

## **EFFECT OF AEROBIC EXERCISES AND YOGIC PRACTICES ON INSPIRATORY RESERVE VOLUME AND EXPIRATORY RESERVE VOLUME 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 inspiratory reserve volume and expiratory reserve volume among male soccer players. To achieve this purpose, forty five soccer players, studying in various departments from Annamalai University, Chidambaram, 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 five 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, inspiratory reserve volume and expiratory reserve volume. inspiratory reserve volume and expiratory reserve volume assessed by using expirograph. 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 inspiratory reserve volume and expiratory reserve volume 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, inspiratory reserve volume and expiratory reserve volume*

## **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 work 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 inspiratory reserve volume and expiratory reserve volume among male soccer players.

## **METHODOLOGY**

To achieve this purpose, forty five soccer players, studying in various departments from Annamalai University, Chidambaram, 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 five 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, inspiratory reserve volume and expiratory reserve volume. inspiratory reserve volume and expiratory reserve volume assessed by using expirograph.

### ANALYSIS OF DATA

The data collected prior to and after the experimental periods inspiratory reserve volume and expiratory reserve volume 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
Inspiratory Reserve Volume	Pre-test Mean ± S.D	2.492 ± 0.092	2.441 ± 0.633	2.45 ± 0.125	1.211
	Post-test Mean ± S.D.	2.555 ± 0.088	2.524 ± 0.074	2.455 ± 0.133	4.60*
	Adj.Post-test Mean ± S.D.	2.529	2.541	2.464	12.19*
Expiratory Reserve Volume	Pre-test Mean ± S.D	1.105 ± 0.015	1.103 ± 0.016	1.107 ± 0.019	0.221
	Post-test Mean ± S.D.	1.151 ± 0.017	1.146 ± 0.018	1.098 ± 0.018	40.28*
	Adj.Post-test Mean ± S.D.	1.150	1.149	1.096	126.7*

*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 inspiratory reserve volume and expiratory reserve volume when compare with control group.

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

*Table – II*

*Scheffé S Test for the Difference Between the Adjusted Post-Test Mean of inspiratory reserve volume and expiratory reserve volume on aerobic exercises and yogic practices and control group*

Aerobic Exercises	Yogic Practices	Control Group	Mean Difference	Confidence interval at .05 level
<b>Adjusted Post-test Mean of inspiratory reserve volume</b>				
2.529		2.464	0.065*	0.043
2.529	2.541		0.012	0.043
	2.541	2.464	0.077*	0.043
<b>Adjusted Post-test Mean of expiratory reserve volume</b>				
1.150		1.096	0.054*	0.019
1.150	1.149		0.001	0.019
	1.149	1.096	0.053*	0.019

\* Significant at 0.05 level of confidence.

Both aerobic exercises and yogic practices increases inspiratory reserve volume and expiratory reserve volume when compare with control.

## CONCLUSIONS

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

Both, yogic practices group and aerobic exercises group have improved their inspiratory reserve volume and expiratory reserve volume when compared with the control group.

Syed Hojjat et.al., (2016) found that there was a high improvement in inspiratory reserve volume and expiratory reserve volume after the yogic practices and aerobic exercises programme. Madanamohan et.al., (1992), Shyamkarthick et.al., (2014), Havesepian et.al., (2013) and Shinde and KJ (2013) has recommended from his research work that there was a high improvement in inspiratory reserve volume and expiratory reserve volume after the yogic practices and aerobic exercises programme. In addition, the results of the tests shows that there was no significant difference between experimental groups.

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