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EFFECT OF AEROBIC TRAINING ON SELECTED PHYSICAL FITNESS VARIABLES AMONG SCHOOL BOYS KABADDI PLAYERS

R. Ramkumar* & Dr. P. Sivaraman**

* Research Scholar, Department of Physical Education, Annamalai University, Annamalai Nagar, Chidambaram, Tamilnadu

** Assistant Professor, Department of Physical Education, Annamalai University, Annamalai Nagar, Chidambaram, Tamilnadu

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Abstract:

The purpose of the study was designed to examine the effect of Aerobic training on speed and cardio respiratory endurance of school boys kabaddi players. For the purpose of the study, thirty school boys kabaddi players from the schools in and around Chidambaram, Cuddalore district were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent Aerobic training for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely speed and cardio respiratory endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and cooper's 12 min run / walk test respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as an appropriate. The results of the study showed that there was a significant difference between Aerobic training group and control group on speed and cardio respiratory endurance. And also it was found that there was a significant change on speed and cardio respiratory endurance due to twelve weeks of Aerobic training.

Key Words: Aerobic training, speed, cardio respiratory endurance, school boys kabaddi players

Introduction:

Aerobic training, also known as cardiovascular exercise or endurance training, is a type of physical activity that raises the heart rate and increases oxygen delivery to the body's tissues. This type of training is typically performed for an extended period of time, ranging from 20 minutes to several hours, and is characterized by rhythmic, continuous movement. Some examples of aerobic training include running, cycling, swimming, and walking. The benefits of aerobic training are numerous and well-documented. Regular aerobic exercise has been shown to improve cardiovascular health, increase endurance, and reduce the risk of chronic diseases such as heart disease, diabetes, and obesity. It can also improve mental health by reducing stress, anxiety, and depression, and may even help to improve cognitive function and memory. In addition to these general benefits, aerobic training can also be tailored to specific goals, such as improving athletic performance or weight loss. For example, runners may use aerobic training to increase their speed and endurance, while those looking to lose weight may use it to burn calories and increase their metabolism. One of the key factors in the effectiveness of aerobic training is intensity. To derive the maximum benefits, it is generally recommended to perform aerobic exercise at a moderate to high intensity, which can be measured using heart rate zones or the rate of perceived exertion. It is also important to incorporate variety into your training program, as this can help to prevent boredom and prevent overuse injuries. Overall, aerobic training is a safe and effective way to improve physical and mental health, and is suitable for people of all ages and fitness levels. It is an important component of a well-rounded exercise program and can be incorporated into a wide variety of activities and sports.

Methodology:

The purpose of the study was designed to examine the effect of Aerobic training on speed and cardio respiratory endurance of school boys kabaddi players. For the purpose of the study, thirty school boys kabaddi players from the schools in and around Chidambaram, Cuddalore district were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent Aerobic training for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely speed and cardio respiratory endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and cooper's 12 min run / walk test respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the

significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as an appropriate.

Analysis of the Data:

Speed:

The analysis of covariance on speed of the pre and post test scores of Aerobic training group and control group have been analyzed and presented in Table I.

Table 1: Analysis of Covariance of the Data on Speed of Pre and Post Tests Scores of Aerobic Training and Control Groups

Test	Aerobic training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	9.50	9.48	Between	0.0028	1	0.0028	0.21
S.D.	0.11	0.09	Within	0.3821	28	0.0136	
Post Test							
Mean	9.13	9.46	Between	0.8333	1	0.8333	20.49*
S.D.	0.11	0.11	Within	1.1387	28	0.0407	
Adjusted Post Test							
Mean	9.12	9.47	Between	0.8984	1	0.8984	232.93*
			Within	0.1041	27	0.0039	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table 1 shows that the adjusted post-test means of Aerobic training group and control group are 9.12 and 9.47respectively on speed. The obtained "F" ratio of 232.93 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on speed. The results of the study indicated that there was a significant difference between the adjusted post-test means of Aerobic traininggroup and control group on speed.

Cardio Respiratory Endurance:

The analysis of covariance on cardio respiratory endurance of the pre and post test scores of Aerobic training group and control group have been analyzed and presented in Table II

Table 2: Analysis of Covariance of the Data on Cardio Respiratory Endurance of Pre and Post Tests Scores of Aerobic Training and Control Groups

Test	Aerobic training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	1127.33	1124.67	Between	53.33	1	53.33	0.18
S.D.	16.92	15.69	Within	8466.67	28	302.38	
Post Test							
Mean	1182.67	1132.00	Between	19253.33	1	19253.33	19.54*
S.D.	16.68	17.59	Within	27586.67	28	985.24	
Adjusted Post Test							
Mean	1182.10	1132.56	Between	18293.81	1	18293.81	72.31*
			Within	6830.84	27	252.99	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table 2 shows that the adjusted post-test means of Aerobic training group and control group are 1182.10 and 1132.56 respectively on cardio respiratory endurance. The obtained "F" ratio of 72.31 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on cardio respiratory endurance. The results of the study indicated that there was a significant difference between the adjusted post-test means of Aerobic traininggroup and control group oncardio respiratory endurance.

Conclusions:

- There was a significant difference between Aerobic training group and control group on speed and cardio respiratory endurance.
- And also it was found that there was a significant changes on selected criterion variables such as speed and cardio respiratory endurance due to Aerobic training.

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