

A Study on the Effect of Specific Resistance and Aerobic Training on Muscular Strength Endurance among School going Male Basket Ball Players

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ABSTRACT

The main purpose of the study was to find out the Effect of Specific Resistance and Aerobic Training on Muscular Strength Endurance among School going Male Basket Ball Players. To achieve the purpose of the present study, Forty Five (N=45) School going Male Basket Ball Players from different Schools of Pathanamthitta District, Kerala were selected at random as subjects and their age ranged from 16 to 19 years. The selected players were divided into three equal groups consists of 15 Basket Ball players each namely experimental group-I, experimental group-II and control group. The experimental group-I underwent specific resistance training for eight weeks. The experimental group-II underwent an aerobic training for eight weeks. The control group was not taking part in any training during the course of the study. Muscular strength endurance was assessed by bent knee sit up test. Pre-test was taken before the training period and post- test was measured immediately after the eight weeks training period. The data were collected before and after the training programme and statistically analyzed by using analysis of covariance (ANCOVA). The results of the study show that specific resistance and aerobic training can be effective training programme to improve the Muscular strength endurance of school going Male Basket Ball players.

Keywords: Specific Resistance, Aerobic Training, Muscular Strength Endurance, and School going Basket Ball Male Players.

INTRODUCTION

Physical conditioning programme provides an opportunity for the development and maintenance of physical fitness. It offers an opportunity for the facilitation of normal growth of a child and prevents the reversal factors of the performance such as strength, endurance, flexibility, speed and skill. By undergoing a physical conditioning programme, one experiences a number of changes that make better performance and faster recovery possible. Through repeated muscular work, strength is gained and as a result one can produce more power as there is a faster contraction, which means, gain in both power and speed. Conditioning the body through regular exercise enables an individual to meet emergencies more effectively.

OBJECTIVE OF THE STUDY

The main purpose of the present study was to find out the Effect of Specific Resistance, Aerobic Training on Muscular Strength Endurance for 8 weeks among School going Male Basket Ball Players.

METHODOLOGY

To achieve the purpose of the present study, Forty Five (N=45) School going Male Basket Ball Players from different Schools of Pathanamthitta District, Kerala were selected at random as subjects and their age ranged from 16 to 19 years. For the present study Pre-Test & Post-Test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned in to two equal groups of 15 students each and named as Group-A, Group-B and Group-C. Group-A underwent Specific Resistance training group, Group-B underwent Aerobic training and Group-C underwent no training. Muscular Strength Endurance was assessed by 'Bent Knee' Sit-up Test. The data was collected before and after eight weeks of training period. The data were collected before and after the training programme and statistically analyzed by using analysis of covariance (ANCOVA). The results of

the study show that Specific Resistance and Aerobic Training can be effective training programme to improve the Muscular Strength Endurance of School going Male Basket Ball Players.

TABLE-I

Analysis of Covariance on Muscular Strength Endurance of Specific Resistance Training Group, Aerobic Training Group and Control Group

Adjusted Post Test Mean			Sources of Variance	Df	Sum of Squares	Mean Square	Obtained "F"
Specific Resistance Training Group	Aerobic Training Group	Control Group					
36.47	34.07	31.67	SSB	2	172.8	86.4	13.05*
			SSW	42	278	6.62	
			SST	43	450.8		

* Significant at .05 level of confidence (Muscular Strength Endurance Scores in Meters)

(The table value required for Significance at .05 level with df 2 and 41 are is 3.22)

Table-I shows that the adjusted Post-Test mean value of Muscular Strength Endurance for Specific Resistance Training Group, Aerobic Training Group and Control Group are 36.47, 34.07 and 31.67 respectively. The obtained F-ratio of 13.05 for three groups is more than the table value of 3.22 for df 2 and 41 required for significant at .05 level of confidence. The results of the study indicate that there are significant differences among three groups on Muscular Strength Endurance. To determine which of the paired means had a significant difference, the Scheffe's test was applied as Post-hoc test and the results are presented in Table-II.

TABLE-II

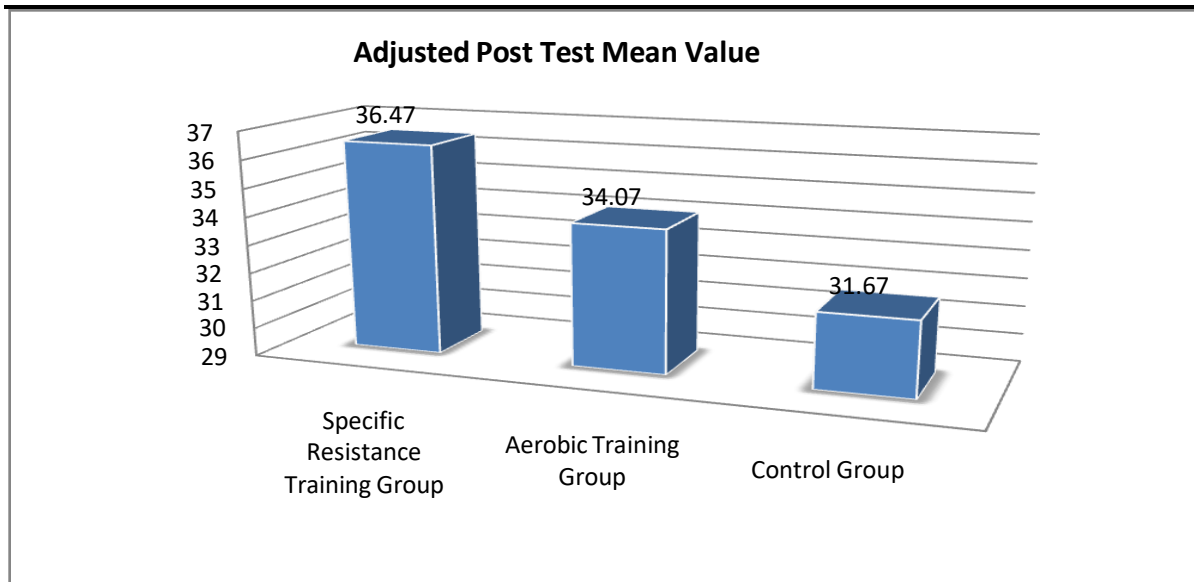
The Scheffe's Test for the Differences between the Paired Means on Muscular Strength Endurance

Mean			Mean Difference	Confidence Interval
Specific Resistance Training Group	Aerobic Training Group	Control Group		
36.47	34.07	-	2.40*	2.38
36.47	-	31.67	4.80*	2.38
-	34.07	31.67	2.40*	2.38

* Significant at .05 level of confidence

Table-II shows that the paired mean difference on Muscular Strength Endurance for Specific Resistance Training Group and Aerobic Training Group, Specific Resistance Training Group and Control Group and Aerobic Training Group and control Group, are 2.40, 4.80 and 2.40 respectively. The values are greater than the confidence interval value 2.38, which shows significant differences at .05 level of confidence. It may be concluded from the results of the study that there is a significant difference in Muscular Strength Endurance for Specific Resistance Training Group and Aerobic Training Group, Specific Resistance Training Group and Control Group and Aerobic Training Group and Control Group. However, the Muscular Strength Endurance was significantly higher for Aerobic Training Group is greater than other Groups.

The results of the study indicate that there are significant differences among the adjusted Post-Test means of Specific Resistance Training Group, Aerobic Training Group and Control Group on Muscular Strength Endurance. It may be concluded that Specific Resistance Training Group is better than Aerobic Training Group and Control Group in Muscular Strength Endurance. The adjusted Post-Test mean values of Specific Resistance Training Group, Aerobic Training Group and Control Group on Muscular Strength Endurance are graphically represented in the Figure-I.



DISCUSSION ON FINDINGS

The result of the study showed that there was a significant difference exists between Specific Resistance Training Group, Aerobic Training Group and Control Group on Muscular Strength Endurance.

CONCLUSIONS

The following conclusions have been drawn from the result of the study.

1. It was concluded that there was a significant improvement on Muscular Strength Endurance among the Experimental Group.
2. It was concluded that there was a significant differences among Specific Resistance Training Group, Aerobic Training Group than Control Group on Muscular Strength Endurance.
3. It was concluded there was a significant improvement than the Resistance Training for the improvement of Muscular Strength Endurance.

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