



Impact of yogic practices on selected physiological variables among inter collegiate male cricket players

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Abstract

The purpose of the study was to find impact of yogic practices on selected physiological variables among inter collegiate male cricket players. The study was conformed to thirty cricket players were selected randomly as subjects, from Vinayaka Mission's College of Physical Education, Salem, Tamil Nadu, India. Their age ranged between 18 to 25 years. They were divided into two equal groups each group consisted of 15 players. Namely experimental group (yogic practices) and control group. They were tested twice before and after the training with respect physiological variables of resting heart rate and breath holding time. The training period for this study was three alternative days per week, for eight weeks. The data collected from the subjects were analyzed with descriptive statistics and paired sample 't' test to find out the influence of the selected independent variables on the criterion variable and analyzed by analysis of co-variance (ANACOVA) and the significance difference on experimental groups with the level of confidence was fixed as 0.05 level. It was concluded that both the experimental groups were having more significant improvement on resting heart rate and breath holding time than the control group.

Keywords: Yogic practices, resting heart rate and breath holding time

Introduction

Yogic practice may help to reduce training and competition stress which largely affects match performance. Cricket is a skill-oriented game and physical fitness also plays an important role because to execute a motor skill, physical fitness is required. There are numerous research works in world literature on the positive effect of yogic asana on different sports and sedentary populations but a few research works have been done on cricketers. There are hardly any data and yogic training scheduled available in the Indian context. Keeping in mind this gap in knowledge, this pilot study will focus on finding out a suitable yogic practice schedule that can improve cricket specific motor fitness and its effect on performance of regional cricketers. Subhashis Biswas *et al.*, (2021) [7].

The word Yoga is derived from Sanskrit word 'Yog', which means 'Jod' in Hindi or 'Joining' in English. This is joining of 'Jivatam' (Human) with 'Parmatma' (God). Through the practice of Yoga, one can have self-realisation and achieve God. 'Yog' word became Yoga in English. For a simple person, Yoga is another form of physical exercise. By doing physical exercises, one can develop only body muscles. But through Yoga, one achieves the conditioning of even all internal organs like heart, brain, spleen, liver, lungs. Apart from these vital organs, through yoga all the glands like thyroid, pituitary, and Pancreas gland of the brain, function better.

Cricket grew out of the many stick-and-ball games played in England 500 years ago, under a variety of different rules. The word 'bat' is an old English word that simply means stick or club. By the seventeenth century, cricket had evolved enough to be recognisable as a distinct game and it

was popular enough for its fans to be fined for playing it on Sunday instead of going to church. Till the middle of the eighteenth century, bats were roughly the same shape as hockey sticks, curving outwards at the bottom. There was a simple reason for this: the ball was bowled underarm, along the ground and the curve at the end of the bat gave the batsman the best chance of making contact. How that early version of cricket played in village England grew into the modern game played in giant stadiums in great cities is a proper subject for history because one of the uses of history is to understand how the present was made. And sport is a large part of contemporary life: it is one way in which we amuse ourselves, compete with each other, stay fit, and express our social loyalties. If tens of millions of Indians today drop everything to watch the Indian team play a Test match or a one-day international, it is reasonable for a history of India to explore how that stick-and-ball game invented in south-eastern England became the ruling passion of the Indian sub-continent. This is particularly so, since the game was linked to the wider history of colonialism and nationalism and was in part shaped by the politics of religion and caste.

Methodology

The purpose of the study was to find out impact of yogic practices on selected physical and physiological variables among inter collegiate male cricket players. To achieve the purpose of the study, thirty (30) cricket players were selected randomly as subjects, from Vinayaka Mission's College of Physical Education, Salem, Tamil Nadu, India. Their age ranged between 18 to 25 years. The selected subjects were randomly divided into two equal groups of fifteen (n=15) each. Experimental group I (n=15) yogic

practices for a duration of eight weeks, with three days per week, in addition to the regular schedule and group II (n=15) control, who is asked to refrain from any special training except their leisure time pursuit. Members of two groups will consist of healthy men collegiate male cricket players.

Independent Variables

Taking into consideration of the feasibility of criteria, availability of instruments and the relevance of the variable to the present study, the following dependent variables and tests were selected.

Table 1: Criterion Measures and Test Selection

S. no	Variables	Test/Equipment Used	Measuring Unit
Physiological Variables			
1	Resting Heart Rate	Heart Rate Monitor	In Heart Beats/Minute
2	Breath Holding Time	Digital Stop Watch	In seconds

Training Programme

The experimental groups namely yogic practices their respective training programs for the duration of 8 weeks of

24 morning sessions in addition to their regular programme in their curriculum design.

Results

Table 2: Mean Standard Deviation and Dependent ‘t’- Test Values on Resting Heart Rate and Breath Holding Time of Experimental and Control Groups

S. No	Variables	Mean and SD	YPG	CG
1	Resting Heart Rate	Pre test mean	75.99	76.34
		SD (±)	0.7	0.95
		Post test mean	72.86	75.63
		SD (±)	0.57	1.54
		‘t’ test	12.16*	1.83
2	Breath Holding Time	Pre test mean	33.79	33.98
		SD (±)	0.48	0.61
		Post test mean	37.01	34.35
		SD (±)	0.60	1.33
		‘t’ test	14.13*	1.46

Significant at 0.05 level. (Table value required for significance at 0.05 level for ‘t’-test with df 14 is 2.14)

The Table II show that the pre-test mean value of resting heart rate and breath holding time on experimental group and control groups are 75.99, 76.34 and 33.79, 33.98 and post-test means are 72.86, 75.63 and 37.01, 34.35. The obtained dependent t-ratio values between the pre and post test score of experimental and control groups are 12.16, 1.83 & 14.13, 1.46. The table value required for significant difference with df 14 at 0.05 level is 2.15. Since, the

obtained ‘t’ ratio value of experimental group is greater than the table value, it was under should that the yogic practice group had significant improvement the resting heart rate and breath holding time. However, the control groups significantly not improvement. The obtained ‘t’ value is less than the table value, as they not subject to any specific training.

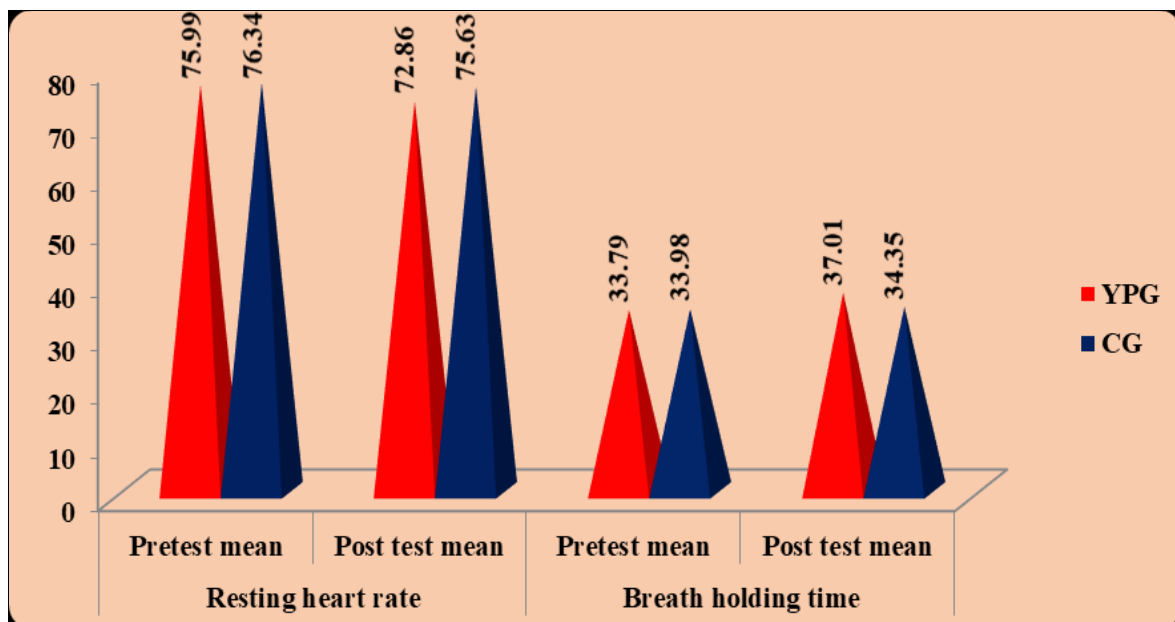


Fig 1: Pre and Post Test Mean of Experimental Groups and Control Group on Resting Heart Rate and Breath Holding Time among Inter Collegiate Male Cricket Players

Table 3: Analysis of Covariance for Experimental and Control Groups on Resting Heart Rate and Breath Holding Time among Inter Collegiate Male Cricket Players

Variables	Adjusted Post-Test Means		SOV	SS	Df	MS	F-ratio
	YPG	CG					
Resting Heart Rate	72.91	75.57	B.S	50.53	1	50.53	37.77*
			W.S	36.11	27	1.33	
Breath Holding Time	37.09	34.27	B.S	57.95	1	57.95	65.19*
			W.S	24.00	27	0.88	

* Significant at 0.05 level of confidence (The table value required for Significance at 0.05 level with df 1 and 27 is 4.21).

Table-III shows that the adjusted post test mean value of resting heart rate and breath holding time or yogic practice group and control group are 72.91, 75.57 and 37.09, 34.27 respectively. The obtained F-ratio of 37.77 and 65.19 for the adjusted post test mean is more than the table value of 4.21 for df 1 and 27 required for significance at 0.05 level of confidence. Since the value of F-ratio is higher than the

table value, it indicate that there is significant difference exist between the adjusted post-test means of practice group in improving the resting heart rate and breath holding time when compared to control group. The pre, post and adjusted mean values of resting heart rate and breath holding time of both experimental and control groups are graphically represented in the figure-2.

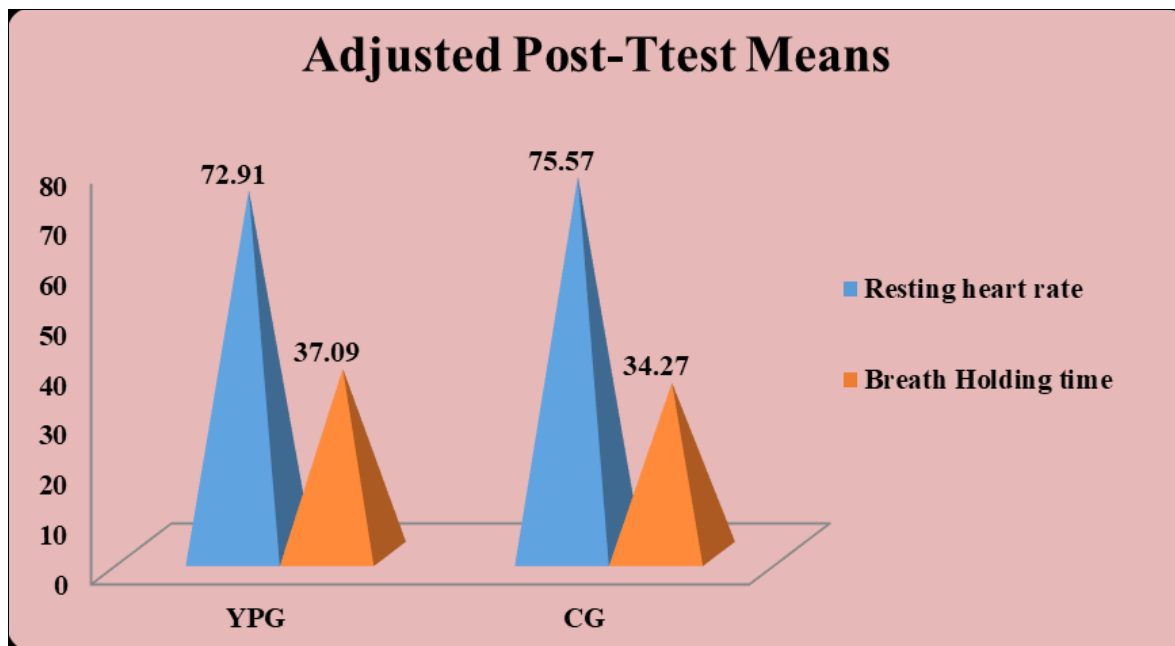


Fig 2: The Pre, Post and Adjusted Mean Values of Resting Heart Rate and Breath Holding Time of Both Experimental and Control Groups

Discussion on Findings

The results of the find out about point out that the experimental team which underwent yogic practice team had confirmed considerable improvement resting heart rate and breath holding time in contrast to manipulate group. The control crew did not enhancement on resting heart rate and breath holding time. The results of the study are in line with the studies of Eswaramoorthy, & Suresh Kumar (2020) [1], Suman Kumar & Yokesh (2019) [5], Suresh Kumar (2019) [6], Nandi *et al.*, (2004) [2].

Conclusions

It was concluded that the cricket players of the experimental group showed significant improvement in all selected physiological variables, namely resting heart rate and breathe holding time.

It was also concluded that the cricket players of control group would not shown significant improvement in any of the variables selected.

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