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Impact of circuit training on selected physiological variables of hand ball players

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Abstract

The purpose of this study was to explore the impact of circuit training on selected physiological variables of hand ball players. Total 20 state and national level hand ball players from various districts of Haryana state, were randomly selected as subjects. The subjects were divided into two groups' namely experimental group and control group. The experimental group was subjected to circuit training (for weekly three days Monday, Wednesday, Friday) at evening session for six weeks. Resting pulse rate, breath holding time, respiratory frequency were selected as dependent variable. After the collection of appropriate data, it was statistically analyzed by using paired 't' test. The level of significance was set at 0.05.

Keywords: Circuit training, physiological variables, hand ball players

Introduction

Circuit training endeavors to utilize monetarily time of activity to enhance quality, control and cardio respiratory framework. Work sessions should join resistance, speed and rest. To coordinate perseverance and strong program, circuit training consolidated various resistance works out, in a constant genuine, compelling to move in an arrangement of example with a particular separation in the middle. The number and sorts of activity, resistance and reiterations fluctuate as indicated by singular level and desires. Each activity is done at a direct rate to speedy pace before moving to the following. At particular focuses there are periods put aside for lighter proceeded with perseverance work out. A circuit ought to be finished 2 or 3 times relying upon its length.

Circuit training can be made more unpleasant by masterminding the activity in a shape known as stage training. In circuit when one arrangement of an activity is finished, the competitor proceeds onward to the following activity et cetera until the point when each of the activity has been finished once. The circuit is then rehashed until the point that every one of the sets have been finished. In arrange training the competitors one arrangement of an activity a short break, at that point rehashes a moment set, thus until the point that every one of the arrangements of that activity have been finished. The competitor at that point proceeds onward to next exercise. Another inactivity is to bunches two exercise together one exercise going about as the recuperation time frame for the other.

Circuit training can give incredible movement in various wellness and engine exercises and is gone for building up all the fundamental physical wellness segments performed in a fascinating and inventive design.

Methodology

The purpose of this study was to explore the impact of circuit training on selected physiological variables of hand ball players. Total 20 state and national level hand ball players from various districts of Haryana state, were randomly selected as subjects. The subjects were divided into two groups' namely experimental group and control group. The experimental group was subjected to circuit training (for weekly three days Monday, Wednesday, Friday) at evening session for six weeks. Resting pulse rate, breath holding time, respiratory frequency were selected as dependent variable. After the collection of appropriate data, it was statistically analyzed by using paired 't' test. The level of significance was set at 0.05.

Results

Table 1: Comparison of Mean, SD and 'T'-values of the Resting Pulse Rate, Breath Holding Time and Respiratory Frequency between Pre and Post Test of the Control and Experimental Groups of Hand Ball Players

Physiological variables	Groups	Test	Mean	S.D	't' values
Resting pulse rate	Control Group	Pre test	72.50	4.55	0.59
		Post test	72.88	3.89	
	Exp. Group	Pre test	72.07	4.33	9.45*
		Post test	66.87	3.16	
Breath holding time	Control Group	Pre test	25.19	6.12	1.17
		Post test	24.45	6.97	
	Exp. Group	Pre test	23.93	5.93	5.46*
		Post test	27.54	6.39	
Respiratory frequency	Control Group	Pre test	19.13	1.36	0.29
		Post test	19.07	1.33	
	Exp. Group	Pre test	18.60	.986	7.47*
		Post test	17.07	.884	

*Significant at 0.05 level of confidence

Table 1 reveals that the mean values of pre test and post test of control group for Resting pulse rate, Breath holding time and Respiratory frequency were 72.50 and 72.88, 25.19 and 24.45, 19.13 and 19.07 respectively; the obtained t ratio were 0.59, 1.17 and 0.29 respectively. The tabulated t value is 2.14 at 0.05 level of confidence for the degree of freedom 9. The calculated t ratio was lesser than the table value. It is found to be insignificant change in resting pulse rate, breath holding time and respiratory frequency of the hand ball players.

The obtained mean and standard deviation values of pre test and post test scores of circuit training group were 72.07 and 66.87, 23.93 and 27.54, 18.60 and 17.07 respectively, the obtained t ratio was 9.45, 5.46 and 7.47. The required table value is 2.14 at 0.05 level of confidence for the degree of freedom 9. The obtained t ratio was greater than the table value. It is found to be significant changes in resting pulse rate, breath holding time and respiratory frequency of the hand ball players.

It was found from the result of the study that selected circuit training in resting pulse rate, breath holding time and respiratory frequency brought significant changes in the hand ball players among the experimental group with control group.

Discussion

The effect of the analysis shows that there is no significant difference between pre-test control and experimental group. Be that as it may, the six weeks of circuit training brings about noteworthy changes in resting pulse rate, breath holding time and respiratory frequency for posttest experimental groups than the control group.

Conclusion

There was a significant difference on selected physiological variables such as resting pulse rate, breath holding time, respiratory frequency due to the effect of six weeks circuit training programme.

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