



Effect of Complex Training on Strength Endurance and Agility among Basketballers

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ABSTRACT

The purpose of the study was to find out the effect of complex training on selected physical fitness variables among basketballers. To achieve this purpose, thirty men basketballers were selected as subjects, their aged between 18 to 25 years, they are studying in the GTN Arts and Science College, Dindigul, Tamil Nadu. The selected subjects were divided into two equal groups of fifteen subjects each, namely Complex training group and control group. The complex training group trained for three sets per exercise per session at 60 to 80% with a progressive increase in load with the number of weeks. Strength endurance and agility were selected as criterion variables and they were tested by using sit-ups and shuttle run respectively. ANCOVA was used to find out the significant difference if any between the groups. The results of the study showed that there was a significant difference on strength endurance and agility between complex training group and control group.

Keywords: Complex Training, Physical Fitness, Strength Endurance, Agility, Basketballers

1 Introduction

Physical fitness is one of the parts of the absolute wellness of the person, which additionally incorporates common, social and enthusiastic wellness. It is one of the fundamental prerequisites of life comprehensively talking it implies the capacity to do every day assignments without under weakness. Strength perseverance is needed in all games development, regardless of whether quick or moderate, developments must be done under lesser or higher states of weakness. Readiness is a blend of a few athletic attributes like strength, response time and speed of development, force and co-appointment. Its presentation becomes fundamental in such developments as avoiding, crisscross running, halting and beginning and evolving body positions rapidly. Complex is a technique for creating touchy force, a significant segment of the athletic presentation as Complex developments are acted in a wide range of sports. In football, it tends to be played all the more capably when players have the force that consolidates with strength and speed to foster hazardous force for partaking in different games exercises. The Complex activities further develop essentially in creating actual wellness factors of basketballers.

2 Methodology

The purpose of the study was to find out the effect of Complex training on strength endurance and agility among college basketballers. To achieve this, thirty male basketball players are studying in the GTN Arts and Science College, Dindigul, Tamil Nadu in the age group of 18 to 25 years were selected as subjects at random. The selected subjects were divided into two equal groups of fifteen subjects each namely Complex training group and control group. The selected criterion variables such as strength endurance and agility were assessed using standard tests and procedures, before (pre test) and after (post test) training regimen for both experimental and control groups by using sit-ups and shuttle run respectively. The selected subjects had undergone the Complex training for eight weeks, with three days per week in alternate days. After 10 to 15 minutes of warm-up the subjects underwent their respective Complex training programme and the subjects performed Complex exercises. The control group did not participate in any specialized training during the period of study.

3 Experimental Design and Statistical Procedure

The experimental design used for the present investigation was random group design involving 30 subjects for training effect. Analysis of Covariance (ANCOVA) was used as a statistical technique to determine the significant difference, if any, existing between pre test and post test data on selected dependent variables separately and presented in Table-I.

Table-I F-ratio for pre-test and post-test among the complex training group and control group on strength endurance and agility.

Variables	Test	Complex Training Group	Control Group	Source of Variance	SS	df	Mean Square	„F“ Ratio
Strength endurance	Pre test	47	47.07	Between Within	0.53 132.92	1 28	0.53 4.75	0.11
	Post test	52.92	47.52	Between Within	218.70 126.67	1 28	218.70 4.53	48.34*
	Adjusted post test	52.94	47.52	Between Within	233.78 56.08	1 27	233.78 2.07	112.55*
Agility	Pre test	10.93	10.99	Between Within	0.03 1.25	1 28	0.03 0.04	0.74
	Post test	10.73	10.96	Between Within	0.38 0.49	1 28	0.38 0.01	22.04*
	Adjusted post test	10.73	10.96	Between Within	0.33 0.44	1 27	0.33 0.01	20.30*

Significance value 0.05 level

Strength Endurance

The post test mean of complex training group and control group on strength endurance (52.92 ± 2.16 Vs 47.52 ± 2.10) resulted in a 'F' ratio of 48.34. The adjusted post test mean of complex training group and control group on strength endurance (52.94 Vs 47.52) resulted in 'F'ratio of 112.55. The results of the study indicate that there was a significant difference between complex training group and control group on strength endurance.

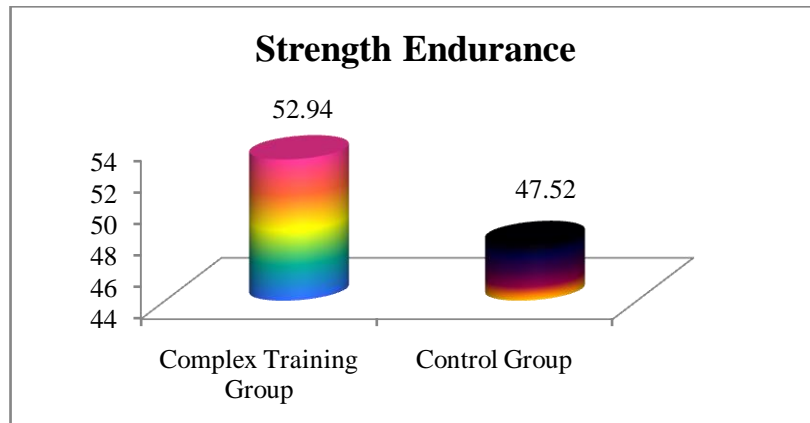


Fig 1: Adjusted mean values of strength endurance of complex training group and control group

Agility

The post test mean of complex training group and control group on agility (10.73 ± 0.123 Vs 10.96 ± 0.14) resulted in a 'F' ratio of 22.04. The adjusted post test mean of complex training group and control group on agility (10.73 Vs 10.96) resulted in a 'F'ratio of 20.30. The results of the study indicate that there was a significant difference between complex training group and control group on agility.

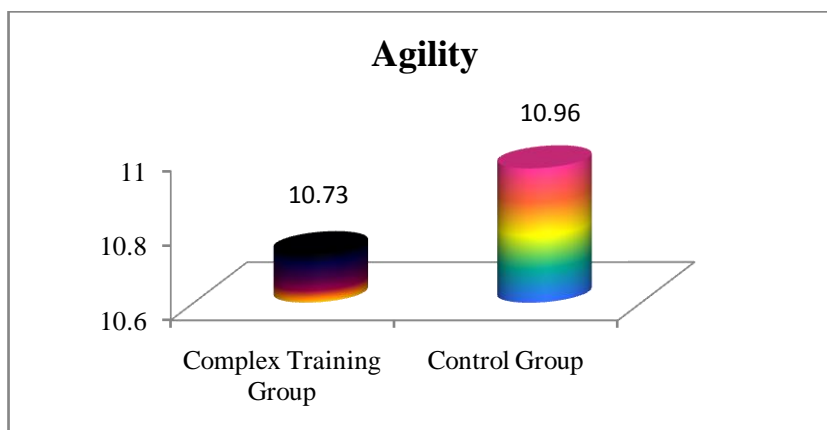


Fig 2: Adjusted mean values of agility of complex training group and control group

4 Conclusion

Strength endurance is required in all sports movement, whether fast or slow, movements have to be done under lesser or higher conditions of fatigue. Agility is a combination of several athletic traits such as strength, reaction time, speed of movement, power and co-ordination. It's display becomes essential in such movements as dodging, zigzag running, stopping and starting and changing body positions quickly. The purpose of the study was to find out the effect of complex training on strength endurance and agility among basketballers. To achieve this purpose, thirty male basketball players were selected as subjects, their aged between 18 to 25 years, they are studying in the GTN Arts and Science College, Dindigul, Tamil Nadu. The selected subjects were divided into two equal groups of fifteen subjects each, namely Complex training group and control group. The complex training group trained for three sets per exercise per session at 60 to 80% with a progressive increase in load with the number of weeks. Strength endurance and agility were selected as criterion variables and they were tested by using sit-ups and shuttle run respectively. ANCOVA was used to find out the significant difference if any between the groups. The results of the study showed that there was a significant difference on strength endurance and agility between complex training group and control group. Based on the results of the study, it was concluded that the complex training program has resulted in significant increase in strength endurance and agility.

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