training, Strength Endurance, Ball badminton players.

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Introduction

Aerobics "with oxygen," refers to physical exercise to improve cardio respiratory endurance. Aerobic movement is rhythmic and repetitive, engaging the large muscle groups in the arms and legs for at least twenty minutes at each session. The ensuing demand for a continuous supply of oxygen creates the aerobic training effect, physiological changes that enhance the ability of the lungs, heart, and blood vessels to transport oxygen throughout the body. The most beneficial aerobic exercises include cross-country skiing, swimming, running, cycling, walking, and aerobic dance. Activities that rely on brief or discontinuous bursts of energy, such as weight lifting, are anaerobic ("without oxygen"). An early proponent of aerobics was Kenneth H. Cooper, a medical doctor whose book *Aerobics* (1968) introduced the first exercise program for cardio respiratory improvement. Cooper also founded the Institute for Aerobics Research in Dallas, Texas. The Aerobics and Fitness Association of America certifies aerobics instructors and sets equipment and training standards (Michael, 1998).

Methodology

The purpose of the study was to find out the effect of aerobic training on strength endurance among ball badminton players. To achieve the purpose of the present study, thirty players from Rayalaseema College of Physical Education, Proddatur, Andhra Pradesh were selected as subjects and their age shall ranged from 18 to 25 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 players each. The groups were assigned as aerobic training group and control group in an equivalent manner. The experimental group were participated the training for a period of six weeks to find out the outcome of the training package. The initial and final scores in strength endurance were put in to statistical treatment using ANCOVA to find out the significant mean differences.

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Results

Table 1. Computation of mean and analysis of covariance on strength endurance of experimental and control groups (30 sec Endurance Jump)

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	15.60	16.00	BG	2.133	1	2.133	0.914
			WG	65.333	28	2.333	
Post Test Mean	17.66	16.13	BG	20.833	1	20.833	12.32*
			WG	47.333	28	1.690	
Adjusted Post Mean	17.69	15.97	BG	21.582	1	21.582	12.50*
			WG	46.583	27	1.725	

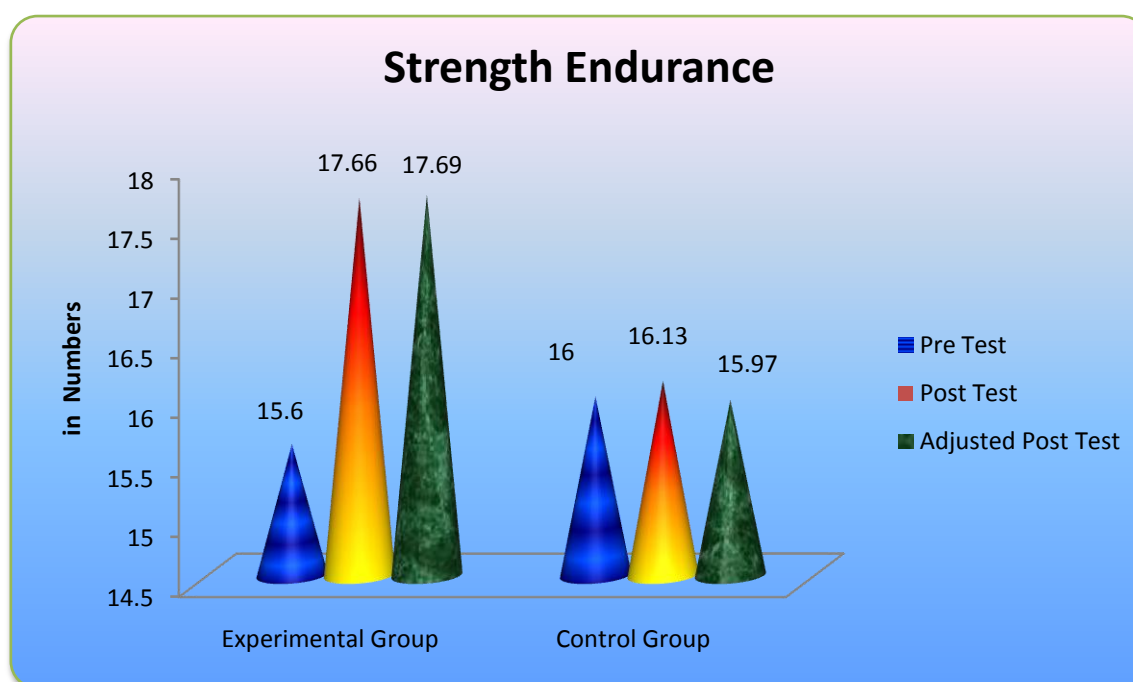
* Significant at 0.05 level

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

The above table indicates the adjusted mean value of strength endurance of experimental and control groups were 17.69 and 15.97 respectively. The obtained F-ratio of 12.50 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 strength endurance. 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 strength endurance of both control and experimental groups are graphically represented in the figure-I.

Figure I. Show the mean values on strength endurance of sport loading training and control groups



Conclusion

Practicing Aerobic training significantly improved strength endurance of ball badminton players with 0.05 level of confidence.

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