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Effect of aerobic training on resting heart rate among men cricket players

S Ramanaichandran[1], Dr. M Sankar[2]
[1] Research Scholar, Department of Physical Education, Annamalai University, Tamil Nadu, India
[2] Assistant Professor, Department of Physical Education, Annamalai University, Tamil Nadu, India

Abstract
The purpose of the study was to find out the effect of aerobic training on resting pulse rate among men cricket players. To achieve this purpose of the study, thirty men cricket players studying in various Departments at Annamalai University, Annamalai nagar, Tamil Nadu, India were selected as subjects at random. The age of the subjects were ranged from 18 to 20 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as aerobic training group (Group I) and control group (Group II). The aerobic training group (Group I) underwent aerobic training programme for three days per week for twelve weeks. Group II acted as control in which they did not undergo any special training programme apart from their regular physical education programme. All the subjects of two groups were tested on resting heart rate at prior to and immediately after the training programme by using radial pulse. The analysis of covariance (ANCOVA) was used to analysis the significant difference, if any between the groups. The level of significance to test the 'F' ratio obtained by the analysis of covariance was tested at .05 level of confidence, which was considered as an appropriate. The results of the study revealed that there was a significant difference between aerobic training group and control group on resting heart rate. Significant improvements on resting heart rate was also noticed due to aerobic training among men cricketers.

Keywords: purpose, resting, confidence, aerobic, cricketers

Introduction
The word "anaerobic" means "without oxygen." When doing anaerobic exercises, such as sprinting, you very quickly become out of breath. It is impossible to sprint for long periods of time. You must soon stop to catch your breath. Anaerobic exercises are used by top athletes to build up their speed.

But in an ordinary physical fitness program, anaerobic exercises are not recommended. Instead one should concentrate on aerobic exercises.

Aerobic training involves you shaking up your usual aerobic exercise routine in that you incorporate other exercises so as to make it fun to do. While most athletes training regimen includes both strength and endurance training, there is relatively little research that shows a clear performance benefit of strength training for endurance athletes. Anything that raises your pulse and makes you breathe hard steadily for 15 minutes or more is aerobic. If you do aerobic exercises daily, or atleast three or four times a week, you will keep your lungs and heart in good condition. If your goal is to take part in athletic competition, then you will want to devote much more time than 15 minutes daily to aerobic exercises.

Methodology
The purpose of the study was to find out the effect of aerobic training on resting pulse rate among men cricket players. To achieve this purpose of the study, thirty men cricket players studying in various Departments at Annamalai University, Annamalai nagar, Tamil Nadu, India were selected as subjects at random. The age of the subjects were ranged from 18 to 20 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as aerobic training group (Group I) and control group (Group II). The aerobic training group (Group I) underwent aerobic training programme for three days per week for twelve weeks. Group II acted as control in which they did not undergo any special training programme apart from their regular physical education programme. All the subjects of two groups were tested on resting heart rate at prior to and immediately after the training programme by using radial pulse. The analysis of covariance (ANCOVA) was used to analysis the significant difference, if any between the groups. The level of significance to test the 'F' ratio obtained by the analysis of covariance was tested at .05 level of confidence, which was considered as an appropriate.

Analysis of the data
The influence of aerobic training on resting heart rate was analyzed and presented below.

Resting heart rate
The analysis of covariance on resting heart rate of the pre and post test scores of aerobic training group and control group have been analysed and presented in Table I.

Table I: Analysis of covariance of the data on resting heart rate of pre and posttests scores of aerobic training group and control group

test	Aerobic Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	72.19	72.31	Between	0.30	1	0.30	0.412
S.D.	0.91	0.89	Within	20.4	28	0.729	
Post Test							
Mean	69.07	71.24	Between	17.63	1	17.63	21.396*
S.D.	0.96	0.87	Within	23.07	28	0.824	
Adjusted Post Test							
Mean	69.81	72.07	Between	22.11	1	22.11	172.73*
			Within	3.46	27	0.128	

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 1 and 28, 1 and 27 were 4.20 and 4.215 respectively)

The table I shows that the pre-test mean values on resting heart rate of aerobic training group and control group are 72.19 and 72.31 respectively. The obtained "F" ratio of 0.412 of pre-test scores is less than the table of 4.20 for df 1 and 28 required for significance at .05 level of confidence on resting heart rate. The post-test mean values on resting heart rate of aerobic training group and control group are 69.07 and 71.24 respectively. The obtained "F" ratio of 21.396 for post test scores is greater than the table value of 4.20 for df 1 and 28 required for significance at .05 level of confidence on resting heart rate.

The adjusted post-test mean values of aerobic training group and control group are 69.81 and 72.07 respectively on resting heart rate. The obtained "F" ratio of 172.73 for adjusted post-test means is greater than the required table value of 4.215 for df 1 and 27 required for significance at .05 level of confidence on resting heart rate.

The results of the study indicated that there was significance between the adjusted post-test means of aerobic training group and control group on resting heart rate.

Conclusions

Based on the results of the study, the following conclusions were drawn.

1. There was a significant difference between aerobic training group and control group on resting heart rate.
2. And also it was found that there was a significant changes on resting heart rate due to aerobic training.

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