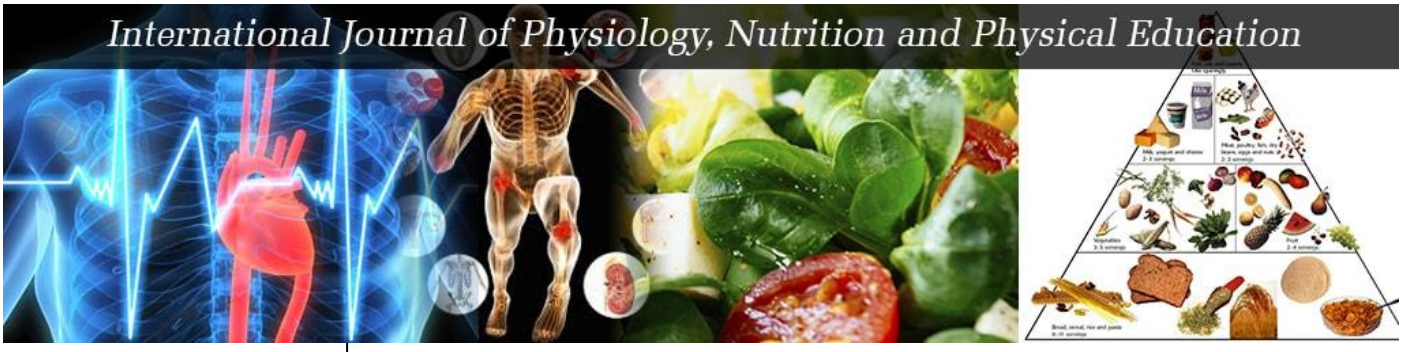

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Impact of circuit training on muscular strength and leg explosive power among basketball players of Mysore

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Abstract
The Circuit training may have significant improvement on physical fitness of human beings. So, the researcher aims to study the impact of Circuit Training on Muscular Strength and Leg Explosive Power among basketball players. For this purpose, 30 men players from different Colleges in Mysore in the age group of 18 to 23 years were selected at random. They were divided into two groups, group I was treated as, experimental group and group II was treated as control group. Experimental group was given six weeks Circuit Training and the control group was not given any treatment. Physical Fitness variables on Muscular Strength and leg explosive power it was assessed through Sit-ups, Standing broad jump test. The data were collected before and after the training period and collected data was computed by dependent's' T test in all cases level of significance was fixed at 0.05 level. The result concluded that there was significant improvement on Muscular Strength and leg explosive power level due to the influence of Circuit Training than the control group among basketball players.

Keywords: Circuit training, Muscular Strength and leg explosive power

Introduction
Physical Education is an education of and through human movement where many of educational objectives are achieved by means of big muscle activities involving sports, games, gymnastic, dance and exercise.

Circuit Training
Circuit training is a combination of strength training and endurance training. In a circuit-training workout you complete a group, or circuit, of exercises with little or no rest in-between. Usually, one circuit consists of 6 to 10 exercises. Each exercise is performed for a set number of repetitions or period of time before moving to the next exercise. For example, you might do squats for 15 seconds, rest 15 seconds, and then do bench presses for another 15 seconds followed by a series of additional exercises. Depending on your fitness level, you might complete one circuit or several circuits during each workout. You can exercise different muscle groups to get a total-body workout. You can build strength and aerobic endurance. You can burn calories and lose weight. It is good for people who have little time to exercise. Workouts can be completed in as little as 10 minutes. You can do circuit training at home or at a gym. You are less likely to become bored with your workout routine since you are doing a variety of exercises. You can make your workouts as hard or as easy as you like by modifying the amount of resistance and the length of the rest interval.

The benefits of circuit training
The demands of circuit training tend to prepare the body in the very even, all-round manner. Circuit training is an exceptional forum of exercise which aid in the prevention of injury. Circuit training is the best way to condition all body. Large number of players can be trained at same time. Circuit training can be totally personalized. Whether a person is a beginner, or an elite athlete, training can be modified as per his/her fitness level. Circuit training is time efficient. No wasted time between sets. It gives maximum results in minimum time. Circuit training doesn't require expensive equipment.

Methodology

To find out the Effect of Circuit Training on Muscular Strength and Leg Explosive Power among basketball players, 30 men players from different Colleges in Mysore in the age group of 18 to 23 year were selected at random. They were divided into two groups, group I was treated as, experimental group and group II was treated as control group. Experimental group was given six weeks Circuit Training and the control group was not given any treatment. The following physical fitness was administered during the training period push-up, high knee action, off squard, skipping, back kick, lanches. Physical Fitness was selected as variable and it was assessed through Sit-ups, Standing broad jump test. The data were collected before and after the training period and collected data was computed by dependent 't' test in all cases level of significance was fixed at 0.05 level.

Results

Table 1: Dependent 't'- ratio for basketball players on muscular strength (scores in numbers)

S. No	Group	Mean		Standard Deviation		SD Error	Obtained t value	Table t value
		Pre	Post	Pre	Post			
1	Control Group	13.46	14.86	2.99	2.66	0.58	2.39	2.15
2	Experimental group	13.53	16.33	3.88	4.18	0.31	8.98*	

Degree of freedom= (N – 1) = 14. *Significance at .05 level of confidence.

Table I shows that the mean value of pre and post-test means were 13.46 and 14.86 of control group. The obtain t-ratio 2.39 was not significant this was lesser than the table t-value of 2.15. Table I shows that the mean value of pre and post-test mean were 13.53 and 16.33 of experimental group. The obtain 8.98 was significant this was higher than the t-value of 2.15. The result indicated that the Circuit training had significant improvement on muscular strength.

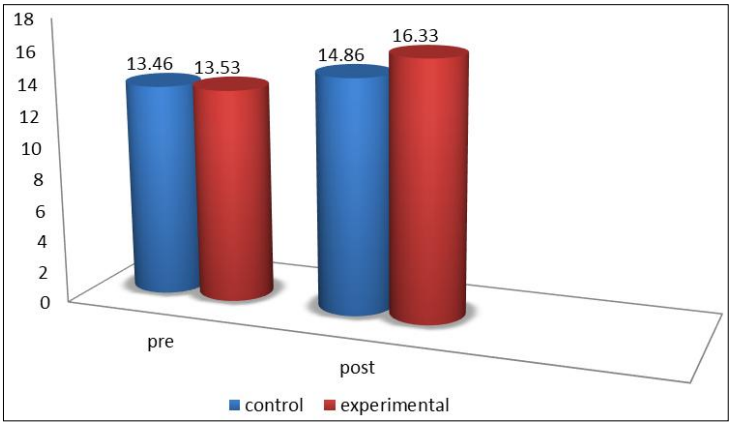

Fig 1: Bar diagram shows the pre and post mean values of control and experimental group on muscular strength among basketball players.

Table 2: Dependent 't'- ratio for basketball players on leg explosive power

S. No	Group	Mean		Standard Deviation		SD Error	Obtained t value	Table t value
		Pre	Post	Pre	Post			
1	Control Group	2.27	2.27	0.23	0.23	0.02	0.62	2.15
2	Experimental group	2.25	2.32	0.16	0.15	0.06	10.73*	

Degree of freedom= (N – 1) = 14. *Significance at .05 level of confidence.

Table lI shows that the mean value of pre and post-test means were 2.27and 2.27of control group. The obtain t-ratio 0.62 was not significant this was lesser than the table t-value of 2.15. Table lI shows that the mean value of pre and post-test mean were 2.25 and 2.32 of experimental group. The obtain 10.73* was significant this was higher than the t-value of 2.15.

The result indicated that the circuit training had significant improvement on leg explosive power.

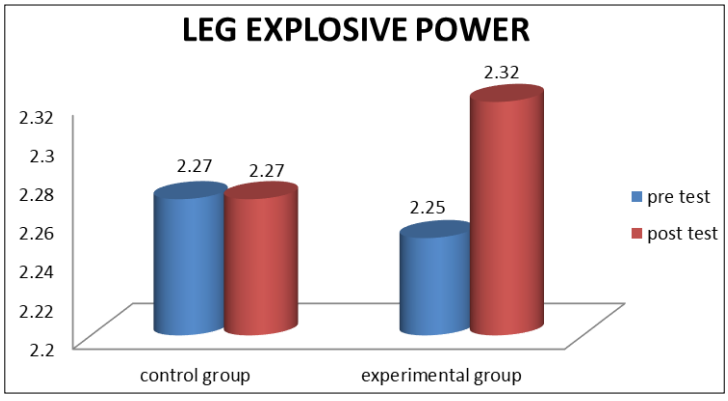

Fig 2: Bar diagram shows the pre and post mean values of control and experimental group on leg explosive power among basketball players

Conclusions

It was concluded that there was significant improvement in selected physical fitness components Muscular Strength and Power due to circuit training among basketball players.

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