



EFFECT OF BALANCE TRAINING ON SELECTED BALANCE ACCURACY VARIABLES OF COLLEGIATE FOOTBALL PLAYERS

A.Murali¹ & Dr.M.Rajashekar²

¹Director of Physical Education, VRS Engineering College, Villupuram, Tamilnadu, India.

²Professor, Dept. of Physical Education Annamalai University, Tamilnadu, India.

Abstract:

The purpose of the study is to assess the effect of balance training on selected balance accuracy variables of collegiate football players after 3 weeks training program. Players were selected as subjects from Anna University, Zone V. The subject were divided randomly into two groups namely one control and one experimental groups consisting of fifteen subjects in each group. Experimental group were given 3 weeks balance training and control group were not allowed to participate in the training program. The training program was given for three days in a week at evening session and alternate days will play football. Pretest and post test was conducted and the data was computed statistically by using (Independent Sample t test) to find out the significant changes. The result revealed that the experimental group has significant effect on balance training after 3 weeks when compared to the control group.

Keywords. Balance training, balance accuracy.

INTRODUCTION

Football players require a variety of motor skills including the maintenance of balance while running, kicking, marking, tackling and changing direction. Balance, the ability to maintain a stable position over a base of support is an important component of a human's single leg stance ability (Matsuda et al. 2008; Paternoet al. 2004). Typically balance forms the basis for motor skills, from simple to more challenging, in sport (Anderson and Behm, 2005; Davlin, 2004). Balance in football, dynamic in nature, requires single limb control in order to complete functional tasks during football such as kicking, jumping, landing, tackling, and running. Dynamic balance requires a combination of both ankle and knee proprioception and core stability in order to maintain an upright posture. Balance incorporates the visual, vestibular and somatosensory input from afferent and efferent control strategies (Matsuda et al. 2008; Simoneau et al. 1995).

METHODOLOGY

The study was conducted on 30 Anna University, Zone 5 football players (15 in experimental and 15 in control group) and their ages between 17 -25 years. Group I underwent balance exercise and Group 2 did not involve in the training program. Standing Stork and Flamingo balance were tested.

STATISTICAL ANALYSIS

The data was analyzed by applying Independent Sample t test to find out the significant difference at 0.05 level of significance.

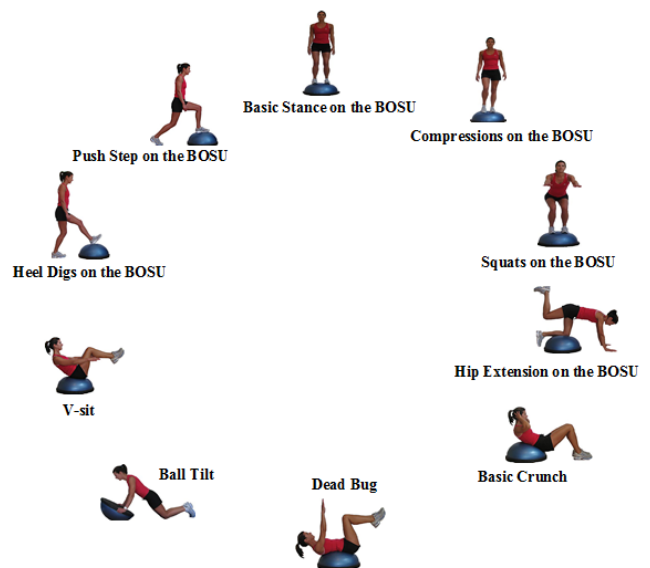


Figure I
Balance Training for Football Players

Table I
Three week balance training schedule for Football Players

Day	Training	Duration	Set	Rest between sets
Monday	Balance Training	1 Minutes	3	45-60 minutes
Tuesday	Playing Football	1 hour	-	-
Wednesday	Balance Training	1 Minutes	3	45-60 minutes
Thursday	Playing Football	1 hour	-	-
Friday	Balance Training	1 Minutes	3	45-60 minutes
Saturday	Playing Football	1 hour	-	-
Sunday	Rest			

* Alternate days playing football

Table II
Selection of Variables and Tests

S.No.	VARIABLES	TEST / TOOLS	UNIT OF MEASUREMENT
1	Balance	Standing Stork Test	Seconds
		Flamingo Balance Test	Seconds

Table III
Computation of Mean, Standard Deviation, Standard Error and t value on Standing Stork test

Test	Group	N	Mean	Std. Deviation	Std. Error Mean	t-value
Pre_test	Experimental	15	19.73	2.81	0.73	1.503
	Control	15	18.27	2.52	0.65	
Post_test	Experimental	15	22.27	2.52	0.65	4.807*
	Control	15	17.67	2.72	0.70	

Required table value for significance at 0.05 level of confidence for df of 2 and 28 is 2.048

* Significant at 0.05 level.

Table III states that the post- test mean were 22.27 for experimental group, 17.67 for control group and pre-test mean were 19.73 for experimental group, 18.27 for control group. The obtained t ratio 4.807 for

post-test was higher than the table tvalue 2.048. Hence, the post-test was significant at 0.05 level of confidence for the degree of freedom 2 and 28.

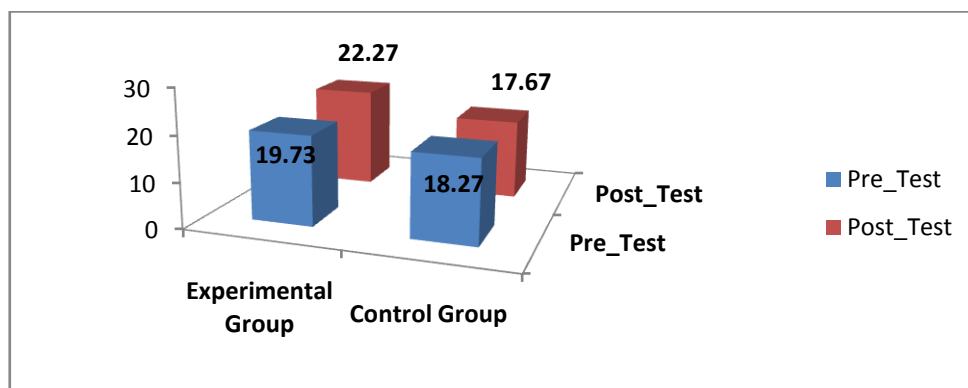


Figure-II
Graphical representation of mean scores of football players on the Standing Stork test

Table IV
Computation of Mean, Standard Deviation, Standard Error and t value on Flamingo Balance Test

Test	Group	N	Mean	Std. Deviation	Std. Error Mean	t-value
Pre_test	Experimental	15	9.13	1.85	0.48	1.349
	Control	15	8.27	1.67	0.43	
Post_test	Experimental	15	10.93	1.44	0.37	5.715*
	Control	15	7.93	1.44	0.37	

Required table value for significance at 0.05 level of confidence for df of 2 and 28 is 2.048

* Significant at 0.05 level.

Table IV also reveals that the post- test mean were 10.93 for experimental group, 7.93 for control group and pre-test mean were 9.13 for experimental group, 8.27 for control group. The obtained t ratio 5.715

for post-test was higher than the table tvalue 2.048. Hence, the post-test was significant at 0.05 level of confidence for the degree of freedom 2 and 28.

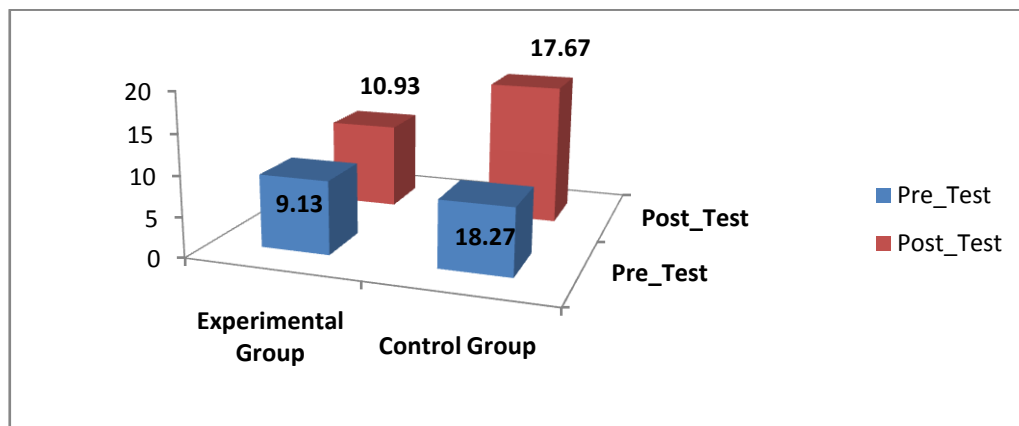


Figure-III
Graphical representation of mean scores of football players on the Flamingo Balance Test

DISCUSSION

Studies of dynamic balance have typically assessed balance through the intervention of balance training over 4-10 weeks (Guillouet al. 2007; Hertelet al. 2006; Jonsson et al. 2004; Tropp and Askling, 1988; Troppet al. 1984; Verhagen et al. 2005).

CONCLUSIONS

It is concluded that there is significant improvement on balance accuracy for the experimental group when compared to the control group. From the finding of the study it is concluded that 3 weeks of balance exercise training has induced significant changes in the selected balance accuracy variables namely standing stork test and flamingo balance test.

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