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

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ABSTRACT

This study aimed to find out the influences on reaction time and agility response to shadow training among cricket players. To achieve the purpose of the study thirty college level cricket players were selected from The National Sports Academy at Coimbatore. Their age ranged between 18-25 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 cricket players.

Keywords: Agility, Reaction Time and cricket players.

1. INTRODUCTION

Cricket is a bat-and-ball game played between two teams of eleven players on a field at the centre of which is a 22-yard (20-metre) pitch with a wicket at each end, each comprising two bails balanced on three stumps. The batting side scores runs by striking the ball bowled at the wicket with the bat (and running between the wickets), while the bowling and fielding side tries to prevent this (by preventing the ball from leaving the field, and getting the ball to either wicket) and dismiss each batter (so they are "out"). Means of dismissal include being bowled, when the ball hits the stumps and dislodges the bails, and by the fielding side either catching the ball after it is hit by the bat and before it hits the ground, or hitting a wicket with the ball before a batter can cross the crease in front of the wicket. When ten batters have been dismissed, the innings ends and the teams swap roles. The game is adjudicated by two umpires, aided by a third umpire and match referee in international matches. Forms of cricket range from Twenty20, with each team batting for a single innings of 20 overs, to Test matches played over five days. Traditionally cricketers play in all-white kit, but in limited overs cricket they wear club or team colours. In addition to the basic kit, some players wear protective gear to prevent injury caused by the ball, which is a hard, solid spheroid made of compressed leather with a slightly raised sewn seam enclosing a cork core layered with tightly wound string.

2. METHODS

2.1 Experimental Approach to the Problem

To address the hypothesis presented herein, we selected thirty college level cricket players. Their age ranged between 18 and 25 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 8 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.

2.2 Design

The evaluated parameters were agility (4x10m shuttle run) and reaction time (Penney Cup Test).The parameters were measured at baseline after 8 weeks of ST and the effects of the training were examined.

2.3 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.

2.4 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.

3. 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 Cricket Players

	Groups	Test	Mean	S.D	't' Values
Reaction Time	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 per 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 cricket 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 cricket players. The mean values on shadow training group and control group are graphically represented in figure-1.

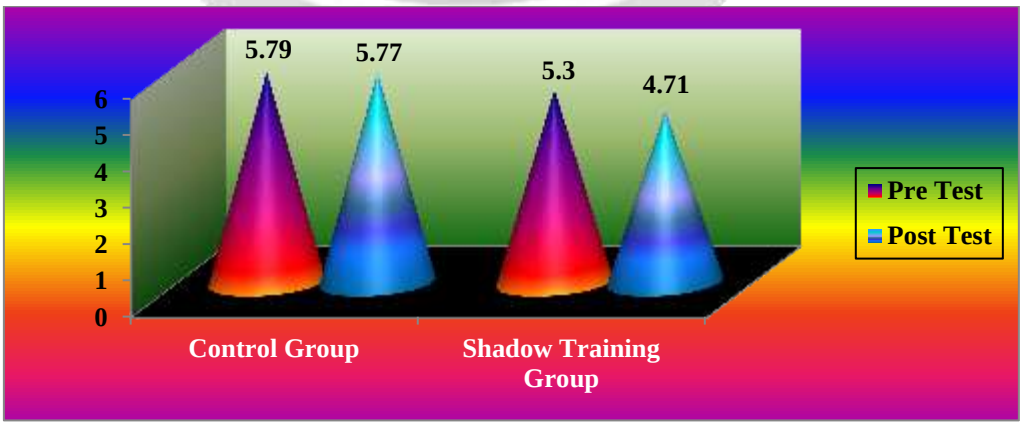

FIGURE-1: BAR DIAGRAM SHOWING THE PRE TEST & POST TEST ON REACTION TIME OF CONTROL AND SHADOW TRAINING GROUPS

Table-II

Relationship of Mean, SD and‘t’-Values of the Agility between Pre & Post Test of the Shadow Training and Control Groups of Cricket Players

	Groups	Test	Mean	S.D	‘t’ Values
Agility	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 per 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 cricket 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 cricket players. The mean values on shadow training group and control group are graphically represented in figure-2.

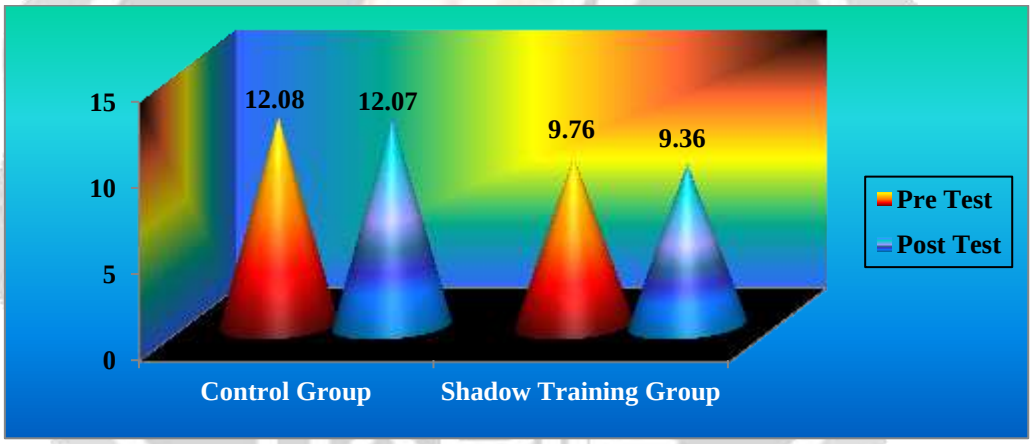

FIGURE-2: BAR DIAGRAM SHOWING THE PRE TEST & POST TEST ON AGILITY OF CONTROL AND SHADOW TRAINING GROUPS

4. DISCUSSION ON FINDING

The shadow training is a incredible training which has been found to be beneficial of the cricket players. To study the shadow training on reaction time and agility of college level boys cricket 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 tennis 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 boys cricket players.

5. 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 cricket players at college level. It was also seen that there is progressive improvement in the selected criterion variables of shadow training group of tennis players after eight weeks of shadow training programme. Further, it also helps to improve reaction 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 cricket players at college level boys cricket cricket players.
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 cricket players at college level boys cricket players.
3. The results of comparative effects lead to conclude that shadow training group had better significant improvement on reaction time and agility of cricket players at college level boys cricket players as compared to their performance with control group.

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