

EFFECTS OF YOGA PRACTICES ON SELECTED PHYSIOLOGICAL PARAMETERS OF BHARATHIDASAN UNIVERSITY INTER-COLLEGIATE MEN FOOTBALL PLAYERS

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ABSTRACT

The purpose of this study was to find out the effects of yoga practices on selected physiological parameters of Bharathidasan University inter-collegiate men Football players. The study was conducted on thirty Football players from various colleges who have participated in Bharathidasan University Tiruchirappalli, Thanjavur Divisional tournaments 2019-2020. Subjects were randomly assigned equally into two groups, Group -I underwent yogic practices group (n=15) and group II (n=15) acted as control group. Resting pulse rate, Breath holding time and Cardio respiratory endurance were selected as creation variables. The training programme was restricted to 12 weeks and the number of session was 3 days per week. Resting pulse rate was assessed by Radial pulse method, Breath holding time was assessed by Manuel method and Cardio Respiratory Endurance was assessed by Cooper's 12 minutes run/walk test. The data was collected from the experimental and Control Groups before and after the 8 weeks of training programme were statically examined with Analysis of covariance (ANCOVA). Resting Pulse Rate, Breath Holding Time and Cardio Respiratory Endurance showed significant difference between the groups.

Keywords: Football, Physiological variable, Resting Pulse Rate, Breath Holding Time and Cardio Respiratory Endurance

INTRODUCTION

Yoga is a commonly known generic term for physical, mental, and spiritual disciplines which originated in ancient India. Specifically, yoga is one of the six āstika ("orthodox") schools of Hindu philosophy. One of the most detailed and thorough expositions on the subject are the Yoga Sūtras of Patañjali. Various traditions of yoga are found in Hinduism, Buddhism, Jainism and Sikhism (Dias et al., 2008).

Pre-philosophical speculations and diverse ascetic practices of first millennium BCE were systematized into a formal philosophy in early centuries CE by the Yoga Sutras of

Patanjali. By the turn of the first millennium, Hatha yoga emerged as a prominent tradition of yoga distinct from the Patanjali's Yoga Sutras. While the Yoga Sutras focus on discipline of the mind, Hatha yoga concentrates on health and purity of the body (Telles et al., 2004).

Hindu monks, beginning with Swami Vivekananda, brought yoga to the West in the late 19th century. In the 1980s, yoga became popular as a physical system of health exercises across the Western world. Many studies have tried to determine the effectiveness of yoga as a complementary intervention for cancer, schizophrenia, asthma and heart patients. In a

national survey, long-term yoga practitioners in the United States reported musculo-skeletal and mental health improvements (Iyengar, 1981).

METHODOLOGY

The study was conducted on thirty (N=30) men University Football players who were participated in Bharathidasan University Tiruchirappalli, Thanjavur Divisional inter-collegiate Football tournaments held during 2019-2020. Subjects were randomly assigned equally into two groups, Group-I underwent Yogic Practice Group (n = 15) and Group II (n=15) acted as control. The training period was limited to 12 weeks and the number of session is three days week. The duration of training session in all the days were between forty five minutes to one hour approximately which included warming up and limbering down. Yogic training programmes includes:

- Padmasana
- Vajrasana
- Halasana
- Dhaurasana
- Bhujanganasana
- Vibareeetha karani
- Matsyasana
- Uththitha padmasana
- Kurmasana
- Tolasana
- Utkatasana
- Vrksasana
- Pawan muktasana
- Sarangasana
- Nadisudhi
- Ujjayi and
- Sarvangasana.

Resting pulse rate, Breath holding time and Cardio respiratory endurance were selected as creation variables. All the two groups were tested on selected criterion variables prior to and immediately after the 12 weeks of yogic

training programme. Resting Pulse Rate was assessed by Radial pulse method, Breath holding time was assessed by stop watch manual method, and Cardio respiratory endurance was assessed by Cooper's 12 Minutes Run/walk Test.

STATISTICAL ANALYSIS

The data collected from the Experimental group and Control group prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. The level of significance was fixed at .05 level of confidence to test the 'f' ratio obtained by analysis of covariance.

Table - 1

The summary of pre and post test mean on selected physiological variables of yogic practice and control groups

Criterion variables	Mean	Yogic Practice Group	Control Group
Resting Pulse Rate	Pre test mean	81.07	74.6
	Post test mean	74.53	74.22
Breath Holding Time	Pre test mean	22.77	22.04
	Post test mean	26.48	21.99
Cardio Respiratory Endurance	Pre test mean	1780.00	1787.33
	Post test mean	2040.67	1774.00

Table - 1 show that pre and post test mean of Resting pulse rate, Breath holding time and Cardio respiratory endurance between Yogic practices group and Control group. It was concluded that Yogic practices group had significant improvement in the performance of Resting pulse rate, Breath holding time and

Cardio respiratory endurance. However control group had no significant improvement in the performance of selected variables.

The analysis of covariance on of Resting pulse rate, Breath holding time and Cardio respiratory endurance of Yogic practices group and Control group have been analyzed and presented in Table – 2.

Table – 2
Analysis of Covariance on Criterion variables of Yogic Practices Group and Control Group

Criterion Variable	Adjusted Post Test Means		Source of variance	Sum of Squares	df	Mean Squares	'F' - ratio
	Yogic Practices Group	Control Group					
Resting Pulse Rate	74.6	81.07	Between	313.63	1	313.63	95.43*
			Within	88.74	27	3.29	
Breath Holding Time	26.18	23.30	Between	107.78	1	107.78	114.76*
			Within	25.36	27	0.94	
Cardio Respiratory Endurance	2042.44	1772.22	Between	546026.25	1	546026.25	63.10*
			Within	233631.31	27	8653.03	

* Significant at .05 level of confident.

Table value required for significance at .05 level with df 1 and 27 is 4.21

From table –2, the obtained value of 'f' - ratio for Resting pulse rate, Breath holding time and Cardio respiratory endurance, for adjusted post test means were 95.43, 114.76 and 63.10. These values are more than the table value of 4.21 for df 1 and 27 required for significant at 0.05 level of confidence. The results of the study indicated that significant differences exist among the adjusted post test means of experimental and control groups on the development of Resting

Pulse Rate, Breath Holding Time and Cardio Respiratory Endurance.

The mean values of Yogic practices group and control group on Resting pulse rate, Breath holding time and Cardio respiratory rate were graphically represented in the Figure 1, Figure-2 and Figure-3 respectively.

Figure-1
Mean values of yogic practices group and control group on Resting Pulse Rate

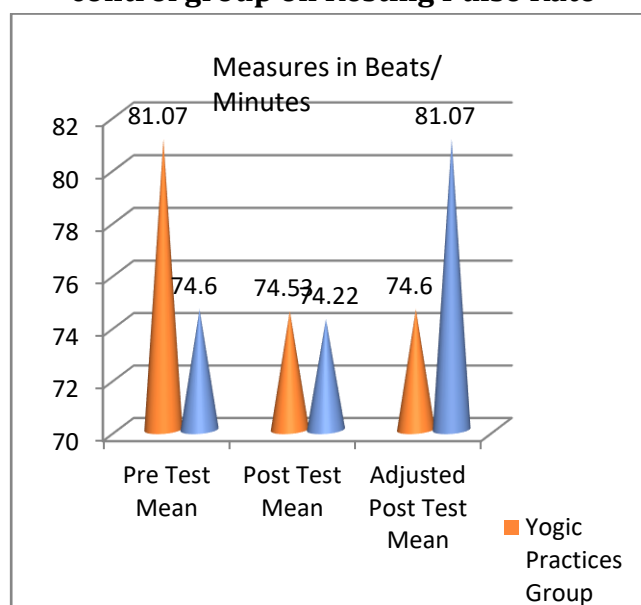


Figure-2
Mean values of yogic practices group and control group on Breath Holding Time

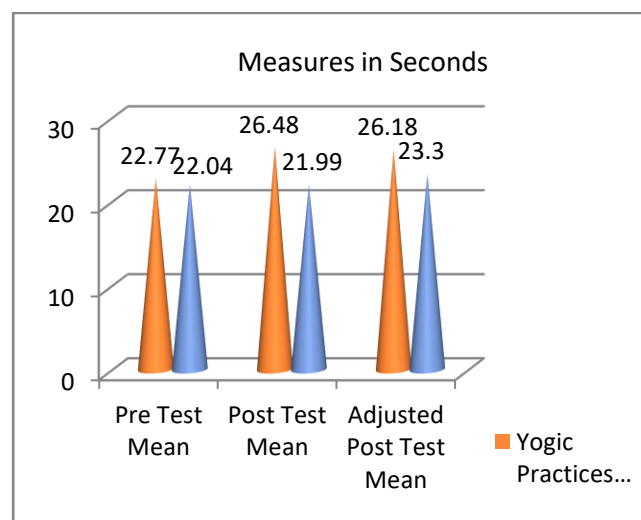
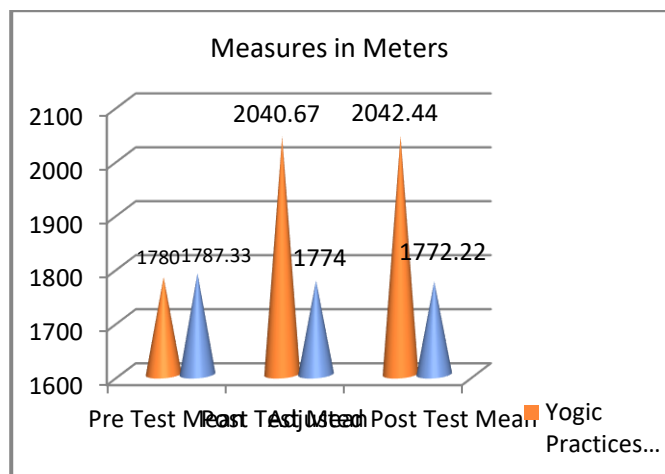


Figure-3

Mean values of yogic practices group and control group on Cardio Respiratory Rate



CONCLUSIONS

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

1. The results of the study showed there was a significant difference between Yogic practices group and Control group on selected Physiological variables among Anna University men Soccer participants.
2. The Yogic practices group was found to be better than the Control group in developing physiological related variables such as Resting pulse rate, Breath holding time and Cardio respiratory endurance.

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