



Impact of Plyometric and Core Strength Training Packages on Selected Psychological Parameters among College Men Basketball Players.

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KEYWORDS

*Plyometric Training,
Core Strength Training,
Sports Achievement
Motivation, State
Anxiety, Self-
Confidence.*

ABSTRACT

The study sought to investigate the impact of plyometric and core strength training packages on selected psychological parameters among college men basketball players. To achieve the purpose of the study (N=60) sixty men basketball players were selected from National college, Tiruchirappalli, Tamilnadu, India as subjects. The age of the subjects ranged from 19 to 25 years. The selected subjects were divided into three equal groups (N=20). Group I underwent plyometric training. Group II underwent core strength training. Group III acted as control group who did not undergo any specialized training program other than their daily routine. The psychological parameters such as sports achievement motivation, state anxiety, self-confidence were selected as dependent variables and they were assessed by 20- item self- evaluation questionnaire, the scale includes 20 statements, rosenberg self-esteem scale respectively. The subjects were concerned with their particular training for a period of six weeks, three days per week. The collected data from three groups prior to and immediately after the training programme on selected criterion variables were statistically analyzed with analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 for all the cases to test the hypothesis. The result of the study reveals that the plyometric training and core strength training groups achieved significant improvement on selected psychological parameters such as sports achievement motivation, state anxiety, self-confidence of college men basketball players....

1. INTRODUCTION

Basketball

Basketball players run and slide up and down with great speed and agile within the smaller playing area. This is one of the most strenuous game it need a great variety of sportive quality (Conte D et.al (2015). Passing, dribbling, throwing, changing the direction suddenly, jumping for rebound and shooting are the basic skills the basketball game feinting, beating an opponent are comes under offensive skills and guarding the opponents and stop the opponents from their score are the defensive skills. All these require rapid movements demanding frequent changes in direction. For one to respond to such situation a player should possess good motor fitness and psychological qualities. Basketball game is fully contains of skill. But it's also a game of athletic quality and movement. To be a good player, they not only need to know the game and have good basketball skills, but they also need to be extremely agile. By improving the ability to move quickly on the pitch and they will be a better player. The game is all about movement: whether it's led by an attacking player, sliding to defend a setter or chasing a stray ball, increasing speed and agility gives you an edge over the competition (Ben-Abdelkrim, N., Chaouachi, A., Chamari, K., Chtara, M., & Castagna, C., (2010).

Plyometric Training

Plyometric is also known as " jump training" or "plyos" are exercise based around having muscles exert maximum force in short intervals of time, with the goal of increasing both speed and power(Ezhilmaran N (2016). This training focuses on

learning to move from a muscle extension to a contraction in a rapid or "explosive" manner, for example with specialised repeated jumping. Plyometric are primarily used by athletes, especially martial artists and high jumpers, to improve performance, and are used in the fitness field to a much lesser degree. Brandon Todd, a 5'5" basketball player, trained himself to slam dunk using plyometric (Abolghasem, Memarzadeh, Mehrzad, Moghadasi and KarimZare, 2014).

Core Strength Training

The core consists of the muscles in your midsection, or torso, surrounding the spine and pelvis. This includes the abdominal muscles at the front, but also muscles within the lower back, and around your sides. The core muscles are not considered powerful, but they play a fundamental role in stabilising the spine and pelvis. They're also key to maintaining good posture (Boyaci, A. & Tutar, M., 2018). These functions are important to ensure you can move your limbs easily. Your core also protects you against injury — people with a weaker core are more likely to sustain a back injury. Core muscle strengthening is often an important part of rehabilitation after a back injury. We use our core muscles while performing daily tasks like getting up from a chair, standing, walking, vacuuming and lifting things. The core muscles are also important for athletic activities like running, jumping, tackling and lifting weights (Deepak, K.D., 2015).

OBJECTIVES

This study was designed to investigate impact of plyometric and core strength training packages on selected psychological parameters among college men basketball players.

METHODOLOGY

To achieve the purpose of the study (N=60) sixty men basketball players were selected from National college, Tiruchirappalli, Tamilnadu, India as subjects. The age of the subjects ranged from 19 to 25 years. The selected subjects were divided into three equal groups (N=20). Group I underwent plyometric training. Group II underwent core strength training. Group III acted as control group who did not undergo any specialized training program other than their daily routine. The psychological parameters such as sports achievement motivation, state anxiety, self-confidence were selected as dependent variables and they were assessed by 20- item self- evaluation questionnaire, the scale includes 20 statements, rosenberg self – esteem scales respectively. The subjects were concerned with their particular training for a period of six weeks, three days per week. The collected data from three groups prior to and immediately after the training programme on selected criterion variables were statistically analyzed with analysis of covariance (ANCOVA). The level of confidence was fixed at 0.05 for all the cases to test the hypothesis.

RESULTS

Table 1: Computation of Analysis of Covariance of Means of Plyometric Training, Core Strength Training and Control Groups Sports Achievement Motivation, State Anxiety, Self-Confidence

Variable	Test Type	PTG Mean	CSTG Mean	CG Mean	Source	df	SS	MS	F-Ratio
Sports Achievement Motivation	Pre	22.00	22.30	21.85	Between	2	2.10	1.05	2.24
					Within	57	26.75	0.47	
	Post	26.80	27.25	22.05	Between	2	332.03	166.01	100.78*
					Within	57	93.90	1.65	
	Adjusted	26.81	27.18	22.1	Between	2	306.71	153.35	93.10*
					Within	56	92.25	1.65	
	Pre	20.50	20.75	20.85	Between	2	1.30	0.65	0.63
					Within	57	59.30	1.04	
	Post	17.00	16.9	20.75	Between	2	192.63	96.32	102.52*

State Anxiety					Within	57	53.55	0.94	
	Adjusted	17.03	16.88	20.70	Between	2	182.75	91.38	112.28*
					Within	56	45.57	0.81	
Self Confidence	Pre	29.85	29.65	29.80	Between	2	0.43	0.22	0.14
					Within	57	90.30	1.58	
	Post	25.95	25.25	29.90	Between	2	251.43	125.72	98.84*
					Within	57	72.50	1.27	
	Adjusted	25.91	25.30	29.88	Between	2	176.35	88.18	78.67*
					Within	56	62.76	1.12	

*Significant at 0.05 level of confidence. (Table value required for significant at 0.05 level of confidence were 2.77 respectively).

The pre, post-test and adjusted post-test mean values of sports achievement motivation on plyometric training group (PTG), core strength training group (CSTG) and control group (CG) were 22.00, 26.80, 26.81; 22.30, 27.25, 27.18; and 21.85, 22.05, 22.1; respectively.

The pre, post-test and adjusted post-test mean values of state anxiety on plyometric training group (PTG), core strength training group (CSTG) and control group (CG) were 20.50, 17.00, 17.03; 20.75, 16.9, 16.88; and 20.85, 20.75, 20.70; respectively.

The pre, post-test and adjusted post-test mean values of self-confidence on plyometric training group (PTG), core strength training group (CSTG) and control group (CG) were 29.85, 25.95, 25.91; 29.65, 25.25, 25.30; and 29.80, 29.90, 29.88; respectively. The obtained F values of adjusted post-test were greater than the table value of 2.77. Hence it was proved that there were significant improvements on sports achievement motivation, state anxiety, self-confidence of college men basketball players.

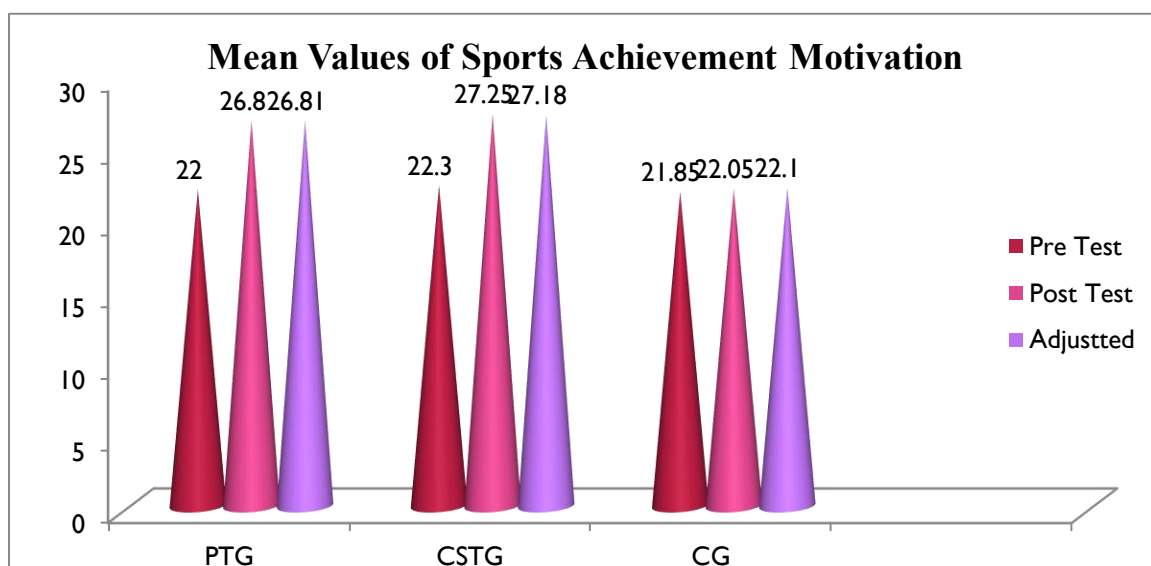


Figure 1: Pre, Post and Adjusted Post Test Means of Plyometric Training, Core Strength Training and Control Groups of Sports Achievement Motivation

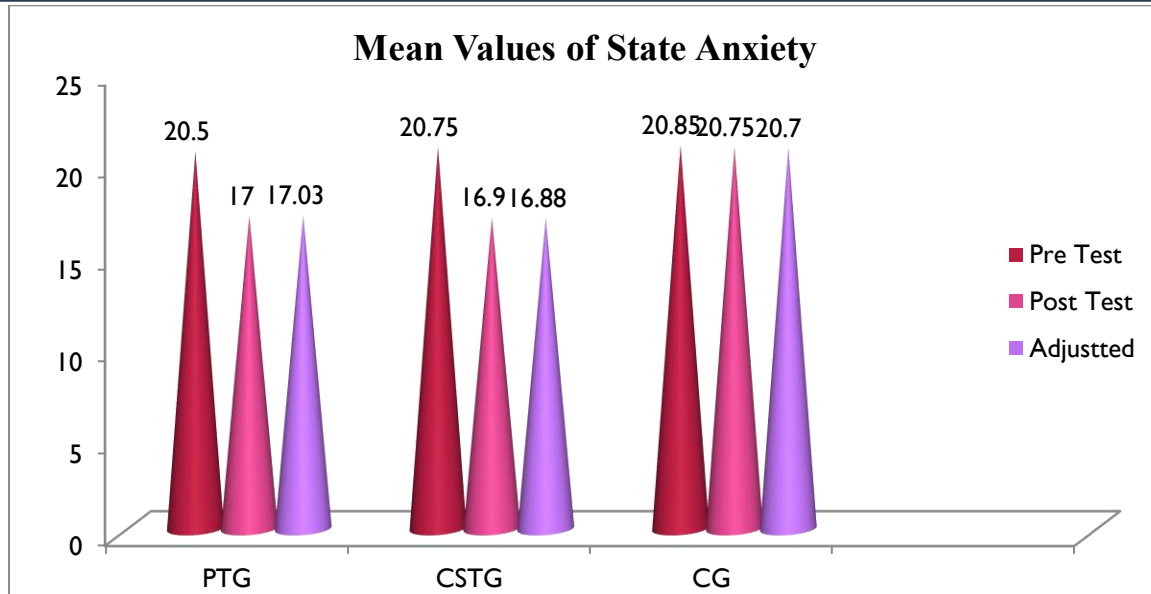


Figure 2: Pre, Post and Adjusted Post Test Means of Plyometric Training, Core Strength Training and Control Groups of State Anxiety

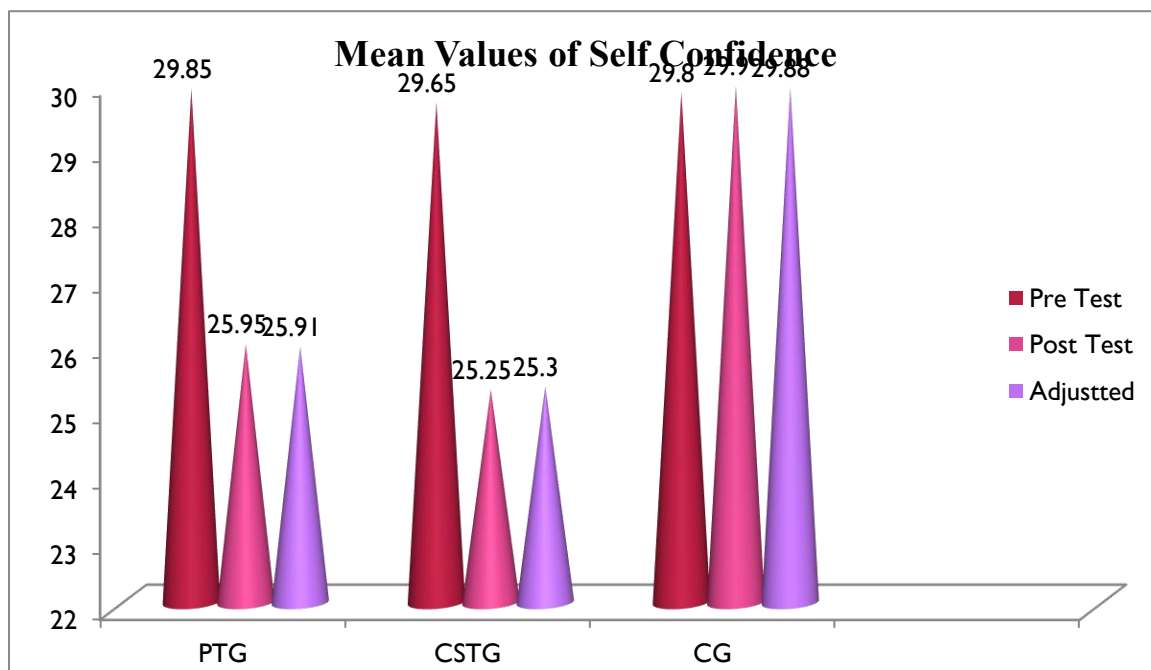


Figure 3: Pre, Post and Adjusted Post Test Means of Plyometric Training, Core Strength Training and Control Groups of Self Confidence

DISCUSSION ON FINDINGS

The results of the study indicates that the experimental group namely as plyometric training and core strength training had significantly improved in the selected dependent variables sports achievement motivation, state anxiety, self-confidence improvement caused by plyometric training and core strength training. The results of the studies are in line with the studies of (Hassan, I. H. I. (2017).

CONCLUSIONS

The experimental groups namely as plyometric training and core strength training had achieved significant improvement

on selected the psychological parameter such as sports achievement motivation, state anxiety, self-confidence when compared to control group.

It was concluded that core strength training shown better improvement when comparing to the plyometric training groups on selected the psychological parameter.

It was concluded that college level player should practice both plyometric training and core strength training for positive enhancement of playing.

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