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INFLUENCE 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 Yogi Vemana University, Kadapa, Andhra Pradesh, India were selected as subjects. They were divided into two equal groups. Each group consisted of the 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 as an 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 change on selected criterion variables such as resting pulse rate and breath holding time due to pranayama practices.

Introduction:

Pranayama, an integral component of traditional yoga, is an ancient discipline that focuses on conscious control of the breath. Derived from Sanskrit, "Prana" means life force or vital energy, and "Yama" signifies control. Pranayama, therefore, translates to the regulation and extension of the life force through breath. This timeless practice offers profound benefits for both physical and mental well-being, making it a cornerstone of holistic health. At its core, pranayama emphasizes the awareness and intentional regulation of breath. This goes beyond mere inhalation and exhalation, delving into specific techniques that influence the flow of life force energy.

Pranayama is intricately woven into the fabric of yoga philosophy. As outlined in ancient yogic texts, the practice seeks to harmonize the mind, body, and spirit by aligning the breath with various energy channels in the body. Pranayama serves as a powerful tool for stress management by promoting a calm and focused mind. Controlled breathing triggers the relaxation response, mitigating the effects of chronic stress. Regular pranayama practices strengthen the respiratory system, increasing lung capacity and promoting efficient oxygen exchange. This is particularly beneficial for individuals with respiratory conditions. The intentional linking of breath and movement fosters a heightened awareness of the mind-body connection. This mindfulness can extend into daily life, promoting a sense of presence and centeredness. Pranayama techniques aim to balance the flow of energy throughout the body. This, in turn, is believed to enhance overall vitality and contribute to a 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 Yogi Vemana University, Kadapa, Andhra Pradesh, India were selected as subjects. They were divided into two equal groups. Each group consisted of the 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 as an 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 I.

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
Pre Test							
Mean	72.53	72.33	Between	0.30	1	0.30	0.49
S.D.	0.50	1.41	Within	17.07	28	0.61	
Post Test							
Mean	70.13	71.80	Between	20.83	1	20.83	9.26*
S.D.	0.94	0.91	Within	62.97	28	2.25	
Adjusted Post Test							
Mean	70.06	71.88	Between	24.37	1	24.37	20.35*
			Within	32.33	27	1.20	

* 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 1 shows that the adjusted post-test means of pranayama practices group and control group are 70.06 and 71.88 respectively. The obtained "F" ratio of 20.35 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
Pre Test							
Mean	43.27	42.07	Between	10.80	1	10.80	1.58
S.D.	1.18	1.06	Within	191.87	28	6.85	
Post Test							
Mean	48.07	42.93	Between	197.63	1	197.63	23.30*
S.D.	3.38	1.24	Within	237.50	28	8.48	
Adjusted Post Test							
Mean	47.90	43.10	Between	163.80	1	163.80	174.56*
			Within	25.34	27	0.94	

* 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 47.90 and 43.10 respectively. The obtained "F" ratio of 174.56 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at 0.05 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.

Conclusions:

- 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 change on selected criterion variables such as resting pulse rate and breath holding time due to pranayama practices.

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