



## **EFFECT OF PRANAYAMA PRACTICES ON SELECTED PHYSIOLOGICAL PARAMETERS AMONG COLLEGE MEN STUDENTS**

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### **Abstract:**

The purpose of the study was designed to examine the effect of pranayama practices on resting pulse rate and breath holding time among college men students. For the purpose of the study, thirty college men students from Dr. Sivanthi Aditanar College of Physical Education, Tiruchendur, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group I underwent pranayama 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 the two groups were tested on selected dependent variables namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time 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 appropriate. The results of the study showed that there was a significant difference between pranayama 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 selected criterion variables such as resting pulse rate and breath holding time due to pranayama practices.

**Key Words:** Pranayama Practices, Resting Pulse Rate, Breath Holding Time, College Men Students

### **Introduction:**

Pranayama, an ancient and integral component of the yogic tradition, serves as a transformative practice that focuses on the regulation of breath to enhance physical, mental, and spiritual well-being. Rooted in the Sanskrit words "prana" (life force or breath) and "yama" (control), Pranayama involves conscious and deliberate manipulation of the breath for various therapeutic and meditative purposes. As an essential element of yoga, Pranayama extends beyond simple breath control, aiming to balance the vital life force within the body. The breath is considered a bridge between the body and the mind, and by refining its rhythm and depth, practitioners can cultivate a heightened sense of awareness and harness the numerous benefits associated with this practice. Pranayama techniques encompass a wide array of breathing exercises, each designed to achieve specific outcomes. These may include calming the nervous system, increasing energy levels, improving concentration, and promoting a sense of inner peace. The practice is accessible to individuals of all ages and fitness levels, making it a versatile tool for enhancing overall health and promoting a holistic sense of well-being.

### **Methodology:**

The purpose of the study was designed to examine the effect of pranayama practices on resting pulse rate and breath holding time among college men students. For the purpose of the study, thirty college men students from Dr. Sivanthi Aditanar College of Physical Education, Tiruchendur, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group I underwent pranayama 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 namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time 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 appropriate.

### **Analysis of the Data:**

#### **Resting Pulse Rate:**

The analysis of covariance on resting pulse rate of the pre and post test scores of pranayama practices group and control group have been analyzed and presented in table 1.

Table 1: Analysis of Covariance of the Data on Resting Pulse Rate of Pre and Post Tests Scores of Pranayama Practices and Control Groups

Test	Pranayama Practices Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
<b>Pre Test</b>							
Mean	72.60	72.40	Between	0.30	1	0.30	0.29
S.D.	0.95	1.38	Within	29.20	28	1.04	
<b>Post Test</b>							
Mean	69.80	72.13	Between	40.83	1	40.83	12.85*
S.D.	1.02	1.15	Within	88.97	28	3.18	
<b>Adjusted Post Test</b>							
Mean	69.69	72.24	Between	48.37	1	48.37	99.96*
			Within	13.06	27	0.48	

\* 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 1 shows that the adjusted post-test means of pranayama practices group and control group are 69.69 and 72.24 respectively. The obtained "F" ratio of 99.96 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 pranayama 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 pranayama practices group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Breath Holding Time of Pre and Post Tests Scores of Pranayama Practices and Control Groups

Test	Pranayama Practices Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
<b>Pre Test</b>							
Mean	41.87	41.53	Between	0.83	1	0.83	0.29
S.D.	1.54	1.15	Within	79.47	28	2.84	
<b>Post Test</b>							
Mean	44.47	41.80	Between	53.33	1	53.33	12.50*
S.D.	1.71	1.76	Within	119.47	28	4.27	
<b>Adjusted Post Test</b>							
Mean	44.33	41.94	Between	42.61	1	42.61	83.81*
			Within	13.73	27	0.51	

\* 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 2 shows that the adjusted post-test means of pranayama practices group and control group are 44.33 and 41.94 respectively. The obtained "F" ratio of 83.81 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 pranayama practices group and control group on breath holding time.

**Conclusion:**

- There was a significant difference between pranayama 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 selected criterion variables such as resting pulse rate and breath holding time due to pranayama practices.

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