



INFLUENCES ON REACTION TIME AND AGILITY RESPONSE TO SHADOW TRAINING AMONG FOOTBALL PLAYERS

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ABSTRACT

This study aimed to find out the influences on reaction time and agility response to shadow training among football players. To achieve the purpose of the study thirty college level football players were selected from University College of Engineering, Ramanathapuram. Their age ranged between 18-23 years. They were divided into two equal groups consists of fifteen each. No attempt was made to equate the groups. Group I acted as Experimental Group underwent Shadow training (ST) for the period of 8 weeks and Group II acted as control group (CG), the subjects in control group was not engage in any training programme other than their regular activity The agility was assessed by 4x10mts shuttle run test and Reaction Time was assessed by Penney Cup Test. The data collected from the subjects was statistically analyzed with 't' ratio to find out significant improvement if any at 0.05 level of confidence. The result of the agility and reaction time improved significantly due to effect shadow training with the limitations of (diet, climate, life style) status and previous training the results of the current study coincide findings of the investigation done by completely different specialists within the field of sports sciences. Shadow training significantly improved agility and reaction time of college level football players.

KEYWORDS: *Football, Agility and Reaction Time.*

INTRODUCTION

Football is the most pervasive games on the planet. Football is portrayed as vivacious, high force, discontinuous, ball and physical games. The attributes of Football alongside the require practical exercises clearly puts extraordinary requests on the specialized and physical abilities of the individual players. The contemporary history of football traverses over 100 years. Everything started in 1863 in England, when rugby on their distinctive courses and the world's first football affiliation was established in England. The two types of football originated from a typical root and both have a long and complicatedly spread familial tree. Their initial history uncovers in any event about six unique amusements, fluctuating to various degrees and to which the chronicled improvement of football is connected and has really been followed back. Regardless of whether this can be legitimized in a few occasions is questionable. By and by, the reality remains that playing a ball with the feet has been continuing for a huge number of years and there is

positively no motivation to trust that it is a variation of the more "normal" type of playing a ball with the hands. In actuality, aside from the total need to utilize the legs and feet in with no laws for security, uncertainty perceived comfortable start that the specialty of controlling the ball with the feet is to a great degree troublesome and, thusly it is the most punctual type of the diversion for which there is logical proof was an activity of definitely this skilful method going back to the second and third hundreds of years B.C in China. A military manual dating from the time of the Han Dynasty incorporates among the physical training works out, the "Tsu' Chu". This comprised opening, measuring just 30- 40 cm in width, into a little net settled onto long bamboo sticks – an accomplishment which clearly requested awesome aptitude and brilliant procedure. A variety of this activity additionally existed, whereby the player is not allowed to go for his objective unrestricted, but rather needed to utilize his feet, chest, and back and bears while endeavouring to withstand the assaults of his adversaries. Utilization



of the hands is not allowed. The ball aestheticness of the present best players is in a way not exactly as new as a few people may expect.

METHODS

Experimental Approach to the Problem

To address the hypothesis presented herein, we selected thirty college level football players. Their age ranged between 18 and 23 years. The selected subjects were divided into two equal groups consisting of 15 each. No attempt was made to equate the groups. Experimental group I (n = 15) underwent shadow training for 6 weeks and group II (n = 15) acted as a control group (CG), the subjects in the control group were not engaged in any training programme other than their regular work.

Design

The evaluated parameters were agility (4x10m shuttle run) and reaction time (Penney Cup Test). The parameters were measured at baseline after 6 weeks of ST and the effects of the training were examined.

Training Protocol

In each training session the training was imparted for a period 45 minutes. The Shadow practices, which included warming up and relaxation procedure after training programme for three days per week for a period of 8 weeks.

Statistical Analysis

The collected data were analyzed with application of 't' test to find out the individual effect from base line to post-test if any. 0.05 level of confidence was fixed to test the level of significance.

RESULTS

Table-I

Relationship of Mean, SD and 't'-Values of the Reaction Time between Pre & Post Test of the Shadow Training and Control Groups of Football Players

Reaction Time	Groups	Test	Mean	S.D	't' Values
	Control Group	Pre Test	5.79	1.17	1.52
		Post Test	5.77	1.20	
	Shadow Training Group	Pre Test	5.03	0.75	8.30*
Post Test		4.71	0.75		

*Significant at 0.05 level of confidence

Table-I reveals that the mean values of pre test and post test of control group for reaction time were 5.79 and 5.77 respectively; the obtained t ratio was 1.52 respectively. The tabulated t value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The calculated t ratio was lesser than the table value. It is found to be insignificant change in reaction time of the football players. The obtained mean and standard deviation values of pre test and

post test scores of shadow training group were 5.03 and 4.71 respectively; the obtained t ratio was 8.30. The required table value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The obtained t ratio was greater than the table value. It is found to be significant changes in reaction time of the football players. The mean values on shadow training group and control group are graphically represented in figure-1.

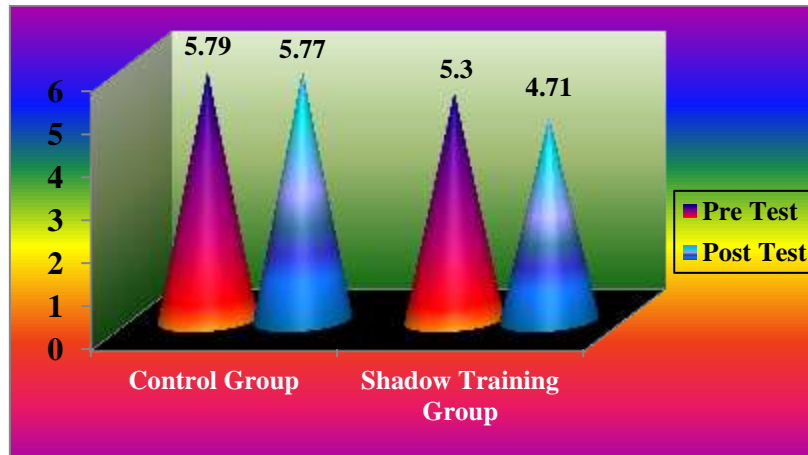


Figure-1: Bar Diagram Showing the Pre Test & Post Test On Reaction Time of Control and Shadow Training Groups

Table-II
Relationship of Mean, SD and 't'-Values of the Agility between Pre & Post Test of the Shadow Training and Control Groups of Football Players

Agility	Groups	Test	Mean	S.D	't' Values
	Control Group	Pre Test	12.08	1.14	0.11
		Post Test	12.07	1.08	
	Shadow Training Group	Pre Test	9.76	0.71	8.33*
Post Test		9.36	0.67		

*Significant at 0.05 level of confidence

Table-II reveals that the mean values of pre test and post test of control group for agility were 12.08 and 12.07 respectively; the obtained t ratio was 0.11 respectively. The tabulated t value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The calculated t ratio was lesser than the table value. It is found to be insignificant change in agility of the football players. The obtained mean and standard deviation values of pre test and post test

scores of shadow training group were 9.76 and 9.36 respectively; the obtained t ratio was 8.33. The required table value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The obtained t ratio was greater than the table value. It is found to be significant changes in agility of the football players. The mean values on shadow training group and control group are graphically represented in figure-2.

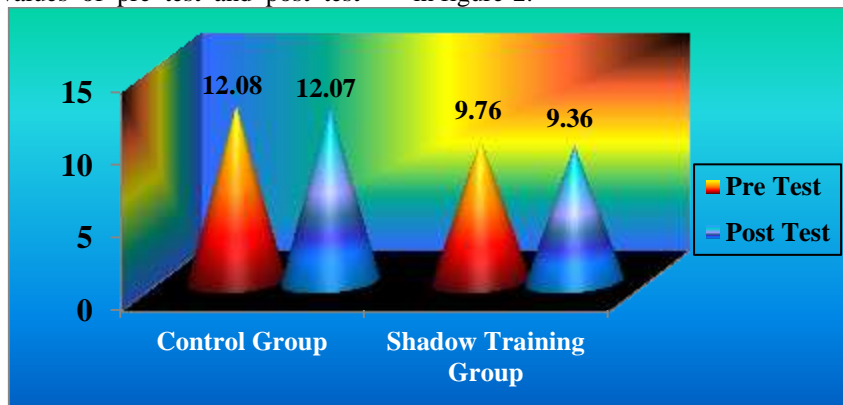


Figure-2: Bar Diagram Showing the Pre Test & Post Test On Agility of Control and Shadow Training Groups



DISCUSSION ON FINDING

The shadow training is a incredible training which has been found to be beneficial of the football players. To study the shadow training on reaction time and agility of college level football players, it was tested under to difference between shadow training group and control group. The shadow training includes on reaction time and agility. The shadow training is namely front run, backward run, side to side, cross run. It also improves the reaction time, agility and other than some physical fitness components are namely speed, speed endurance. The obtained result proved positively the shadow training group significantly improved. The result of the present study showed that the shadow training has significant improvement on reaction time and agility of football players. The results of the study are in line with the studies of **J Nirendan et al., (2019)**, **S Senthil Kumaran (2018)** & **Mehmet Fatih Yuksel, latif Aydos, (2017)** the result of the study showed that the control group was not significantly improved on reaction time and agility of college level football players.

CONCLUSIONS

Based on the findings and within the limitation of the study it is noticed that practice of shadow training helped to improve reaction time and agility of football players at college level. It was also seen that there is progressive improvement in the selected criterion variables of shadow training group of football players after eight weeks of shadow training programme. Further, it also helps to improve reaction time and agility.

1. It was concluded that individualized impacts of shadow training group showed a statistically significant positive sign over the course of the treatment period on reaction time and agility of football players at college level.
2. It was concluded that individualized impacts of control group showed a statistically insignificant positive sign over the course of the period on reaction time and agility of football players at college level.
3. The results of comparative effects lead to conclude that shadow training group had better significant improvement on reaction time and agility of football players at college level as compared to their performance with control group.

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