ARUNAI PUBLICATIONS

Asian Journal of Applied Research

DOI: http://dx.doi.org/10.20468/ajar.2017.08.003

Original Article

Effect Yogic Practices on Selected Physical and Physiological Variables among College Men Hockey Players

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ABSTRACT

The main purpose of this study is to find out the effect of yogic practices on selected physical and physiological variables among college men hockey players. For the present study, the researcher takes the male hockey players from Adhiyamaan College of Engineering, Hosur, taken as sources of data. Thirty male hockey players, who had participated in intercollegiate tournaments, were preferred as area under discussion for this study. The age of the subject matter was ranging from 18 to 25 years. The criterion measures adopted for the study measuring the physical and physiological variables are given below. To measure the physical variables sit and reach test for flexibility, 12 min run and walk for cardiorespiratory endurance, manual heart rate for resting heart rate and manual timing for breath holding time the effect of yogic practices on selected physical and physiological variables among college men hockey players the independent *t*-test was used at 0.05 level of significance. **Result:** There was a significant difference in experimental groups in flexibility, cardiorespiratory endurance, resting heart rate, and breath holding time.

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Keywords:
Hockey players, physical variables, physiological variables, Yoga

Received: 15th June 2017
Accepted: 25th July 2017
Published: 05th August 2017

INTRODUCTION

The most important benefit of yoga is physical and mental therapy. Indians have given great importance to "yoga" and "physical exercises" not only to prevent or cure the physical ailments/diseases but to keep fit also. The great ancient Rishis, Vedas, and Puranas also have given much importance to physical fitness.[1] Kalidasan and Samsudeen[2] investigated the impact of game-specific yogic training on cricket performance among college-level cricketers. The analysis revealed that physical field training combined with game and specific yogic training showed significant improvement on the cricket playing ability among cricketers. Shanmugam[3] studied the effect of asanas and jogging on selected physiological and hematological variables among school boys. Asanas were found to be more effective than jogging in improving pulse rate, vital capacity, breath holding time and serum cholesterol. It has already proven its mettle in the improvement of oxidative stress as well as in improving the glycemic status of diabetics through the neuroendocrinal mechanism.[4] Calorie restriction and the metabolic effects associated with yoga practice.[5] Regular practice of Surya Namaskar may maintain or improve cardiorespiratory fitness, as well as promote weight management. Petrofsky *et al.*[6] highlighted the yoga and yoga-related training increases the abdominal muscular endurance among the obese people. Karunakaran and Ramesh,[7] suggested that 12 weeks of yogic pranayama and meditation improve the hip flexibility level. Similarly, Ramesh and Subramaniam[8] confirm that yogic practices improve the level of flexibility. Slawta *et al.*[9] stated that 12 weeks yoga intervention, significant improvements were observed in body composition, fitness. Acharya *et al.*[10] have confirmed that regular practice of pranayama exercise increases the

Table 1

Physical and physiological variables	Test item	Unit of measurement
Flexibility	Sit and reach	c/m's
Cardiorespiratory endurance	Cooper's test	Meters
Resting heart rate	Stopwatch	Counts
Breath holding time	Manual	Minutes/seconds

Table 2

Variables	Group	Test	Mean±SD	df	"t" ratio
Flexibility	Control group	Pre-test	4.21±3.40	14	0.18
		Post-test	4.02±3.28		
	Experimental group	Pre-test	3.23±2.54	14	2.20*
		Post-test	6.06±3.59		
Cardiorespiratory endurance	Control group	Pre-test	2206±171.46	14	1.58
		Post-test	2106±171.46		
	Experimental group	Pre-test	2076±245.58	14	2.20*
		Post-test	2280±286.22		
Resting heart rate	Control group	Pre-test	72.67±3.92	14	1.58
		Post-test	74.53±3.40		
	Experimental group	Pre-test	74.93±4.46	14	2.37*
		Post-test	70.93±3.39		
Breath holding time	Control group	Pre-test	39.36±9.00	14	0.29
		Post-test	38.49±7.82		
	Experimental group	Pre-test	37.39±12.55	14	2.25*
		Post-test	47.17±9.88		

Insignificance at 0.05 level of confidence df (14) is=2.15. SD: Standard deviation

high-density lipoprotein-cholesterol level in normal healthy junior footballers. Systematic physical exercise training and yogic practice reduce the total cholesterol, low-density lipoprotein-cholesterol, and triglycerides level. The above findings can also be substantiated by observations made by renowned expert Ounis *et al.*[11] and Telles *et al.*[12]

METHODOLOGY

To achieve the purpose of these study 30 male Hockey players were selected at random, from the Adhiyamaan College of Engineering, Hosur, 30 players. The age of the subjects ranged from 18 to 25 years. The selected subjects were divided into one experimental group and one control group at random. The investigator reviewed the available scientific literature and on the basis of discussion with experts, feasibility, criteria, availability of instruments, equipment, and the relevance of the variables to this study. The following variables were selected for this study [Table 1].

Statistical techniques

Analysis of "t" ratio will be used in this study. The level of significance is 0.05 level of confidence which will be considered to be the appropriate one for this study.

RESULTS

Computation of "t" ratio between the pre- and post-test mean values of physical and physiological variables on experimental group and control group [Table 2].

DISCUSSION ON FINDINGS

The investigator had a through and vision that yogic practices would improve college men hockey players flexibility, cardiorespiratory endurance, resting heart rate, and breath holding time which in turn would help them to play better. The investigator selected exercises that are yogic practices for hockey players.

The statistical values presented in table proved that there was a significant improvement in selected physical and physiological variables among college men hockey players due to yogic practices. Obtained "t" value of flexibility is 2.20, cardiorespiratory endurance is 2.20, resting heart rate is 2.37, and breath holding time is 2.25, respectively, which is greater than the required "t" value to be significant. The degrees of freedom 2.15 at 0.05 level of confidence.

Thus, the hypothesis of this study that there would be a significant improvement due to yogic practices on selected physical and physiological variables among college men hockey players was accepted at 0.05 level of confidence.

CONCLUSIONS

Based on the results of the present study, the following conclusions: The results of the study showed that there were significant improvements in physical variables on flexibility and cardiorespiratory endurance after 6 weeks yogic practices among hockey players. The results of the study showed that there were significant improvements in physiological variables on breath holding time, and resting heart rate after 6 weeks of yogic practices among hockey players.

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Cite this article: Prem MA, Rajan KM. Effect Yogic Practices on Selected Physical and Physiological Variables among College Men Hockey Players. Asian J Appl Res 2017;3(8):8-10.

Source of Support: Nil, **Conflict of Interest:** None declared.