



EFFECTS OF COMBINED STRENGTH TRAINING AND YOGA PRACTICE ON FLEXIBILITY AMONG MEN KABADDI PLAYERS

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ABSTRACT

The present study was undertaken to analyze the Effects of Combined Strength Training and Yoga Practice on flexibility Among Men Kabaddi players. The investigator has selected N=48 men inter collegiate level/state level participated kabaddi players at random from various colleges in and around the West Godavari district of Andhra Pradesh, India and their age range from eighteen to twenty five years as per their record of secondary school board Andhra Pradesh certificate. The kabaddi players chosen for the study were divided into four equal groups n=12 and designated as experimental group 'A' experimental group 'B' experimental group 'C' and control group 'D'. Strength training were given to group 'A' Yoga practice were given to group 'B', Combined training of strength and yoga practice were given to group 'C' and the 'CG' control group 'D' were restricted to participate in any activities. The trainings were given for a period of twelve weeks. The data were collected before and after the training by conducting Sit and reach test. The obtained data's were analyzed by Analysis of Covariance (ANCOVA). The level of significant was fixed at 0.05 levels. The results of the study showed that strength training, yoga practice and combined training significantly improved flexibility performance of the kabaddi players when comparative with control group. The study also found no changes between strength training [STG] and combined strength training and yoga practice [CSTYPG] kabaddi players and yoga practice [YPG] and combined strength training and yoga practice [CSTYPG] kabaddi players on sit and reach test. Further study proved that yoga practice [YPG] is more effective to increase flexibility of kabaddi players than strength training [STG] kabaddi players.



KEYWORDS: strength, yoga, flexibility.

INTRODUCTION

Strength is an important variable as it pertains to kabaddi conditioning. Strength is the basis for all components of sports training. Stronger kabaddi players have an advantage as it pertains to competitions, everything else being equal. Strength fits into the equation for power and speed development, quickness and agility, flexibility and conditioning. Strength training can also assist each kabaddi player's confidence, help minimize injuries, decrease rehabilitation time and give meaning to

the entire team. Strength is the foundation of all other bio motor ability components. It is very important to develop a great base of strength training before to extensive specific training.

Asanas are the posture, or held position that stabilizes the mind and body through static stretchings. The word 'asana' is derived from the Sanskrit root *as* which actually means 'to sit'. Patanjali considered asanas to be the third step of his system of Ashtanga yoga (Asht=eight; anaga=limb) (Gharote 2012). Patanjali has formulated yoga has eight limbs path or eight fold path known as ashtanga yoga. The eight limbs of yoga are yama (social discipline), Niyama (self discipline), asana (body posture), pranayama (control over vital energy), pratyahara (control over senses), dharna (concentration), dhyana (meditation) and Samadhi (self realization). Asana basically perform five functions: co native, cognitive, mental, intellectual and spiritual. Asana also help in balancing and harmonizing the basic structure of the human body, which is why they have a range of therapeutic uses to. The various categories of asanas were standing asanas, forward bending asanas, supine asanas, inverted asanas, abdominal and lumbar asanas, twisting asanas, back bending asanas and balancing asanas (Jay Prakash 2015). The two basic principles of asanas are stability and comfort. Their aim is to established proper rhythm in the neuromuscular tonic impulses and improve the general muscle tone. Every asana should be performed effortlessly and maintained for a comfortable time. There should not be any jerks and performances of asanas should lead to undue fatigue (Gharote and Ganguly 2011).

STATEMENT OF THE PROBLEM:

The investigation purpose was to examine effects of combined strength training and yoga practice on flexibility of men kabaddi players.

OBJECTIVES OF THIS STUDY

1. To measure the influence of strength training treatment on flexibility of kabaddi players.
2. To evaluate the impact of yoga practice treatment on flexibility of kabaddi players.
3. The examined the effect of combined training treatment on flexibility of kabaddi players.
4. To understand the changes between strength training treatment, yoga practice treatment and combined training on flexibility of kabaddi players.

HYPOTHESES:

1. It was hypothesis that there will be a significant improvement on flexibility after the twelve weeks of training in strength training group, yoga practice group and combined training group [Strength training and yoga practice] group kabaddi players when compared with control group kabaddi players.
2. It was hypothesis that combined training group kabaddi players will be superior to the strength training and yoga practice group kabaddi player on flexibility.

METHODOLOGY:

The purpose of this study was to find out the effects of effects of combined strength training and yoga practice on flexibility of men kabaddi players.. To achieve the purpose of this study investigator has selected N=48 men inter collegiate level and state level participate kabaddi players at random from various colleges in and around the West Godavari district of Andhra Pradesh, India and their age range from eighteen to twenty five years as per their per their record of secondary school board Andhra Pradesh certificate. The subjects chosen for study was divided into four groups each groups consisted of twelve kabaddi players and designated as experimental group 'A' experimental group 'B' experimental group 'C' and control group 'D'. Strength training were given to group 'A' [STG], yoga practice were given to group 'B' [YPG], Combined training of strength training and yoga practice were given to group 'C' [CSTYPG] and the 'CLG' control group 'D' was restricted to participate in any of the training programme other than their regular activities.

Training was given three days in a week for twelve weeks to STG, YPG and CSTYPG kabaddi players. The subject were tested on flexibility at the beginning (Pre-test) and at the end of the experimental period (Post-test). To measure the flexibility performance sit and reach test were used respectively because of their simplicity and availability of necessary facilities, instrument and equipment's. The analysis of data on sit and reach test data have been examine by ANCOVA in order to determine the differences if any among the group at pre and posttest.

Table - I
Analysis of Covariance of STG, YPG, CSTYPG and CLG kabaddi players for flexibility performance [In centimeters]

| TEst | STG GROUP | YPG GROUP | CSTYPG GROUP | CLG GROUP | Source of Variance | Sum of Squares | df | Mean Squares | Obtained F |
|-----------|-----------|-----------|--------------|-----------|--------------------|----------------|----|--------------|------------|
| Pre Test | 29.87 | 29.29 | 29.62 | 29.33 | Between | 2.68 | 3 | 0.89 | 0.066 |
| Mean | 3.36 | 4.50 | 2.96 | 3.75 | Within | 5.99 | 44 | 13.62 | |
| SD | | | | | | | | | |
| Post Test | 32.70 | 36.87 | 35.50 | 27.50 | Between | 618.18 | 3 | 206.06 | 16.70* |
| Mean | 3.55 | 3.58 | 3.28 | 3.60 | Within | 542.79 | 44 | 12.33 | |
| SD | | | | | | | | | |
| Adjusted | | | | | Between | 614.11 | 3 | 204.70 | 80.48* |
| Post Test | 32.41 | 37.07 | 35.42 | 27.66 | Within | 109.37 | 43 | 2.54 | |
| Mean | | | | | | | | | |
| Mean Diff | 2.83 | 7.58 | 5.88 | 1.83 | - | - | - | - | - |

*Significant at 0.05 level of confidence

Table value F-ratio at 0.05 level of confidence for 3 and 44 (df) =2.82, 3 and 43 (df) =2.82.

*Significant

The above table-I shows that there is a significant difference on flexibility among the four groups such as strength training group [STG], Yoga practice group (YPG), combined training of strength training and yoga practice [CSTYPG] and control group (CLG). Since the calculated 'F' value required being significant at 0.05 level for d/f 3, 44 and 3, 43 are 2.82 and 2.82, but the calculated values of flexibility post and adjusted posttest 'F' values are 16.70 and 80.48 respectively. Which are higher than the tabulated value. Since the obtained 'F' ratio is found significant.

Table - II
Scheffes Post hoc test for mean difference between STG, YPG, CSTYPG and CLG kabaddi players for flexibility performance [In centimeters]

| ADJUSTED POSTTEST MEANS VALUES | | | | | Required C I |
|--------------------------------|-----------|--------------|-----------|-----------------|--------------|
| STG GROUP | YPG GROUP | CSTYPG GROUP | CLG GROUP | Mean Difference | |
| 32.41 | 37.07 | - | - | 4.66* | 3.17 |
| 32.41 | - | 35.42 | - | 3.01 | 3.17 |
| 32.41 | - | - | 27.66 | 4.75* | 3.17 |
| - | 37.07 | 35.42 | - | 1.65 | 3.17 |
| - | 37.07 | - | 27.66 | 9.41* | 3.17 |
| - | - | 35.42 | 27.66 | 7.76* | 3.17 |

*Significant at 0.05 level of confidence

The mean difference STG kabaddi players and YPG kabaddi players, STG kabaddi players and CLG kabaddi players, YPG kabaddi players and CLG kabaddi players, CSTYPG kabaddi players and CLG kabaddi players were 4.66, 4.75, 9.41 and 7.76 which are higher than the CI value 3.17. Therefore study approved that there is significant differences exist between above groups on kabaddi players. Further the study proved that there is no significant difference between STG kabaddi players and CSTYPG kabaddi players, YPG and CSTYPG kabaddi players were 3.01 and 1.65 lower than the CI value 3.17.

The prior test mean value, post test mean values and adjusted post test mean values of STG, YPG, CSTYPG and CLG kabaddi players for flexibility performance displayed in line graph

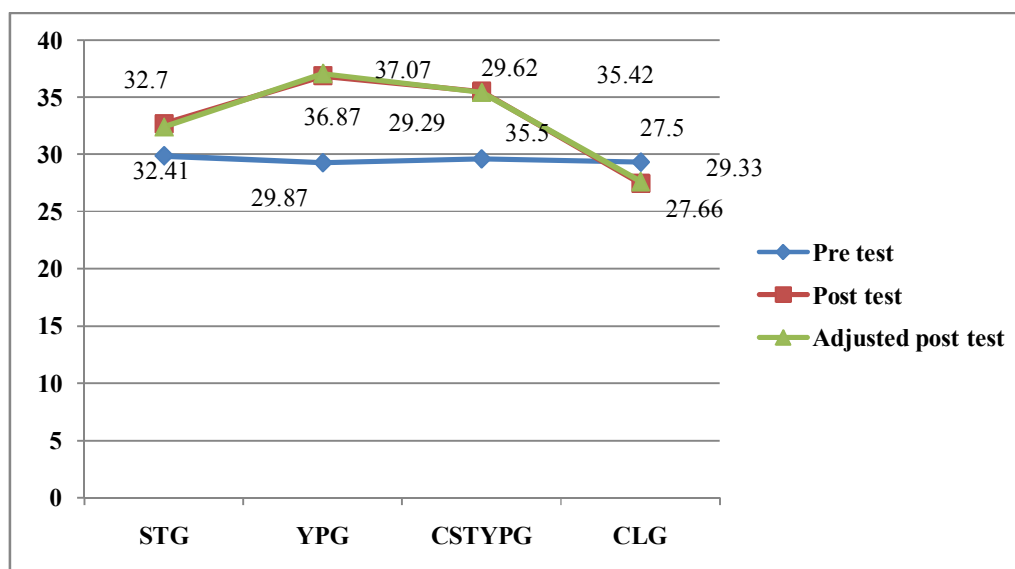


Figure -I display the line graph of pre test, post test and adjusted post test mean values for coordination of STG, YPG, CSTYPG and CLG kabaddi players.

DISCUSSION ON HYPOTHESIS:

- In the first hypothesis it was stated that there will be a significant improvement in flexibility after the twelve weeks of training in strength training group, yoga practice group group kabaddi player, and combined training group [strength training and yoga practice] group kabaddi players when compared with control group kabaddi players. The result of the study found that experimental group's kabaddi players flexibility performance level improved when compared with control group. Hence the research hypothesis is accepted.
- In second hypothesis mention that combined training group kabaddi players will be superior to the yoga practice group and strength training group kabaddi player. The study found that combined training group kabaddi players given were not found superior. Hence research hypothesis rejected.

DISCUSSION AND FINDINGS:

The result found that strength training, yoga practice and combined [strength and yoga practice] increased the flexibility of three empirical group's kabaddi players. The list of experimental studies related to the flexibility were Ramesh (2011) study result found that physical exercises and yogic practices significantly improved the flexibility physical exercises empirical group [PEG] and yogic practice empirical group [YPG] obese adolescent's students. Rajendran (2015) observed that six weeks of yogic practices have significantly improved the flexibility of college men kabaddi players. Saraboji (2020) study found that after six weeks of malkhamb training the empirical group boys showed significant improvement on the flexibility. Senthil (2016) study concluded that Yoga practice and

physical activity group [YPPAG is better than the control group to improve flexibility of college students.

CONCLUSIONS:

The three experimental groups namely strength training [STG] group kabaddi players, yoga practice [YPG] and combined strength training and yoga practice [CSTYPG] kabaddi players flexibility increased with the impact of specific training comparative to control kabaddi players [CLG]. The study also found no changes between strength training [STG] and combined strength training and yoga practice [CSTYPG] kabaddi players and yoga practice [YPG] and combined strength training and yoga practice [CSTYPG] kabaddi players on sit and reach test. Further study proved that yoga practice [YPG] is more effective to increase flexibility of kabaddi players than strength training [STG] kabaddi players.

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