



### EFFECT OF 8 WEEK CIRCUIT TRAINING ON SELECTED PHYSIOLOGICAL VARIABLES OF UNIVERSITY KABADDI PLAYERS

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#### ABSTRACT

The purpose of study was to find out effect of 8 week circuit training on selected physiological variables of university kabaddi players. 30 subjects were randomly selected from Kashmir University Hazratbal Srinagar at all inter college level tournament. Their age were ranged from 18 to 28 years. They were divided into two equal groups'



namely experimental group and control group. The experimental group was given circuit training for 8 weeks. The results of study that there was a significant difference on selected physiological variables such as resting pulse rate, breath holding time, respiratory frequency due to the effect of circuit training programme.

**KEYWORDS :** Kabaddi, Circuit Training, Pulse Rate, Breath Holding, Respiratory Frequency .

#### INTRODUCTION:-

Circuit training is a fast-paced class in which you do one exercise for 30 seconds to 5 minutes and then move on to another exercise and is a form of body conditioning or resistance training using high - intensity aerobics. It targets strength building and muscular endurance. An exercise "circuit" is one completion of all prescribed exercises in the program. When one circuit is complete, one begins the first exercise again for the next circuit. Traditionally, the time between exercises in circuit training is short, often with rapid movement to the next exercise.

The program was developed by R.E. Morgan and G.T. Anderson in 1957 at the University of Leeds in England

Circuit training attempts to use economically time of exercise to improve strength, power and cardio respiratory system. Work sessions should combine resistance, speed and rest. To integrate endurance and muscular programme, circuit training incorporated a number of resistance exercises, in a continuous serious, forcing to move in a set of pattern with a specific distance in between. The number and types of exercise, resistance and repetitions vary according to individual level and expectations. Each exercise is done at a moderate rate to quick pace before moving to the next. At specific points there are periods set aside for lighter continued endurance exercise. A circuit should be completed 2 or 3 times depending on its length.

Circuit training can be made more stressful by arranging the exercise in a form known as stage training. In circuit when one set of an exercise is completed, the athlete moves on to the next exercise and so on until each of the exercise has been completed once. The circuit is then repeated until all the sets have been completed. In stage training the athletes one set of an exercise a short break, then repeats a second set, and so until all the sets of that exercise have been completed. The athlete then moves on to next exercise. Another passivity is to groups two exercise together one exercise acting as the recovery period for the other.

Circuit training can provide vigorous activity in a number of fitness and motor activities and is aimed at developing all the basic physical fitness components performed in an interesting and imaginative fashion.

## METHODOLOGY

The purpose of this study was 30 subjects were randomly selected from Kashmir University Hazratbal Srinagar at inter college level tournament. Their age were ranged from 18 to 28 years. They were divided into two equal groups' namely experimental group and control group. The experimental group was given circuit training. (Circuit training weekly three days Monday, Wednesday, Friday) at evening from 6.00 to 7.30 p.m for 8 weeks. The dependent variable as resting pulse rate, breath holding time, respiratory frequency, independent variable as circuit training. The data were collected and statistically analyzed by using (paired 't' test). The level of confidence was fixed at 0.05 level for significant difference.

## RESULTS

**TABLE-1**

**Calculation of Mean Standard Deviation Standard Error and 'T'-Ratio of the Resting Pulse Rate, Breath Holding Time and Respiratory Frequency Between Pre and Post Test of the Control and Experimental Groups of Kabaddi Players**

Physiological variables Groups	Groups	Periods & scores	Mean	S.D	S.E	D.M	't' ratio
Resting pulse rate	Control Group	Pre test	73.60	4.55	1.17	.27	0.695
		Post test	73.87	3.89	1.0		
	Exp. Group	Pre test	73.07	4.33	1.12	5.20	9.54*
		Post test	67.87	3.16	.82		
Breath holding time	Control Group	Pre test	26.19	6.12	1.58	.74	1.37
		Post test	25.45	6.97	1.80		
	Exp. Group	Pre test	24.93	5.93	1.53	3.61	5.44*
		Post test	28.54	6.395	1.65		
Respiratory frequency	Control Group	Pre test	20.13	1.36	.35	.07	0.323
		Post test	20.07	1.33	.34		
	Exp. Group	Pre test	19.60	.986	.25	1.53	7.99*
		Post test	18.07	.884	.23		

\*Significant at 0.05 level of confidence

Table 1 show that the obtained mean and standard deviation values of per test and post test scores of control group were 73.60+4.55 and 73.87+3.89, 26.19+6.12 and 25.45+6.97, 20.13+1.36 and 20.07+1.33 respectively, the obtained t ratio was 0.695,1.37 and 0.323. the required table value is 2.14 at0.05 level of confidence for the degree of freedom 1 and 14. The obtained t ratio was lesser than the table value. It is found to be insignificant in resting pulse rate, breath holding time and respiratory frequency of the Kabaddi players.

The obtained mean and standard deviation values of per test and post test scores of circuit training group were 73.07+4.33 and 67.87+3.16, 24.93+5.93 and 28.54+6.395, 19.60+0.986and 18.07+0.884

respectively, the obtained t ratio was 9.54, 5.44 and 7.99. The required table value is 2.14 at 0.05 level of confidence for the degree of freedom 1 and 14. 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 Kabaddi players.

It was inferred 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 Kabaddi players among the experimental group with control group.

## DISCUSSION

The result of the study indicates that there is no significant difference between pre test control and experimental group. But the eight weeks of circuit training results in significant changes in resting pulse rate, breath holding time and respiratory frequency for post test experimental groups than the control group.

## CONCLUSION

From the results of the study the following conclusion were drawn.

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

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