EFFECT OF AEROBIC EXERCISES AND YOGIC PRACTICES ON FLEXIBILITY MUSCULAR ENDURANCE AND SHOULDER MUSCULAR STRENGTH AMONG MALE SOCCER PLAYERS

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Abstract

The purpose of present study was to find out the effect of aerobic exercises and yogic practices on flexibility muscular endurance and shoulder muscular strength among male soccer players. To achieve this purpose, forty five soccer players, studying in various colleges of Thiruvalluvar University, Vellore, Tamilnadu, in the age group of 19 - 25 years were selected as subjects. The selected forty five subjects were randomly divided into three groups of fifteen each, out of which group - I (n = 15) underwent aerobic exercise (continuous running) for three days (alternative days) per week, group - II (n = 15) underwent yogic practice for six days per week (Monday to Saturday) for twelve weeks and group – III (n = 15) remained as control. . Prior to and after the training period the subjects were tested for, flexibility, muscular endurance and shoulder muscular strength. Flexibility was measured by sit and reach test, muscular endurance measured by sit – ups and shoulder muscular strength was measured by push – ups test. The statistical tool were used for the present study is Analysis of covariance (ANCOVA). If obtained 'F' ratio is significant, Scheffe's test used as a post hoc test to find out the differences among the groups. The result of the study was a significant improvement on flexibility muscular endurance and shoulder muscular strength after twelve weeks of aerobic exercises and yogic practices. However the improvement was favour of experimental groups. There was a significant difference was occurred between aerobic exercises and yogic practices group and control group after twelve weeks of aerobic exercises and yogic practices.

Key Words:- *Aerobic Exercises, yogic Practices, Soccer, Flexibility, Muscular endurance and Shoulder muscular strength*

INTRODUCTION

Aerobic is something but nothing that relates or involves or requires free oxygen and moreover means the usage of oxygen that is sufficiently requisite to gather energy insistence while performing physical jerk by aerobic metabolism. The activities that can maximize intensity performance are maximally supported by aerobic metabolism and further they performed with added phase of duration.

Yoga is not an antique legend hidden in forgetfulness. It is the good number of precious in stupor. This is the necessary requirement of today and the traditions of tomorrow. It is an art of right living and, as such, is proposed to be included in daily life.

In the game of football, there are eleven players are played in each side of two sides or teams on a rectangular play field with goals of net at either end. The players shall drive the football into the opponent's goal by heading, kicking or using any part of the human body except the arms and hands.

STATEMENT OF THE PROBLEM

The purpose of present study was to find out the effect of aerobic exercises and yogic practices on flexibility muscular endurance and shoulder muscular strength among male soccer players.

METHODOLOGY

To achieve this purpose, forty five soccer players, studying in various colleges of Thiruvalluvar University, Vellore, Tamilnadu, in the age group of 19 - 25 years were selected as subjects. The selected forty five subjects were randomly divided into three groups of fifteen each, out of which group - I (n = 15) underwent aerobic exercise (continuous running) for three days (alternative days) per week, group - II (n = 15) underwent yogic practice for six days per week (Monday to Saturday) for twelve weeks and group – III (n = 15) remained as control. . Prior to and after the training period the subjects were tested for, flexibility, muscular endurance and shoulder muscular strength. Flexibility was measured by sit and reach test, muscular endurance measured by sit – ups and shoulder muscular strength was measured by push – ups test.

ANALYSIS OF DATA

The data collected prior to and after the experimental periods flexibility, muscular endurance and shoulder muscular strength on aerobic exercises and yogic practices and control group were analyzed and presented in the following table –I

Table-I

Analysis of covariance of aerobic exercises and yogic practices and control groups

Variable Name	Group Name	Aerobic Exercises	Yogic Practices	Control Group	F ratio
Flexibility	Pre-test Mean ± S.D	7.80 ± 0.86	7.73 ± 0.70	7.80 ± 0.76	0.038
	Post-test Mean ± S.D.	10.07 ± 0.96	10.27 ± 0.88	7.60 ± 0.74	44.17*
	Adj.Post-test Mean ± S.D.	10.059	10.782	7.592	48.45*
Muscular Endurance	Pre-test Mean ± S.D	35.73 ± 1.16	35.40 ± 1.242	36.13 ± 1.36	1.28
	Post-test Mean ± S.D.	38.33 ± 1.11	38.80 ± 0.94	35.53 ± 1.45	33.07*
	Adj.Post-test Mean ± S.D.	38.349	39.055	35.263	93.05*
Shoulder muscular strength	Pre-test Mean ± S.D	26.13 ± 1.30	25.80 ± 1.08	25.27 ± 1.10	2.11
	Post-test Mean ± S.D.	28.47 ± 1.13	28.93 ± 1.30	24.73 ± 1.49	46.63*
	Adj.Post-test Mean ± S.D.	28.145	28.88	25.109	66.41*

Significant at .05 level of confidence

** (The table value required for significance at .05 level of confidence with df 2 and 42 and 2 and 41 were 3.22 and 3.23 respectively.)*

RESULTS

From the Table-I it is clear that aerobic exercises and yogic practices increases flexibility, muscular endurance and shoulder muscular strength when compare with control group.

Further to determine which of the paired means has a significant improvement, Scheffĕ *S* test was applied as post-hoc test. The result of the follow-up test is presented in Table – II.

Table – II

Scheffĕ S Test for the Difference Between the Adjusted Post-Test Mean of flexibility, muscular endurance and shoulder muscular strength on aerobic exercises and yogic practices and control group

Aerobic Exercises	Yogic Practices	Control Group	Mean Difference	Confidence interval at .05 level
Adjusted Post-test Mean of Flexibility				
10.059		7.592	2.467*	0.77
10.059	10.282		0.223	0.77
	10.282	7.592	2.69*	0.77
Adjusted Post-test Mean of Muscular endurance				
38.349		35.263	3.086*	0.75
38.349	39.055		0.706	0.75
	39.055	35.263	3.792*	0.75
Adjusted Post-test Mean of Shoulder muscular strength				
28.145		25.109	3.036*	0.75
28.145	28.88		0.735	0.75
	28.88	25.109	3.771*	0.75

* Significant at 0.05 level of confidence.

Both aerobic exercises and yogic practices increases flexibility, muscular endurance and shoulder muscular strength when compare with control. yogic practices may have better effect to increases flexibility and muscular endurance among soccer players and aerobic exercises may have better to increase shoulder muscular strength to soccer players.

CONCLUSIONS

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

1. There was a significant difference between aerobic exercises and yogic practices on flexibility, muscular endurance and shoulder muscular strength when compared with the control group.

2. The improvement in criterion variable such as flexibility and muscular endurance was higher for the yogic practices group than the aerobic exercises group.

3. The improvement on shoulder muscular strength was better for aerobic exercises group than the yogic practices group.

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