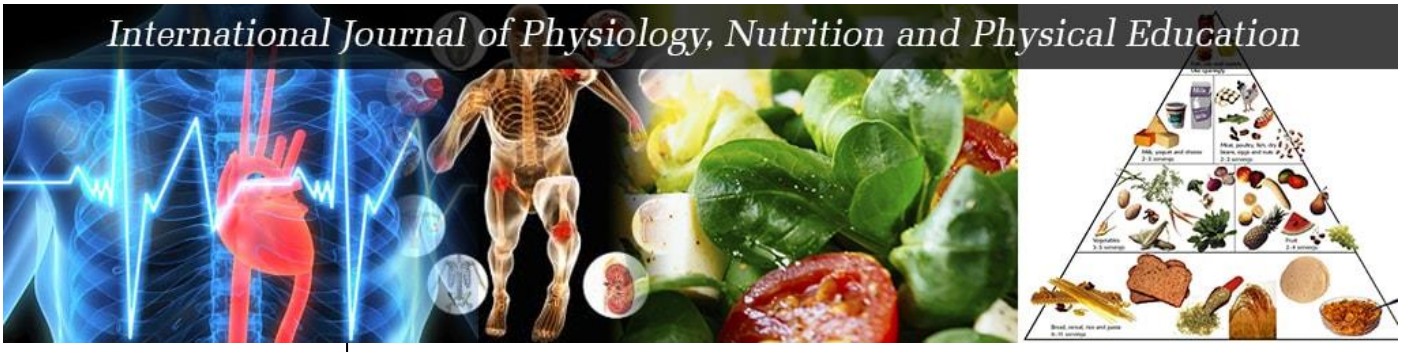

ISSN: 2456-0057
IJPNPE 2022; 7(2): 286-288

www.journalofsports.com
Received: 18-07-2022
Accepted: 20-08-2022

E Rajasekaran
Ph.D. Scholar, Department of Physical Education and Yoga, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India

Dr. A Mahaboobjan
Professor, Department of Physical Education and Yoga, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India

Corresponding Author:
E Rajasekaran
Ph.D. Scholar, Department of Physical Education and Yoga, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India

Effect of kettlebell training on shoulder and leg strength among college level men kabaddi players

E Rajasekaran and Dr. A Mahaboobjan

DOI: https://doi.org/10.22271/journalofsport.2022.v7.i2e.2627

Abstract
This study was designed to investigate the effect of kettlebell training on shoulder strength, leg strength variables among college level men kabaddi players. To achieve the purpose of the study (N=30) forty men kabaddi players were selected from affiliated colleges of Anna University, Tiruchirappalli, Tamil Nadu, India as subjects. The age of the subjects ranged from 19 to 25 years. The selected subjects were divided into two groups (N=15). Group I underwent kettlebell training, Group II acted as control group who did not undergo any specialized training program other than their daily routine. The variables such as shoulder strength, leg explosive strength was a selected as dependent variables and they were assessed by pull-ups (numbers) and standing broad jump (seconds) respectively. The subjects were concerned with their particular training for a period of six weeks, six days per week. The collected data from two 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 kettlebell training group achieved significant improvement on shoulder strength, leg strength of college level men kabaddi players.

Keywords: Kettle bell training, shoulder strength and leg strength

Introduction
The nature of the sport requires players to operate at an optimum level in multiple are a as endurance, speed, power, flexibility and agility. So they have to focuses on functional movement strengthening the core is the major objective. Since kabaddi is extremely physical sports, strengthening the core is crucial. The players have to be alert constantly and run and jump and change the direction quickly. So the game need more of workouts and also need strength to overcome defender. Further experts insisted of in Kabaddi game, namely, ready, reading, reacting, responding and recovering.

Thus the game of Kabaddi warrants high level of physical fitness. To improve the physical fitness and overall fitness level, a player aspires involves himself in different exercise ‘on court’ as well as ‘off court’. In this study, the investigator was interested it find out the different training namely such as effect of strengthening exercise and ‘on court drills’ on selected performance variables. The variables selected for this study were, skill performance in Kabaddi was measured subjectively by experts to determine the performance in Kabaddi. Kabaddi drills are an important part in skill acquisition and perfection in Kabaddi they are used by professional Kabaddi coaches at every Kabaddi academy and every Kabaddi camp around the world. They are an invaluable supplementary asset in player development, from peewee Kabaddi players to high level, advanced players. Drills can be used by two players or for large numbers of players (beginners or kids) in a group coaching situation. (Arumugam, 2015) [2].

Kettlebell is a cast-iron or cast steel load (resembling a cannonball with a handle) used to carry out all types of exercises, including but not imperfect to ballistic exercises that merge cardiovascular, strength and flexibility training. They are also the primary equipment used in the weight lifting sport of kettlebell lifting. It's well-known that compound, whole body actions typical of kettlebell exercises are better to machines that isolate muscles for improving muscle tone, body composition, and strength.

Further, kettlebells strengthen the tendons and ligaments, making the joints tougher and less-susceptible to injury. Strengthens every muscle from head-to-toe. Kettlebell training consists of whole-body movement exercises. It's well-known that complex, whole body actions typical of kettlebell exercises are superior to machines that isolate muscles for improving muscle tone, body composition, and strength. Kettlebell training should be implemented in the condition program of all sports, not just strength sports. They expand in leg strength; muscular strength and muscular endurance will advantages of every sport. As athletes involves more of muscular contraction. Which build the components for the game, as a researcher special planned kettlebell training programme (Prabakaran and Sridar, 2016) [3].

Methodology

To achieve the purpose of the study (N=30) forty men kabaddi 4players were selected from affiliated colleges of Anna University, Tiruchirappalli, Tamil Nadu, India as subjects. The age of the subjects ranged from 19 to 25 years. The selected subjects were divided into two groups (N=15). Group I underwent kettlebell training, Group II acted as control group who did not undergo any specialized training program other than their daily routine. The variables such as shoulder strength, leg explosive strength was a selected as dependent variables and they were assessed by pull-ups (numbers) and standing broad jump (seconds) respectively. The subjects were concerned with their particular training for a period of six weeks, six days per week. The collected data from two 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.

Table 1: Criterion Variables and Tests

Sl. No.	Variables	Test /Instruments	Unit of Measurement
1	Shoulder Strength	Pull Ups	Numbers
2	Leg Explosive Strength	Standing Broad Jump	Meter

Table 2: Analysis of Covariance of Shoulder Strength on Experimental and Control Group of Men Kabaddi Players. (Numbers)

Test	Exp. Group	Con. Group	Sum of Variance	Sum of Square	Degree of Freedom	Mean Square	'F' Ratio
Pre-test Mean	12.47	12.60	BG	0.13	1		0.009
			WG	401.33	28	0.133	
Post-test Mean	12.00	15.07	BG	70.53	1	14.333	6.23*
			WG	316.93	28	70.533	
Adjusted Mean	12.06	15.01	BG	65.36	1	11.319	76.38*
			WG	23.10	27	65.361	

*The table value required for significant at the 0.05 level confidence for 1 to 28 & 1 to 27 are 4.30 and 4.20 and 4.21, respectively

The pre, post-test and adjusted post test mean values of speed on experimental group and control group were 12.47, 12.00, 12.06 and 12.60, 15.07, 15.01respectively. The obtained F value of post-test and adjusted post test were 6.23 was greater than the table value of 4.20. Hence it was proved that there were significant improvements on Shoulder Strength of college level men kabaddi players.

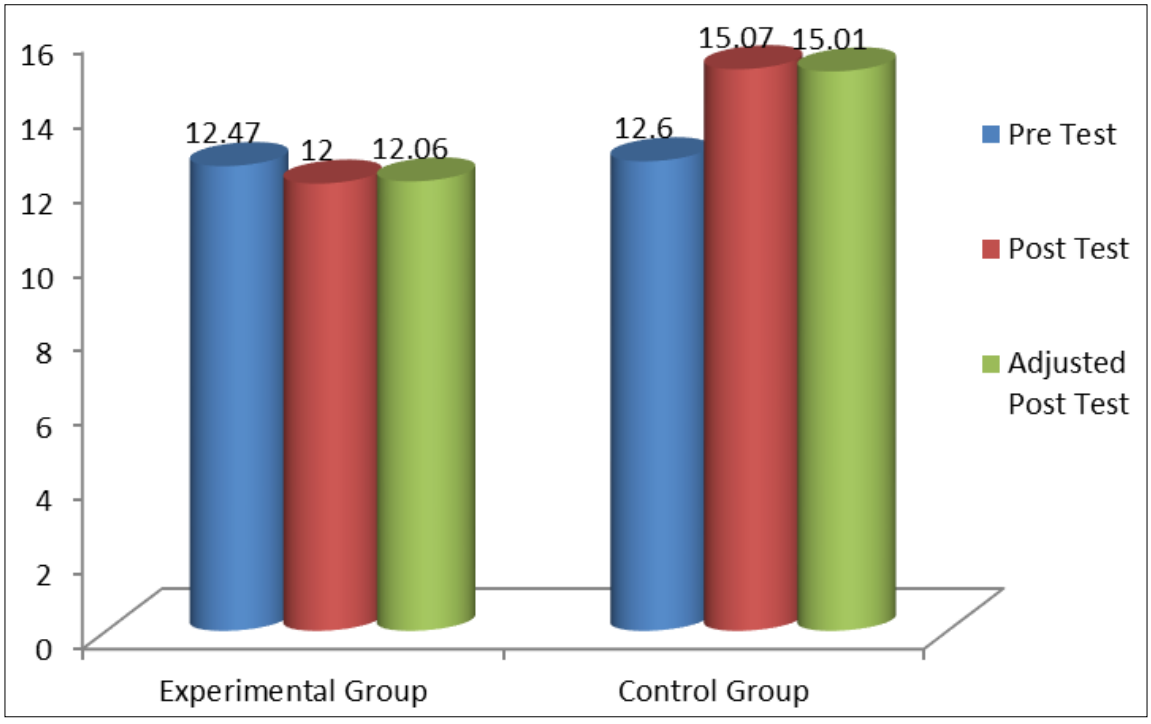

Fig 1: Mean Values of Shoulder Strength on Experimental and Control Groups

Table 3: Analysis of Covariance of Leg Strength on Experimental and Control Group of Men Kabaddi Players (Scores in Seconds)

Variance	Exp. Group	Con. Group	Source of Variance	Sum of Squares	df	Mean Square	'F' Ratio
Pre-test Mean	1.80	1.84	BG	0.01	1	0.011	0.65
			WG	0.486	28	0.017	
Post-test Mean	1.78	1.92	BG	0.135	1	0.135	7.60*
			WG	0.496	28	0.018	
Adjusted Post-test Mean	1.80	1.90	BG	0.068	1	0.068	44.92*
			WG	0.041	27	0.002	

The table value required for significant at the 0.05 level confidence for 1 to 28 & 1 to 27 are 4.30 and 4.20 and 4.21, respectively

The pre, post-test and adjusted post test mean values of speed on experimental group and control group were 1.80, 1.78, 1.80 and 1.84, 1.92, 1.90 respectively. The obtained F value of post-test and adjusted post test were 7.60 was greater than the table value of 4.20. Hence it was proved that there were significant improvements on leg strength of college level men kabaddi players.

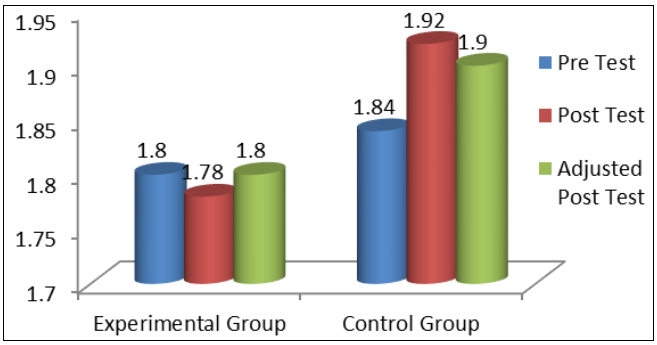

Fig 2: Mean Values of Leg Strength on Experimental and Control Groups

Discussion on Findings

The result of the study indicates that there was a significant improvement on shoulder strength and leg strength due to the effect of kettlebell training among college level men kabaddi players when compared to control group**.** The following studies are supported to the result of this investigation (Arumugam, 2015) [2].

Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn:

1. The experimental group showed better improvement on the dependent variables namely shoulder strength and leg strength among college level men kabaddi players.
2. The control group would not show any improvement on the dependent variables namely shoulder strength and leg strength among college level men kabaddi players.

References

1. Prasath E Rao. Modern Coaching of Kabaddi. D.V.S., Publicaitions, New Delhi; c1994. p. 92-95.
2. Arumugam S. Effect of Complex Training on Muscular Strength among Kabaddi Players, International Journal of Advance Research and Innovative Ideas in Education. 2015;1(4):1912-1914.
3. Prabakaran, Sridar. Impacts of Kettlebell Training on Selected Physical Fitness Components among Handball Players. International Journal of Current Trends in Science and Technology. 2016;8(05):20427-20430.
4. Vijay J, Vallimurugan V. Badminton Player's Fitness Output in Response to Kettle bell Training. EPRA International Journal of Multidisciplinary Research. 2021;7(09):38-41.