# EFFECT OF YOGIC PRACTICES PROCEEDED WITH LOW CIRCUITTIE RESISTANCE TRAINING ON SELECTED MUSCLE FITNESS PARAMETERS OF KABADDI PLAYERS

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**Abstract**

The purpose of the study was to examine the effect of yogic practices proceeded with low volume circuit type resistance training on the selected muscle fitness parameters of kabaddi players. To achien the purpose of this study 40 male kabaddi players who participated in the inter-collegiate tournance from Cnennai district, Tamilnadu, India were selected as subjects and their age ranged between 18 and 25 years. The study was formulated as a true random group design, consisting of a pre-test and post-te The subjects were randomly assigned in to two equal groups of fifteen each and named as Group A and Group 'B. Group A underwent yoga with low volume resistance training and Group 'B' underwent as training. The experimental group underwent respective schedule for six weeks an alternate days. The variables namely explosive strength, grip strength (Dominant & Non-Dominant Hand) and muscular endurance were tested using analysis of covariance. The results reveal that the yogic training proceeded with low volume circuit type resistance training group showed significant improvement on all the selected variables among the kabaddi players. It was also found that the experimental group showed a significant improvement on all the selected variables among the kabaddi players than the control group

**Keywords**: Yoga, Resistance, Kabaddi, Muscle Fitness.

## Introduction

Resistance training is well established and an effective method of exercise for developing muscul fitness. Fleck and kraemer (1988) describes the primary goals of resistance training as improving muscular strength and endurance. It is well established that resistance training is the most effective method available for improving muscle strength and lean body mass (Atha, 1982, Blaak, 2002). Resistance training has been prescribed by many major health organizations for improving fitness and health The effectiveness of a resistance training program depends on several factors including intensity of training, volume of training, order of exercise, rest period length between sets and exercises, frequency of training and repetition velocity. Research over the past 50 years has utilized various forms of resistance training (i.e.single vs multiple sets, concentric vs eccentric actions, isolation vs compound movements) (Hass & Feigenbaum, 2001). Low volume circuit type resistance exercises are designed for the benefits of the normal people.

Yoga is a science practiced in India over thousands of years. It produces consistent physiological changes and have sound scientific basis (lyengar, 1968) Stories and legends from ancient times testify the existence of yoga, and to the practitioners and divinities associated with it (Ananda, 1982). The investigator was interested to see the impact of low volume circuit type resistance training when it is proceeded after the the yogic practices.

## Materials and Methods

The purpose of the study was to examine the effect of yogic practices proceeded with low volume circuit type resistance training on the selected muscle fitness variables of the kabaddi

players. To achieve the purpose of this study 40 male kabaddi players who participated in the inter-collegiate tournament Chennai, Tamilnadu, India were selected as subjects and their age ranged between 18 and 25 years. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects were randomly assigned in to two equal groups of twenty each and named as Group'A' and B Group 'A'underwent yoga with low volume resistance training and Group B'underwent no training. The experimental group underwent respective schedule for six weeks on alternate days. The variables namely explosive strength, grip strength (Dominant & Non-Dominant Hand) and muscular endurance were selected and are shown in table L.

**TABLE-I**

| S.No | VARIABLES | TEST ITEMS | UNITS |
|---|---|---|---|
| 1 | Explosive Strength | Standing Vertical Jump | In centiments |
| 2 | Grip Strength | Grip Dynamometer | In kilograms |
| 3 | Mucular Edurance | Sit Ups | In points |

The subjects were selected randomly, but the groups were not equated in relation to the factors to be examined, hence the difference between means of the two groups in the pre-test had to be taken into account during the analysis of the post-test differences between the means. This was achieved by the application of the analysis of covariance, where the final means were adjusted for differences in the initial means, and the adjusted means were tested for significance. The results are presented in the following tables,

**Table – 1I**
**Descriptive Analysis Of Selected Variables of Yogic Training Proceeded With Low Volume Circuit Type Resistance Training Group**

| SI.No | Variables | Pre Test Mean | SD (±) | Post Test mean | SD (±) | Adjusted Mean |
|---|---|---|---|---|---|---|
| 1 | Explosive Strength | 0.18 | 0.03 | 0.30 | 0.05 | 0.30 |
| 2 | Grip Strength (Non Dominant) | 22.34 | 1.24 | 24.60 | 1.10 | 24.71 |
| 3 | Grip Strength (Dominant) | 22.48 | 1.79 | 25.64 | 1.16 | 25.63 |
| 4 | Muscular Endurance | 37.40 | 1.46 | 44.85 | 2.13 | 44.85 |

The above table documents the pre & post tests means, standard deviations and adjusted me values of yogic practices proceeded with low volume circuit type resistance training group on selected variables among the kabaddi players.

**Table-11I**
**Descriptive Analysis Of Selected Variables Of Control Group**

| SI.No | Skills | Pre Test Mean | SD (±) | Post Test mean | SD (±) | Adjusted Mean |
|---|---|---|---|---|---|---|
| 1 | Explosive Strength | 0.19 | 0.02 | 0.20 | 0.02 | 0.20 |
| 2 | Grip Strength (Non Dominant) | 22.18 | 1.24 | 22.13 | 1.17 | 22.12 |
| 3 | Grip Strength (Dominant) | 22.07 | 1.05 | 22.50 | 1.24 | 22.51 |
| 4 | Muscular Endurance | 37.30 | 1.68 | 37.30 | 1.62 | 37.29 |

The above table documents the pre & post tests means, standard deviations and adjusted mean values of control group on the selected variables among the kabaddi players.

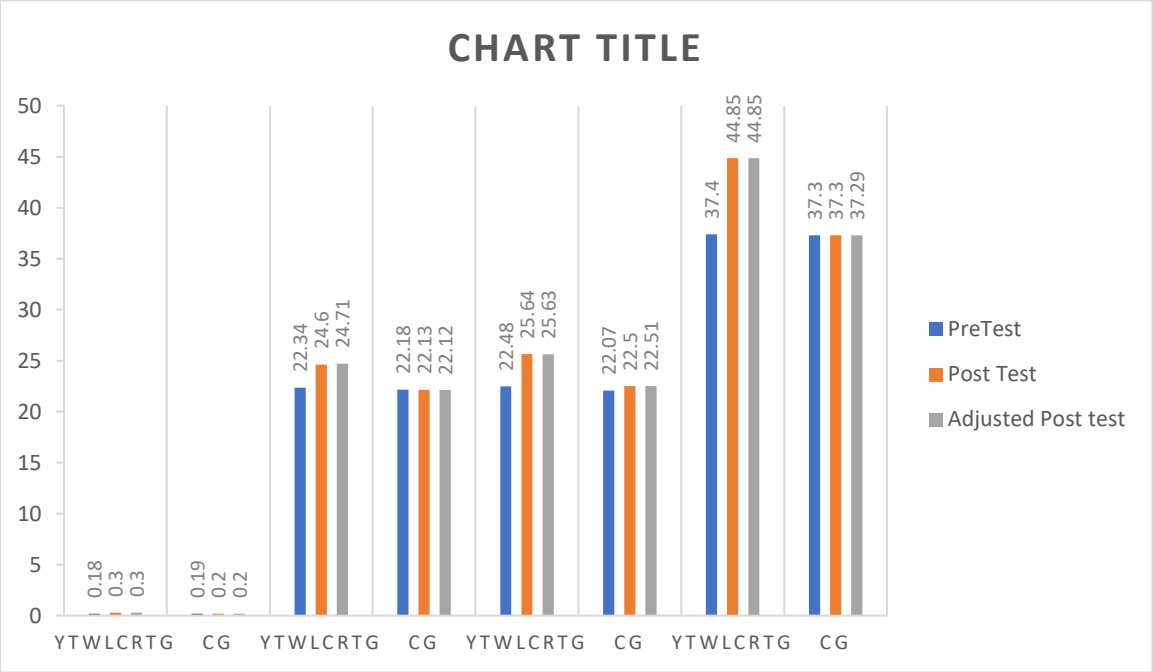
**Table-IV**
**Computation of Analysis of Covariance on Both the Groups on Selected Variables in Kabaddi**

| SI.No | Skills | Source of variance | Sum of squares | Df | Mean Square | F |
|---|---|---|---|---|---|---|
| 1 | Explosive Strength | BG | 0.09 | 1 | 0.09 | 47.97* |
| | | WG | 0.07 | 37 | 0.002 | |
| 2 | Grip Strength (Non Dominant) | BG | 66.39 | 1 | 66.39 | 49.78* |
| | | WG | 49.34 | 37 | 1.33 | |
| 3 | Grip Strength (Dominant) | BG | 95.64 | 1 | 95.64 | 64.11* |
| | | WG | 55.19 | 37 | 1.49 | |
| 4 | Muscular Endurance | BG | 571.11 | 1 | 571.11 | 155.87* |
| | | WG | 135.56 | 37 | 3.66 | |

*Significant at 0.05 level *"F0.05 (1,37)-4.10

Table-IVshows the results of analysis of covariance on the explosive strength, grip strength (Dominant Hand), grip strength (Non-Dominant Hand) and the muscular endurance and are 47.97, 49.78,64,11 and 155.87. They are greater than the required value 4.10 at 0.05 level of confidence. Since the observed 'F' value is greater than the table F value on all the selected variables, it is concluded that there exists a significant difference among the groups. The mean values of yogic training with low volume circuit type distance training group and control groups are graphically represented in figure I.

**Figure 1**
**Showing the mean values of yogic training proceeded with low volume circuit type resistance training group and control group on selected variables among kabaddi players**




## Discussion and Conclusions

Yoga aims at bringing the different bodily functions into a perfect co-ordination so that they work for the good of the whole body. Bird et al. (2005) the popularity of resistance training has grown immensely over the past 25 years, with extensive research demonstrating that not only is resistance training an effective method to improve the muscle fitness parameters. With the combinations of yogic practices proceeded with low volume circuit type resistance training is one of the best methods for improving muscular fitness. The results of the study support the findings of Robert (2011), Kristrin, et al (2002), Blaak, et al. (2002) and Abe et al. (2000), Feigenbaum (1991).

From the analysis of the data, the following conclusions are drawn.

1. It is found that the yogic training proceeded with low volume circuit type resistance training group showed significant improvement on all the selected variables among the kabaddi players.
2. It is also found that the experimental group shows a significant improvement on all the selected variables among the kabaddi players than the control group.

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