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# Effect of Specific Drills and Strength Training Program on Physical Fitness Variables of College Level Kabaddi Players

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### ABSTRACT

This study investigated the effect of specific drills and strength training programs on physical fitness variables of college-level Kabaddi players. A total of 30 players were selected from SRMV Maruthi college of physical education assigned to either an experimental group or a control group. The experimental group underwent a 6-week specific drills and strength training program, while the control group continued with their regular training routine. The results showed significant improvements in physical fitness variables such as leg explosive power, muscular endurance in the experimental group. The findings suggest that specific drills and strength training programs can be an effective way to enhance physical fitness in Kabaddi players.

**Keywords:** Specific drills and strength training program on physical fitness variables.

### Introduction

Kabaddi is a high-intensity contact sport that demands a combination of strength, speed, agility, endurance, and quick decision-making. At the college level, where players are transitioning into more competitive environments, it becomes essential to adopt training strategies that not only develop general physical fitness but also enhance sport-specific skills. Traditional training routines often lack the specificity needed to meet the complex physical and tactical demands of Kabaddi.

Strength training is known to improve muscular power, endurance, and overall athleticism, which are crucial for successful raiding and defending. Similarly, specific drills designed to mimic actual match situations help in improving agility, reaction time, tactical awareness, and technical execution under pressure. A well-designed program that integrates both these elements can offer more comprehensive development for Kabaddi players.

Despite the increasing popularity of Kabaddi, limited research exists on the effectiveness of combining strength training with sport-specific drills, particularly at the college level. This study aims to evaluate the impact of such an integrated training program on selected physical fitness variables among college Kabaddi players. The findings may help coaches and trainers adopt more effective training protocols that enhance both the physical and technical capabilities of athletes.

### Methodology:

#### Selection of subjects:

The purpose of this study is to determine the effect of specific drills and strength training program on physical fitness variables of college level kabaddi players. To achieve the purpose of the study, fifteen male kabaddi players are studying in Ramakrishna Mission Vidyalaya Maruthi College of Physical Education Coimbatore. Their age, range from 18 to 25 years respectively. They have high potential and greater ability in the game. The researcher is proposing to collect data from these subjects as the scores will be more applicable to the study. The subjects have past played experience of at least one years in kabaddi and only those who represented their respective college teams were chosen as subjects,

#### Selection of variables:

The study focuses on the following physical fitness variables:

- Leg explosive power
- Muscle endurance

#### Criterion measures:

As per the available literature and consultation with experts the following standardized tests will use to collected data on selected Physical fitness variables. The selected criterion variables were measured using standardized test and equipment's.

<u>PHYSICAL FITNESS VARIABLES</u>	<u>TESTS</u>
Leg explosive power	Standing broad jump
Muscle endurance	Sit-ups

#### Research Design:

This study investigated the effect of specific drills and strength training programs on physical fitness variables of college-level Kabaddi players. A total of 30 players were randomly assigned to either an experimental group(n=15) or a control group(n=15). The experimental group underwent a 6-week specific drills and strength training program, while the control group continued with their regular training routine. The results showed significant improvements in physical fitness variables such as leg explosive (standing broad jump), and muscle endurance (sit ups), in the experimental group. The findings suggest that specific drills and strength training programs can be an effective way to enhance physical fitness in Kabaddi players. Data will be analysed using descriptive statistics, paired t-tests, and analysis of covariance (ANCOVA) to determine the significant differences between the experimental and control groups.

#### Statistical Technique:

The purpose of study is to find out the effect of specific drills and strength training programs on physical fitness variables of college-level Kabaddi players. The pre and post-test are conducting and the data is collecting from the subjects are analysing by using the following statistical technique to find out the significant improvement in each variable due to Paired- Sample 't' test is applied to find out the significant improvement in the select criterion variables. The level of significant is fixing at 0.05.

## RESULTS

**TABLE I**

#### COMPUTATION WITH 'T' TEST OF ON LEG EXPLOSIVE POWER COLLEGE LEVEL KABADDI PLAYERS

\*Significant at 0.05 level, Table value for df 14 was 2.14

Variable	Group	Test	Mean	S. D	DM	$\sigma$ DM	't'
Leg explosive power	Experimental Group	Pre Test	2.14	6.86	6.00	0.53	11.22*
		Post Test	2.20	6.81			
	Control Group	Pre Test	1.754	13.38	0.400	3.042	0.509
		Post Test	1.758	13.59			

Table 1 highlights the mean and standard deviation of Leg explosivetest for both the experimental and control groups of kabaddi players. The experimental group's pre-test and post-test mean scores were 2.14 and 2.20, respectively, with standard deviations of 6.86 and 6.81. The calculated 't' value of 11.22 exceeded the table value of 2.14 at 14 degrees of freedom. In contrast, the control group's mean scores were 1.754 and 1.758, with standard deviations of 13.38 and 13.59 and the 't' value of 0.509 fell below the table value of 2.14. The results suggest that the experimental group showed significant enhancement in leg explosive power, attributed to proprioceptive training combined with specific drills and strength trainingamong kabaddi players.

Figure 1: The Bar Diagram Shows That the Pre and Post Test Means of Experimental and Control Groups on Leg explosive power of men kabaddi Players.

Figure 1

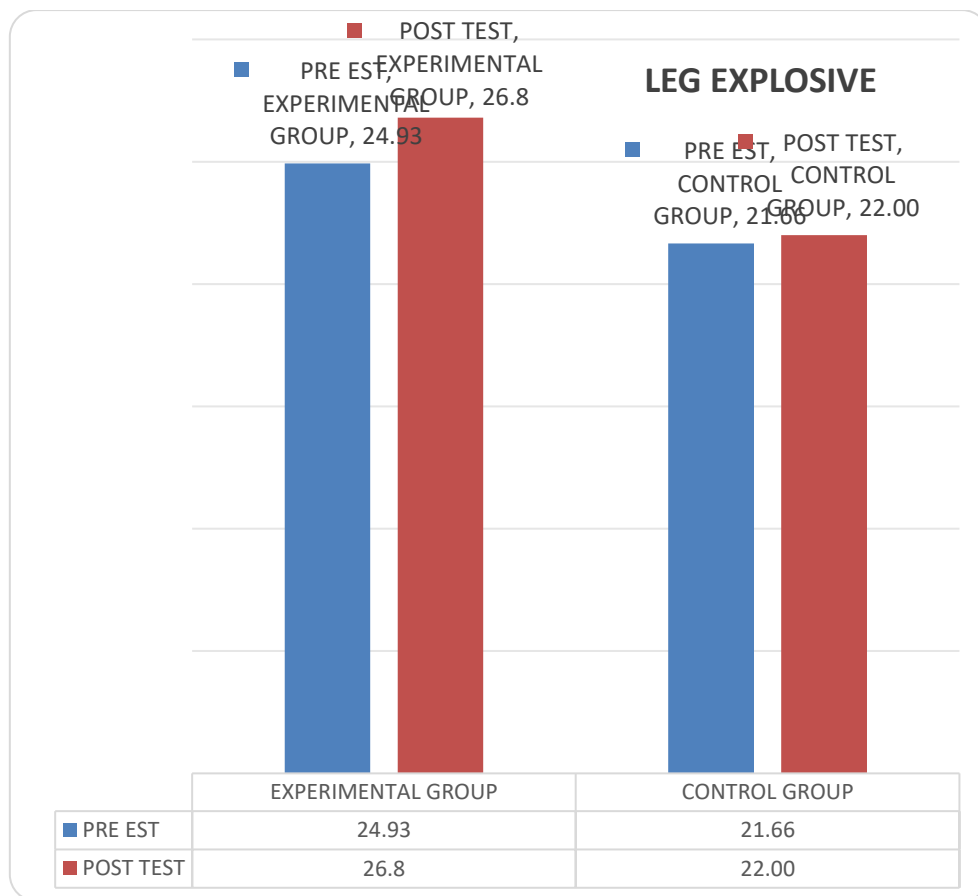


TABLE II

## COMPUTATION WITH 'T' TEST OF ON MUSCULAR ENDURANCE OF COLLEGE LEVEL KABADDI PLAYERS

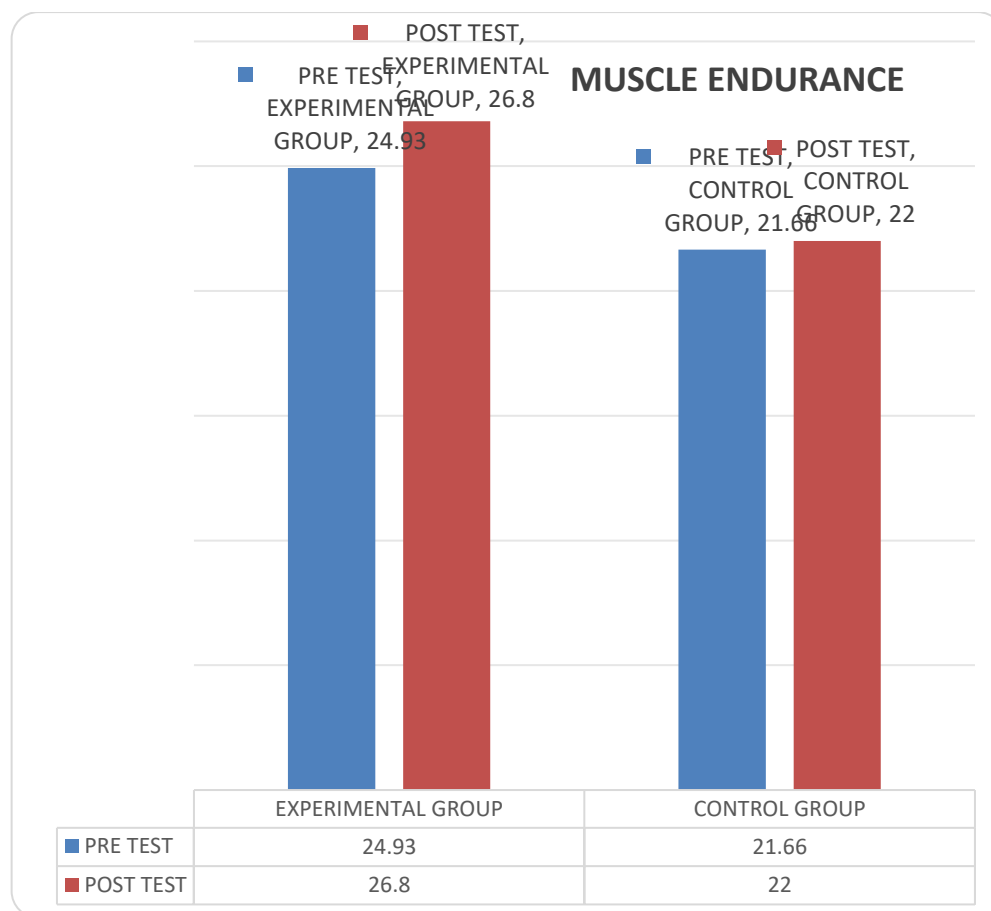
\*Significant at 0.05 level, Table value for df 14 was 2.14

Variable	Group	Test	Mean	S. D	DM	$\sigma$ DM	't'
Muscular endurance	Experimental Group	Pre Test	24.93	3.61	1.86	0.51	14.00*
		Post Test	26.80	3.64			
	Control Group	Pre Test	21.66	2.28	0.33	1.23	1.04
		Post Test	22.00	2.03			

Table 2 highlights the mean and standard deviation of Muscle Endurance test for both the experimental and control groups of kabaddi players. The experimental group's pre-test and post-test mean scores were 24.93 and 26.80, respectively, with standard deviations of 3.61 and 3.64. The calculated 't' value of 14.00 exceeded the table value of 2.14 at 14 degrees of freedom. In contrast, the control group's mean scores were 21.66 and 22.00, with standard deviations of 2.28 and 2.03, and the 't' value of 1.04 fell below the table value of 2.14. The results suggest that the experimental group showed significant enhancement in leg explosive power, attributed to proprioceptive training combined with specific drills and strength training among kabaddi players.

Figure 2: The Bar Diagram Shows That the Pre and Post Test Means of Experimental and Control Groups on Muscular endurance of college level kabaddi Players.

Figure 2



### Discussion on finding

The study revealed that specific drills combined with a structured strength training program significantly improved **leg explosive power** and **muscular endurance** among college-level Kabaddi players. Plyometric exercises such as squat jumps, bounding, and agility drills contributed to enhanced leg power, which is essential for explosive movements like raiding, dodging, and sudden direction changes. Strength training exercises like squats and lunges increased the ability to generate rapid force, allowing players to perform powerful take-offs and tackles.

Additionally, muscle endurance improved through high-repetition resistance training and sport-specific conditioning. This enabled players to maintain performance levels during prolonged game durations without early fatigue. Enhanced endurance was particularly noticeable in defensive stances and repeated raiding efforts, where sustained muscular effort is crucial.

The combined effect of these training components led to better performance in Kabaddi-specific actions, such as quick retreats, ankle holds, and dynamic escapes. Improved leg explosiveness allowed faster and more powerful movements, while greater muscle endurance supported consistent execution of skills throughout the match. Overall, the findings confirm that integrating specific drills and strength training into regular practice enhances key physical fitness variables crucial for competitive Kabaddi performance.

### Conclusions

1. The present study concludes that the integration of specific drills and a structured strength training program
2. It has a significant positive impact on the physical fitness of college-level Kabaddi players.
3. There is a significant improvement on leg explosive power and muscular endurance of the subject in underwent six weeks training programme

### REFERENCE

1. American College of Sports Medicine (ACSM). (2018). ACSM's Guidelines for Exercise Testing and Prescription. Philadelphia, PA: Wolters Kluwer.

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2. Cronin, J. B., Hansen, K. T., & McNair, P. J. (2017). Effects of exercise and training on sport performance. In A. B. Weinberg & A. C. Fry (Eds.), *Sport and exercise science* (pp. 123-144). Champaign, IL: Human Kinetics.
  3. Kraemer, W. J., & Ratamess, N. A. (2017). *Fundamentals of Resistance Training: Progression and Periodization*. Champaign, IL: Human Kinetics.
  4. West, D. W., Abt, G., & Cotie, L. M. (2015). Resistance training-induced changes in integrated myofibrillar protein synthesis are related to hypertrophy only after attenuation of muscle damage. *Journal of Applied Physiology*, 119(1), 141-148.
  5. Schoenfeld, B. J. (2018). The mechanisms.