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EFFICACY OF KALARIPAYATTU AND TRADITIONAL WITH KALARIPAYATTU TRAINING ON SELECTED MOTOR FITNESS VARIABLES OF COLLEGE LEVEL MEN KABADDI PLAYERS



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ABSTRACT

To achieve this purpose forty five men students from Maruthi College of physical education, Coimbatore were selected. The subject's age ranged between 22 to 25 years. The subjects were selected for purposive sampling method. The selected subjects were randomly divided in three groups. Group-I (n-15) Kalaripayattu training group, Group – II (n-15) Kalaripayattu with traditional training group and Group-III acted as control group. The selected motor fitness variables are cardio respiratory endurance and flexibility. The criterion variables were tested with 12 min run/walk test and sit and reach test. The experimental group under gone

kalaripayatu training up to eight weeks, morning 6.30 to 7.30 am, the control group did not any training. The collected data were treated with ANCOVA. If obtained 'F' ratio is significant, Scheffe's post hoc test was used. The level of significant was fixed at 0.05. The results of the study kalaripayatu with traditional training group significantly improvement on cardio respiratory endurance and flexibility.

KEYWORDS : *Kalaripayatu training, Traditional Training, Cardio respiratory endurance and Flexibility*

INTRODUCTION

Existence of martial arts in India for over 3000 years can be proved by the mention of martial arts in the Vedas. According to ancient folkcore, lord's Vishnu disciple parasuram who as an avatar of lord Vishnu is believed to be founder of martial arts in India, kalaripayatu, which is the most popular amongst many martial arts practiced in India, is believed to have been founded by Parasurama. Kalaripayatu is probably the oldest form of martial arts in India. Kalaripayatu is perhaps the most ancient martial art in the world. Religions have incorporated kalaripayatu in their realm. Kalaripayatu training improves the co-ordination ability to carry out a series of movements smoothly and effectively. It improves with the practice very many of the players trained, and his motor fitness and developed our body co-ordination and as well as hand eye and foot eye co-ordination will improve. Kabaddi is a body contact game in which a person comes in contact with others creating reaction in the two persons in the physical movements. The Kabaddi players required good and sound physique,

explosive power, agility, speed, endurance and flexibility. The purpose of the study was to find out efficacy of kalaripayatu training on selected motor fitness variables of college level men Kabaddi players.

METHODOLOGY

To achieve this purpose sixty men students from Maruthi College of physical education, Coimbatore were selected. The subject’s age ranged between 22 to 25 years. The subjects were selected for purposive sampling method. The selected subjects were randomly divided in three groups. Group-I (n-15) Kalaripayatu training group, Group-II Kalaripayatu with traditional training group and Group-III acted as control group. The selected motor fitness variables are cardio respiratory endurance and flexibility. The criterion variables were tested with 12 min run/walk test and sit and reach test. The experimental group under gone kalaripayatu training, traditional training up to eight weeks, morning 6.30 to 7.30 am, the control group did not any training. The collected data were treated with ANCOVA. If obtained ‘F’ ratio is significant, Scheffe’s post hoc test was used. The level of significant was fixed at 0.05.

TRAINING PROGRAM

Based on maximum heart rate were intensity was fixed for kalaripayatu training.

| | | | | | | | | |
|-----------------------|----|----|----|----|----|----|----|----|
| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| % of Intensity | 60 | 60 | 65 | 65 | 70 | 70 | 75 | 75 |

Warming up – 10 minutes, Kalaripayatu training 45 minutes, warm down – 5 minutes

TRADITIONAL TRAINING

Kabaddi related skills and drills were practiced by the players up to eight weeks.

RESULTS

TABLE-I
ANALYSIS OF COVARIANCE ON CARDIO RESPIRATORY ENDURANCE OF KALARIPAYATTU AND KALARIPAYATTU WITH TRADITIONAL TRAINING AND CONTROL GROUP

| | | Kalari Training | Kalari with Traditional group | Control Group | Source of Variance | Sum of Square | df | Mean Square | 'F' Ratio |
|------------------|-----------|------------------------|--------------------------------------|----------------------|---------------------------|----------------------|-----------|--------------------|------------------|
| Pre-test | \bar{X} | 2204 | 2203 | 2205 | B | 43.33 | 2 | 21.66 | 0.02 |
| | σ | 85.08 | 112.5 | 99.69 | W | 417836.6 | 42 | 9948.49 | |
| Post-test | \bar{X} | 2577.0 | 2706.1 | 2208.0 | B | 2001640 | 2 | 1000820 | 40.9* |
| | σ | 202.54 | 166.7 | 66.85 | W | 1026240 | 42 | 24434.2 | |
| Adjust Post-test | \bar{X} | 2578 | 2707 | 2208.04 | B | 2010605 | 2 | 1005302 | 44.55* |
| | | | | | W | 925043.2 | 41 | 22562.0 | |

* Significant at 0.05 level of confidence.

The table value for significance at 0.05 level of confidence with df 2 and 42 and 2 and 41 are 3.22 and 3.21, respectively.

The table -I shows that the pre-test means of kalaripayattu training, kalaripayattu with traditional training and control group are 2204, 2203 and 2205 respectively. The obtained 'F' ratio of 0.02 for pre-test means of cardio respiratory endurance is lesser than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The table -I shows that the post-test means of kalaripayattu training, kalaripayattu with traditional training and control group are 2577, 2706.1 and 2208 respectively. The obtained 'F' ratio of 40.9 for post-test means of cardio respiratory endurance is higher than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The adjusted post-test means of kalaripayattu training, kalaripayattu with traditional training and control group are 2578, 2707 and 2208.04 respectively. The obtained 'F' ratio of 44.55 for adjusted post-test means of cardio respiratory endurance is higher than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The results of the study indicate that there is a significant difference among kalaripayattu training, kalaripayattu with traditional training and control groups on cardio respiratory endurance. To determine which of the paired means had a significant difference, Scheffe's post-hoc test was applied and the results are presented in Table II.

TABLE-II
SCHEFFE'S TEST FOR THE DIFFERENCE BETWEEN THE ADJUSTED POST-TEST PAIRED MEANS OF
CARDIO RESPIRATORY ENDURANCE

| Adjusted Post-test Means | | | Mean Differences | Confidence Interval |
|------------------------------|---|---------------|------------------|---------------------|
| Kalaripayattu Training Group | Kalaripayattu with Traditional Training Group | Control Group | | |
| 2578 | 2707 | - | 127.0* | 123.6 |
| 2578 | - | 2208.04 | 369.96* | 123.6 |
| - | 2707 | 2208.04 | 498.96* | 123.6 |

The table -II shows the adjusted post-test mean difference of cardio respiratory endurance between kalaripayattu and kalaripayattu with traditional training, kalaripayattu and control group and kalaripayattu with traditional training groups are 127, 369.96 and 498.96 respectively, which were greater than 123.6 at 0.05 level of confidence.

The results of the study showed that, kalaripayattu and kalaripayattu with traditional group training groups has significantly differed on cardio respiratory endurance when compared to control group, but between the training significant differences was found. Hence it was concluded that both kalaripayattu and kalaripayattu with traditional training was equally better method to increase the

cardio respiratory level.

FIGURE-1
THE MEAN VALUES OF PRE AND POST TEST ON CARDIO RESPIRATORY ENDURANCE OF KALARIPAYATTU TRAINING KALARIPAYATTU WITH TRADITIONAL AND CONTROL GROUP

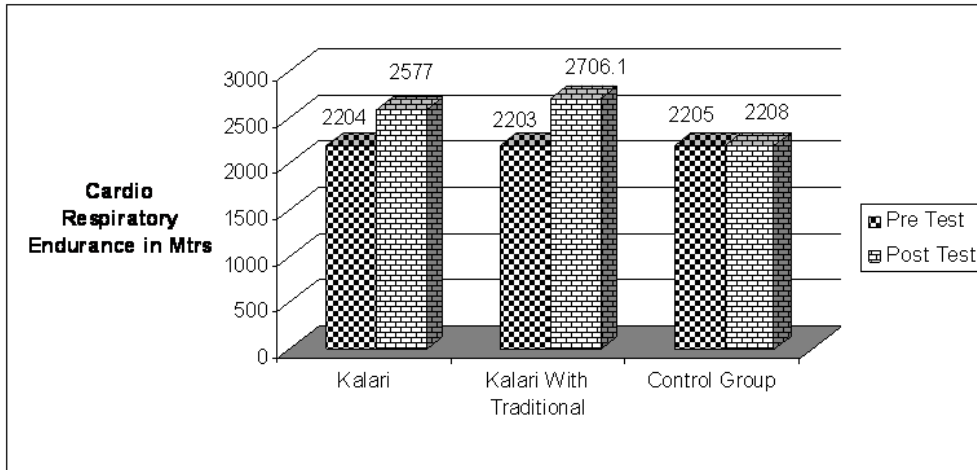


TABLE-III
ANALYSIS OF COVARIANCE ON FLEXIBILITY OF KALARIPAYATTU AND KALARIPAYATTU WITH TRADITIONAL TRAINING AND CONTROL GROUP

| | | Kalari Training | Kalari with Traditional group | Control Group | Source of Variance | Sum of Square | df | Mean Square | 'F' Ratio |
|------------------|-----------|-----------------|-------------------------------|---------------|--------------------|---------------|----|-------------|-----------|
| Pre-test | \bar{X} | 16.33 | 16.3 | 16.35 | B | 0.22 | 2 | 0.11 | 0.04 |
| | σ | 1.67 | 1.3 | 2.16 | W | 128.95 | 42 | 3.070 | |
| Post-test | \bar{X} | 18.13 | 19.0 | 16.5 | B | 48.344 | 2 | 24.172 | 6.99* |
| | σ | 1.80 | 1.73 | 2.02 | W | 145.23 | 42 | 3.458 | |
| Adjust Post-test | \bar{X} | 19.04 | 19.36 | 16.48 | B | 49.708 | 2 | 24.85 | 12.37* |
| | | | | | W | 82.37 | 41 | 2.009 | |

* Significant at 0.05 level of confidence.

The table value for significance at 0.05 level of confidence with df 2 and 42 and 2 and 41 are 3.22 and 3.21, respectively.

The table -III shows that the pre-test means of kalaripayattu training, kalaripayattu with traditional training and control group are 16.33, 16.3 and 16.35 respectively. The obtained 'F' ratio of

0.04 for pre-test means of flexibility is lesser than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The table –III shows that the post-test means of kalaripayatu training, kalaripayatu with traditional training and control group are 18.13, 19.0 and 16.5 respectively. The obtained ‘F’ ratio of 6.99 for post-test means of flexibility is higher than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The adjusted post-test means of kalaripayatu training, kalaripayatu with traditional training and control group are 19.2, 19.04 and 16.48 respectively. The obtained ‘F’ ratio of 12.37 for adjusted post-test means of flexibility is higher than the table value 3.22 for df 2 and 42 required for significance at 0.05 level.

The results of the study indicate that there is a significant difference among kalaripayatu training, kalaripayatu with traditional training and control groups on flexibility. To determine which of the paired means had a significant difference, Scheffe’s post-hoc test was applied and the results are presented in Table IV.

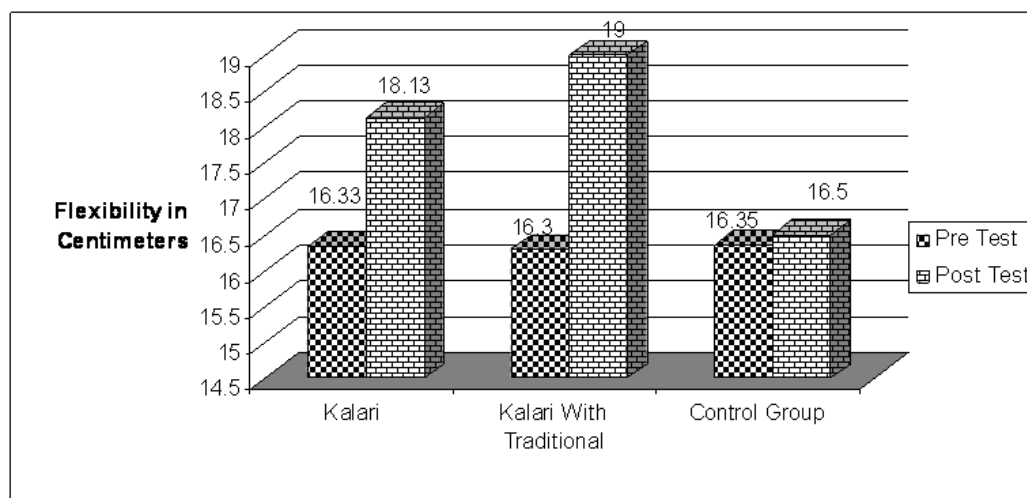
TABLE-IV
SCHEFFE’S TEST FOR THE DIFFERENCE BETWEEN THE ADJUSTED POST-TEST PAIRED MEANS OF FLEXIBILITY

| Adjusted Post-test Means | | | Mean Differences | Confidence Interval |
|------------------------------|---|---------------|------------------|---------------------|
| Kalaripayattu Training Group | Kalaripayattu with Traditional Training Group | Control Group | | |
| 19.04 | 19.36 | - | 0.32* | 0.26 |
| 19.04 | - | 16.48 | 2.56* | 0.26 |
| - | 19.36 | 16.48 | 2.88* | 0.26 |

The table -II shows the adjusted post-test mean difference of flexibility between kalaripayatu and kalaripayatu with traditional training, kalaripayatu and control group and kalaripayatu with traditional training groups are 0.32, 2.56 and 2.88 respectively, which were greater than 0.26 at 0.05 level of confidence.

The results of the study showed that, kalaripayatu and kalaripayatu with traditional kalaripayatu training groups has significantly differed on flexibility when compared to control group, but between the training significant differences was found. Hence it was concluded that both kalaripayatu and kalaripayatu with traditional training groups was equally better method to increase the flexibility.

FIGURE-II
THE MEAN VALUES OF PRE AND POST TEST ON FLEXIBILITY OF KALARIPAYATTU TRAINING
KALARIPAYATTU WITH TRADITIONAL AND CONTROL GROUP



DISCUSSION ON FINDINGS

The results statistically proved that kalaripayattu with traditional training group are better in cardio respiratory endurance, flexibility. The result is in agreement with other studies. These training protocols resulted in similar oxygen uptake and heart rate responses compared to match simulations (Franchini E et.al., 2013). Youth participating in soft martial arts had good upper extremities that might not result from regular exercise alone (Huang C.C, 2008). Traditional with kalaripayattu training improves motor fitness variables cardio respiratory endurance, flexibility (Donovaa Oliver 2006).

CONCLUSIONS

1. Kalaripayattu training group, kalaripayattu with traditional training groups had shown significant improvement of selected motor fitness variables cardio respiratory endurance, flexibility of men Kabaddi players.
2. The control group had not shown the significant improvement of selected motor fitness variables (cardio respiratory endurance, flexibility)
3. Kalaripayattu with traditional training group better training for improve for motor fitness variables of men Kabaddi players.

REFERENCES

1. Donova Oliver (2006), " An Investigation of leg and trunk strength and reaction times of hard style martial arts practioners", *Journal of Sports Science and Medicine*, pp. 2, 42
2. Frachini (2013), "Physiological and performance responses to intermittent", *The Journal of Strength and Conditioning Research*, Vol 27 (4), pp.1147-55.
3. Huang CC (2008), " Upper Extremities Flexibility Comparison of Collegiate Soft Martial art Practioners with other Athletes", *International Journal of Sports Medicine*, Vol 29(3), pp.232-241.

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