

Effect of Circuit Training On Selected Performance Variables of Male Football Players

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ABSTRACT

The aim of this study was find out the circuit training effects on some performance variables of football players. To achieve the purpose of this study the researcher was selected 40 male players' bases on pre-test from Bithoriya United Football Club, Haldwani, Uttarakhand. Their age ranged between 10-12 years. After the selection of subjects, the researcher was divided them equally into two groups. First group was experimental group (EG; =20) and second one is control group (CG; =20). Experimental group was given six weeks' circuit training but not given any specific training of control group. Researcher was used paired t-test for statistical analysis and data was collected bases on pre-test and posttest. The result of this study was circuit training is effective for agility but no improvement on speed of football players by six weeks' circuit training program.

Key Words: Speed, Agility, Circuit training, Male Football Players. Paired t-test.

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I. INTRODUCTION:

Circuit training method is a specific arrangement of exercises or activities. It is developed in 1957 by Adamson and Morgan.

Morgan and Anderson (1953) said strategy of physical conditioning in which one moves from one work out to another, usually in an arrangement of different equipment or stations in-circuit Training each of a few stations features an assigned assignment. The sportsperson mover from station to stations, generally in an endorsed arrangement, and complete the make fitness tasks at each stations. **The International Football Association Board (2018)** football is the popular sports on earth. It is played in every country. The Laws of the game are the same for all football throughout the world from the FIFA World Cup final through to a game between young children in a remote village.

II. HYPOTHESIS:

- 2.1- There will be no significance difference of circuit training on speed of male football players.
- 2.2- There will be no significance difference of circuit training on agility of male football players.

III. OBJECTIVE OF THIS STUDY:

The following objectives of this study are-

- 3.1 Circuit training is effective of Speed or not.
- 3.2 Circuit training is effective of Agility or not.

IV. DELIMITATIONS:

Selected all subject were male.

- 4.1 Subject's age ranged between 10 to 12 years.
- 4.2 Total forty male football players were selected as a subject in this study.
- 4.3 Total subject were divided equally into two groups, Experimental group (EX=20) and Control group (CG=20).
- 4.4 Experimental group was given circuit training for six weeks but not given any specific training of Control group.

V. LIMITATIONS:

The subject's diet plan, Atmospheric conditions, etc was not controlled in researcher hands. The previous training and skill abilities were not being considered they are limitations in this research.

VI. METHODOLOGY:

In this study the researcher was selected total forty men (n=40) football players from Bethoriya United Football Club Haldwani in Uttrakhand. All the subjects selected bases on pre-test and after selection of subject’s researcher was divided them equally into two groups. First group was Experimental group (EG=20) and second group control group (CG=20). Experimental group was given six weeks’ circuit training and 6days per weeks. The control group was not given any specific training in these twelve weeks.

INDEPENDENT VARIABLE:DEPENDENT VARIABLES:

*Circuit training	*Speed	*Agility
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7. SELECTION OF TEST:

The researcher was used dependent t-test for statistically analysis.

8. TEST:

8.1 SPEED: 50 Meters Sprint

Purpose: The purpose of 60M sprint was measure speed of subjects.

Equipment’s: Flat ground surface, stop watch, note book, pen, measuring tape.

Procedure: Two parallel lines (Start line and stop line) will be marked at a distance of sixty meters on the flat ground surface. Participant will stand on starting line and start running with maximum speed when the coach whistles. During this running of participant, the researcher will note the time in the stop watch.

Score: The best of three timing is considered. The measurement unit is seconds.

8.2 AGILITY: Shuttle Run (4×10)

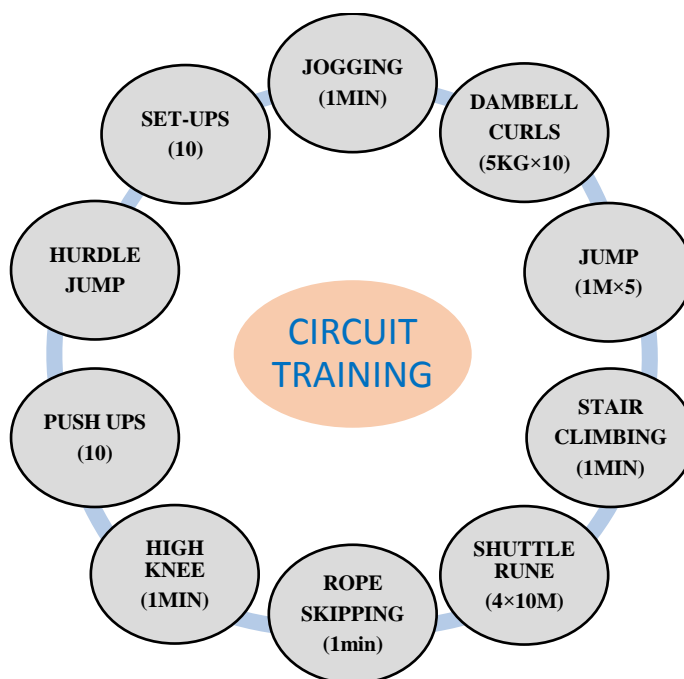
Purpose: The purpose of shuttle run was measure agility.

Equipment’s: Cones, Flat ground surface, stop watch, note book, pen, measuring tape.

Procedure: Two parallel lines (Start line and stop line) will be marked at a distance of ten meters. When coach whistles the participant will run fast from start line to end line and back to the start line, the participant will complete four repetitions.

Score: The score is the time to the nearest one-tenth second. The measurement unit is seconds.

9. TRAINING SASSION:



10. STATISTICAL ANALYSIS:

The collection of data is statistically analyzed below.

10.1 SPEED:

TABLE I
Descriptive Statistics in relation to Speed of football players

		Mean	N	Std. Deviation	Std. Error Mean
Experimental Group	Pre- Speed	7.1730	20	1.23356	.27583
	Post- Speed	7.1285	20	.93362	.20876
Control Group	Pre- Speed	7.1563	20	1.27684	.28551
	Post- Speed	7.2197	20	1.21675	.27207

Table I showed that pre-test and post-test of experimental group Mean, and Std.Deviation are 7.1730 ± 7.1285 and 1.23356± 0.93362 and Std. Error Mean are 0.27583 ± 0.20876 respectively. Likewise Table I showed that pre-test and post-test of control group Mean, and Std.Deviation are 7.1563± 7.2197 and 1.27684± 1.21675 and Std. Error Mean are 0.28551± 0.27207 respectively

TABLE II
Analysis of paired t-test of the Means of Experimental group and Control group in Relation to Speed of Football players.

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	S.D	S.E.M	95% Confidence Interval of the Difference				
					Lower	Upper			
Experimental Group	Pre- Speed Post- Speed	.04450	1.11308	.24889	-.47644	.56544	.179	19	.860
Control Group	Pre- Speed Post- Speed	-.06350	1.83263	.40979	-.92120	.79420	-.155	19	.878

*Significant at 0.05 level of significance, $t_{(19)(0.05)}=2.093$

Table II showed that experimental group received t-value is 0.179 and this value less than tabulated value 2.093. Likewise, the control group received t-value is 0.155 and this value highly less than tabulated value 2.093. In table II is clearly showed that no effect of circuit training on speed of experimental group.

10.2 AGILITY:

TABLE III
Descriptive Statistics in relation to Agility of football players

		Mean	N	Std. Deviation	Std. Error Mean
Experimental Group	Pre-Agility	14.8580	20	.99066	.22152
	Post- Agility	12.8455	20	1.32264	.29575
Control Group	Pre- Agility	14.7320	20	1.16105	.25962
	Post- Agility	14.3430	20	1.13168	.25305

Table III showed that pre-test and post-test of experimental group Mean, and Std.Deviation are 14.8580± 12.8455 and 0.99066± 1.32264 and Std. Error Mean are 0.22152± 0.29575 respectively. Likewise, Table III showed that pre-test and post-test of control group Mean, and Std.Deviation are 14.7320± 14.3430 and 1.16105± 1.13168 and Std. Error Mean are 0.25962± 0.25305 respectively

TABLE IV
Analysis of paired t-test of the Means of Experimental group and Control group in Relation to Speed of Football players.

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	S.D.	S.E.M.	95% Confidence Interval of the Difference				
					Lower				Upper
Experimental Group	pre-Agility Post-agility	2.01250	1.99413	.44590	1.07922	2.94578	4.513	19	.000

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Control Pre- Agility Group Post- Agility	.38900	1.69287	.37854	-.40329	1.18129	1.028	19	.317
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***Significant at 0.05 level of significance, $t_{(19)(0.05)}=2.093$**

Table IV showed that experimental group received t-value is 4.513 and this value higher than tabulated value 2.093. Likewise, the control group received t-value is 1.028 and this value less than tabulated value 2.093.

In table IV is clearly showed that speed of experimental group was improved by circuit training.

11. REASULTS:

The finding of this study is that, no improvement on speed by six weeks' circuit training but six weeks' circuit training was improved agility of football players.

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