



Effect of Hatha Yoga Practices on Selected Physiological Variables among College Men Students

S. Sethilprabhu¹, Dr. A. Karthikeyan² & Dr. M. Kulothungan³

¹Research Scholar, Department of Physical Education, Annamalai University.

²Assistant Professor, Department of Physical Education, Annamalai University.

³Physical Director, Department of Physical Education, D.R.B.C.C Hindu College, Chennai.

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Abstract

The purpose of the study was designed to examine the effect of Hatha yoga practices on resting pulse rate and breath holding time of college men students. For the purpose of the study, thirty men students from the colleges in and around Chennai, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent Hatha yoga practices for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and shuttle run respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as an appropriate. The results of the study showed that there was a significant difference between Hatha yoga practices group and control group on resting pulse rate and breath holding time. And also it was found that there was a significant improvement on resting pulse rate and breath holding time due to twelve weeks of Hatha yoga practices.

Keywords: Hatha yoga practices, Resting pulse rate, Breath holding time, College men Students, ANCOVA.

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Introduction

Hatha yoga is a branch of yoga that emphasizes physical exercises, including postures (asanas) and breathing techniques (pranayama), to improve mental and physical well-being. The word "hatha" can be translated as "forceful," implying that the physical practices of hatha yoga require effort and discipline. Asanas: These are physical postures that help to strengthen and stretch the body. Asanas can be standing, seated, or lying down, and can range from simple to challenging. Pranayama: These are breathing exercises that focus on controlling the breath and the flow of prana, or vital energy, in the body. Meditation: Hatha yoga often includes meditation practices, which can help to calm the mind and promote relaxation. Bandhas: These are muscular contractions that are used to regulate the flow of energy in the body and can be incorporated into asanas or practiced on their own. Hatha yoga is suitable for people of all ages and fitness levels, and can be modified to suit individual needs and abilities. It is important to consult with a qualified instructor and to listen to your body when practicing hatha yoga to ensure that you are performing the postures and techniques

safely.

Methodology

The purpose of the study was designed to examine the effect of Hatha yoga practices on resting pulse rate and breath holding time of college men students. For the purpose of the study, thirty men students from the colleges in and around Chennai, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent Hatha yoga practices for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and shuttle run respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as an appropriate.

Correspondence

Dr.M.Kulothungan

Annamalai University

Analysis of the Data

Resting pulse rate

The analysis of covariance on resting pulse rate of the pre and post test scores of Hatha yoga practices

group and control group have been analyzed and presented in Table I.

**TABLE I
ANALYSIS OF COVARIANCE OF THE DATA ON RESTING PULSE RATE OF PRE AND POST TESTS
SCORES OF HATHA YOGA PRACTICES AND CONTROL GROUPS**

Test	Hatha yoga practices group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	73.87	74.13	Between	0.53	1	0.53	1.11
S.D.	0.62	0.68	Within	13.47	28	0.48	
Post Test							
Mean	72.73	73.93	Between	10.80	1	10.80	12.26*
S.D.	0.72	0.68	Within	24.67	28	0.88	
Adjusted Post Test							
Mean	72.84	73.83	Between	7.07	1	7.07	34.57*
			Within	5.52	27	0.20	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table I shows that the adjusted post-test means of Hatha yoga practices group and control group are 72.84 and 73.83 respectively on resting pulse rate. The obtained “F” ratio of 34.57 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on resting pulse rate. The results of the study indicated that there was a significant difference between the adjusted

post-test means of Hatha yoga practices group and control group on resting pulse rate.

Breath holding time

The analysis of covariance on breath holding time of the pre and post test scores of Hatha yoga practices group and control group have been analyzed and presented in Table II.

**TABLE II
ANALYSIS OF COVARIANCE OF THE DATA ON BREATH HOLDING TIME OF PRE AND POST TESTS
SCORES OF HATHA YOGA PRACTICES
AND CONTROL GROUPS**

Test	Hatha yoga practices group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	35.53	35.87	Between	0.83	1	0.83	0.99
S.D.	1.02	1.82	Within	23.47	28	0.84	
Post Test							
Mean	40.47	36.00	Between	149.63	1	149.63	20.40*
S.D.	0.72	0.63	Within	205.37	28	7.33	
Adjusted Post Test							
Mean	40.62	35.84	Between	165.69	1	165.69	129.28*
			Within	34.61	27	1.28	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table II shows that the adjusted post-test means of Hatha yoga practices group and control group are 40.62 and 35.84 respectively on breath holding time. The obtained “F” ratio of 129.28 for adjusted post-test

means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on breath holding time.

The results of the study indicated that there was a significant difference between the adjusted post-test means of Hatha yoga practices group and control group on breath holding time.

Conclusions

1. There was a significant difference between Hatha yoga practices group and control group on resting pulse rate and breath holding time.
2. And also it was found that there was a significant improvement on selected criterion variables such as resting pulse rate and breath holding time due to Hatha yoga practices.

References

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3. "The Yoga Sutras of Patanjali" by Swami Satchidananda: This is a classic text that provides a detailed overview of the philosophy and practice of yoga, including the eight limbs of yoga and the practice of meditation.
4. "Yoga: The Science of the Soul" by Swami Vivekananda: This book offers a philosophical exploration of the principles and practices of yoga, including the nature of the self, the role of the mind, and the path to liberation.
5. "The Heart of Yoga: Developing a Personal Practice" by T.K.V. Desikachar: This book provides a practical guide to developing a personalized yoga practice, including guidance on asana, pranayama, and meditation.