



Effect of Resistance Circuit Training and Intensive Interval Training on Speed of Veer Narmad South Gujarat University Kho-Kho Players

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Abstract :

The purpose of this research study was Effect of Resistance Circuit Training and Intensive Interval Training on Speed of Veer Narmad South Gujarat University Kho-Kho Players Male players of Kho-Kho selected at school level in Veer Narmad South Gujarat University District were selected in the present study. Total 90 male players were selected as subjects for the sample of the present study, in which 30 players were included in the Resistance Circuit training group, 30 in Intensive Interval training group and 30 players were included in the control group. The male players of 13 to 17 years age group were included in the present study. In this research study Speed was measured by 50 Yard Dash Run. Statistical technique such as analysis of covariance was applied to know the effects on Resistance Circuit training group and Intensive Interval training group. Mean difference was examined at 0.05 levels by using Least Significant Difference (Post Hoc) Test. The conclusion of which was seen as follows. Remarkable improvement was found in Speed of selected subjects by 12 weeks systematic Resistance Circuit training and Intensive Interval training programmes.

Introduction :

Sport training is a physical, technical, moral and intellectual participation of with the help of physical exercises. It is a planned process for the participation of athlete and players to achieve top-level performance.

Training is much like constructing a multi storey building. One needs for the building such as aerobic, anaerobic running, comprehensive conditioning, flexibility, etc. several kinds of materials like training intensities and modalities hold be utilized in an on going process to complete the goal of finished buildings or competitively fit athlete. As a training season develops, compressive conditioning work for strength of endurance will gradually form a transition into an emphasis on power with a substitution of intensity of volume in determining the total load.

Types of training and training methods need to be understood well in order to select and design the appropriate training program for an athlete. Training is what athletes do in order to improve their performance. However, training gains are also specific to the training. Training benefits are specific to the speed of movement, muscles used, and types of contractions, intensity and duration of the training. The basic rule of training is that the body makes specific improvements in response to the stress placed on it. If the stress is that the muscle ran out of glycogen stores then more glycogen is stored. If the stress is that the muscle could not lift the weight again, then hypertrophy occurs to enable the muscle to lift the weight again. This is always the case and so it is important that an athlete uses training types and methods that are most closely related to their sport (specificity).

Circuit Training is an everlasting and evolving training exercise program developed by R. E. Morgan and G. T. Anderson in 1953 at the University of Leeds, England. Circuit Training was developed to allow people to work at their own intensity while also training with others. In the original format, a circuit would comprise of 9 to 12 stations. A participant would move from one station to the next with little rest and performing an exercise for a set period of time or number of repetitions. During the circuit training session all the energy systems interweave to enable different intensity activities to be performed. This will result in the aerobic energy system being more predominant during some exercises and the anaerobic energy system will be more predominant in other exercises.

By circuit training we mean the training of exercise in a circle. It is special method of training in which exercise are undertaken either with equipment or without equipment. Circuit training is the most popular organized from of training method of physical exercises. The number of repetition, the intensity of the learner, the time interval etc. are pre-planned. The main aim of circuit training is to simultaneously increase tolerance, muscular strength and proficiency. The required exercises are given in a circle according to the requirement of full preparation. Such exercises are races, jumps, rolls, carrying load crossing the hurdle, pulling, pushing etc. In it the player has to complete this circle in a fixed time. These circles are to be completed I greater number by more exercise or their time and number are increased.

This training method is based on the fact that any activate sets in fatigue in the body, and rest is needed to ward off this fatigue. If a parson gets rest in between his work periods, his capacity of work increases. The circuit training bring about improvement is respiratory and blood circulation systems of our body. It improves co-ordination among various body systems. These types of co-ordination are known as cardiovascular adjustment.

Purpose of the Study :

The purpose of this research study was Effect of Resistance Circuit Training and Intensive Interval Training on Vital Capacity of Veer Narmad South Gujarat University Kho-Kho Players

Selection of Subjects :

Male players of Kho-Kho selected at school level in Veer Narmad South Gujarat University District were selected in the present study. Total 90 male players were selected as subjects for the sample of the present study, in which 30 players were included in the Resistance Circuit training group, 30 in Intensive Interval training group and 30 players were included in the control group. The male players of 13 to 17 years age group were included in the present study.

Criterion Measurement :

No.	Variable	Test	Measurement
1	Speed	50 Yard Desh	ml

Statistical Process

Statistical technique such as analysis of covariance was applied to know the effects on Resistance Circuit training group and Intensive Interval training group. Mean difference was examined at 0.05 levels by using Least Significant Difference (Post Hoc) Test.

Result of the Study :

Table – 1 Analysis of covariance of mean scores of speed of two experimental groups and a control group

Test	Groups			Analysis of variance				
	Resistance Circuit Training	Intensive Interval Training	Control	Sum of classes (SS)		df	MSS	'F'
Pretest mean	9.726	9.683	9.787	A	0.158	2	0.79	1.203
				W	35.455	87	0.408	
Post-test mean	9.249	9.596	9.907	A	6.579	2	3.289	8.369*
				W	39.258	87	0.451	
Adjusted mean	9.252	9.401	9.864	A	5.721	2	2.860	19.121*
				W	14.201	86	0.165	

*Significance criterion at 0.05 levels 'F' = 0.05 (2,87) = 3.101 & (2,86) = 3.103

In the above table – 1 the 'F' ratio of pre-test mean of Speed test performance was found to be 1.203. Which compared to the table value (3.101) was not found to be significant at 0.05 level. The 'F' ratio of the mean of the final test of the three groups was found to be 8.369. Comparing it with the table value (3.101) was found to be significant at 0.05 level. The 'F' ratio of corrected medians was found to be 19.121. Comparing it with the table value (3.103) was found to be significant at 0.05 level. Significance was examined with logarithmic differences between adjusted medians. Which is shown in Table – 2.

Table – 2 Critical difference of mean scores of Speed of two experimental groups and a control group

Mean			Mean difference	Critical difference
Resistance Circuit Training	Intensive Interval Training	Control Group		
9.252	9.401		0.149	0.209
9.252		9.864	0.612*	
	9.401	9.864	0.463*	

* Significance at 0.05 levels

Difference between adjusted mean scores of Speed of two experimental groups and a control group is seen clearly in table – 2. The difference is found out between Resistance Circuit Training group and Intensive Interval Training group, Resistance Circuit Training group and control group and Intensive Interval Training group and control group and it was compared with critical difference. It is observed in table – 2 that higher significant improvement (0.612) was found in Resistance Circuit Training group with compared to the control group. Then, higher significant improvement (0.463) was found in Intensive Interval Training group with compared to the control group. Significant effect of experimental treatment was found higher in Resistance Circuit Training group and Intensive Interval Training group with compared to control group, whereas significant effect of experimental treatment was not found between Resistance Circuit Training group and Intensive Interval Training group.

Conclusion :

Remarkable improvement was found in Speed of selected subjects by 12 weeks systematic Resistance Circuit training and Intensive Interval training programmes.

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