



**EFFECT OF RESISTANCE TRAINING ON AGILITY AND CARDIO
ESPIRATORY ENDURANCE OF VOLLEYBALL PLAYERS**

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Abstract

The purpose of this study was to discover the effect of Resistance Training on Agility and Cardio respiratory Endurance of volleyball Players. A total of 40 males ranging in age from 18 to 25 years old were chosen from the South Gujarat male Volleyball players for the research. Group-A: Experimental (N1=20) and Group-B: Control (N2=20) were randomly assigned to the individuals. The purpose and method of the observation were explained to all of the subjects. The subjects in Group-A were subjected through a ten-week Resistance Training Program. Group-B performed as the control group, which did not participate in any extracurricular activities. T-test ware used to find out the statistical significances of each groups pre and post mean differences. The level of significance was set at p<0.05 level of confidence. The results of the study stated that the Resistance Training had significantly improved the agility and Cardio respiratory Endurance of the subjects.

Introduction

Resistance training program was developed by R.E. Morgan and G.T. Anderson in 1953 at the University of Leeds in England. There onwards this training has become one of the training to improve the physical fitness qualities of athletes. Resistance training was a workout routine that combines cardiovascular fitness and resistance training. The initial routines were arranged in a circle by doing the different sets of exercises in a sequence alternating one another and thereby it was named Resistance training. By allowing only a short rest interval of 30-60 seconds between stations, cardiovascular fitness is gained along with the benefits of another related training effect. The different exercises in different stations are fixed depending on the trainee's training state, age, and demand to improve physical fitness and physiological qualities. Resistance training is a type of physical conditioning that involves moving from one activity to the next through a set of stations or pieces of equipment. Resistance training is a type of fitness training that focuses

on the entire body. Resistance training improves muscular strength, endurance, cardiovascular fitness, agility, and flexibility all at the same time if done on a regular basis. Resistance training is a method of fitness training that is designed to develop general, all-round physical and cardiovascular fitness” (Scholarch, 1990). It is a great training program for improving all types of physical fitness abilities based on the program in various stations.

Methodology

For the purpose of present study, Total Forty (40) male subjects, age ranged from 18 to 25 years were selected as subjects from South Gujarat male Volleyball Players. The subjects were randomly divided into two groups: Group-A: Experimental (N1=20) and Group-B: Control (N2=20). All the subjects were informed approximately the purpose and method of the observation. The Subjects from Group-A had been subjected to a 10-week of Resistance Training Program. Group-B acted as control who did not take part in any special training apart from the regular curricular sports.

Table 1: Selected Variables and Test

S. No	Selected Variables	Test
1	Cardio respiratory Endurance	Cooper’s 12 Minute Run/Walk test
2	Agility	Shuttle Run (4x10m)

Statistical Analysis

The data collected in the study was subjected to statistic analysis with appropriate use of SPSS package. T-test was used to find out the

statistical significances of each groups pre and post mean differences. The level of significance was set at $p < 0.05$ level of confidence.

Result and Discussion

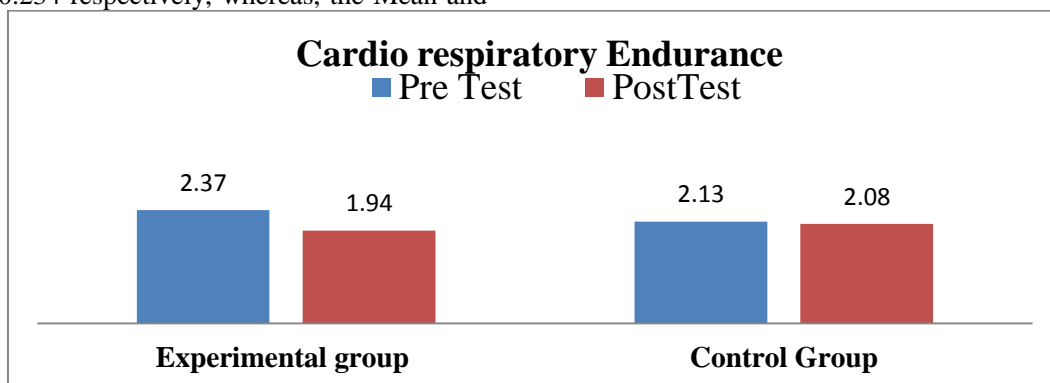
Table 2: Show Statistics of Selected Variables Male Volleyball Players.

S. No	Variables	Group	Pre-test		Post-test		T- Test
			Mean	S.D	Mean	S.D	
1	Cardio respiratory Endurance	Experimental	2.37	0.316	1.94	0.234	7.969
		Control	2.13	0.408	2.08	0.365	0.408
2	Agility (in secs)	Experimental	11.14	0.1273	11.04	0.1291	4.093
		Control	11.16	0.016	11.14	0.099	1.46

Cardio respiratory Endurance

Table - 2 presents the result of experimental group and control group with regard to the Cardio respiratory Endurance. The descriptive statistics shows the Mean and SD value of endurance of pre-test and post-test of experimental group was 2.37 ± 0.316 and 1.94 ± 0.234 respectively, whereas, the Mean and

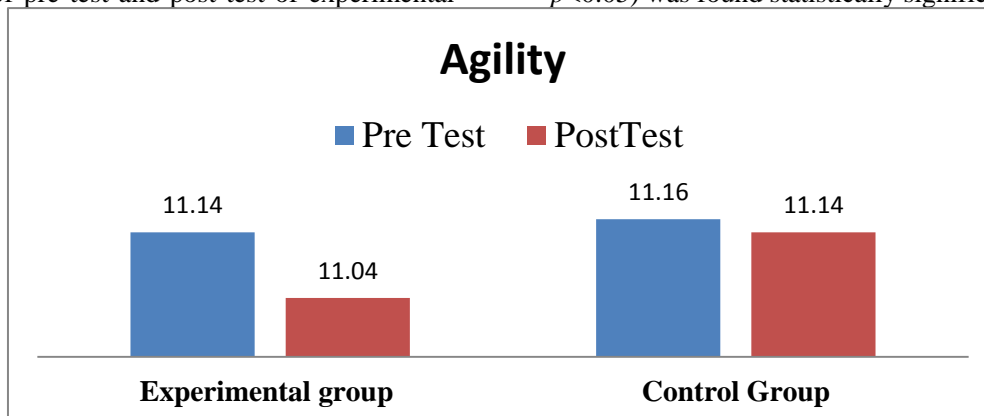
SD value of endurance of pre-test and post-test of control group was 2.13 ± 0.408 and 2.08 ± 0.365 . The ‘t’ value of experimental group was 7.969* and control group was 0.408. It means there was statistical significant found in endurance between pre-test and post-test of experimental group among sports persons.



Agility

Table- 2 presents the results of experimental group and the control group with regard to the variable Agility. The descriptive statistics shows the Mean and SD values of Agility of pre test and post test of experimental

group was 11.14 ± 0.1273 and 11.04 ± 0.1291 respectively, whereas, the Mean and SD values of Agility of pre-test and post-test of control group was 11.16 ± 0.016 and 11.14 ± 0.099 . . The ‘t’ value in case of experimental group (4.09 $p < 0.05$) was found statistically significant.



Conclusion

The researcher analyzed the collected data as per the purpose of study. The statistical analysis of the study stated that the Resistance Training had significantly improved the Cardio respiratory Endurance and Agility of Volleyball players.

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