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Influence of Yogic Training on Breath Holding Time among Sportsmen

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Abstract

The aim of the present study is to assess the Influence of yogic training on breath holding time among sportsmen. Thirty university players from various games and sports were randomly selected as subjects from Annamalai University, Annamalai nagar, Chidambaram, Tamilnadu. The subjects were divided into two groups as experimental and control each fifteen. The experimental group underwent yogic training for 5 days per week for 8 weeks. The collected data from the experimental and control group during pre and post test on breath holding time. The analysis of covariance (ANCOVA) was applied to find out significant difference if any between the experimental and control group as a result of eight weeks of yogic practices. In all cases .05 level of confidence was utilized to test the significance. The study resulted that the experimental group had a significant improvement on breath holding time as compared to the control group.

Keywords: Yogic Training, Breath Holding Time, Sportmen.

Introduction

Pranayama means control and regulation of breath. Prana is a Sanskrit word which means vital force. It also signifies of life of breath. Ayana means the control of the Prana so Pranayama means the control of the vital force by concentration regulated breathing. Prana is the vital power or force which is motivating every element on the earth and is the origin of the force of thought. There is a deep affinity between Prana and mental force, between mental force and intellect, between intellect and soul, and between soul and God. The Prana not only ensures the proper functioning of the body but is also the regulator and animator of the Physche. It is a remedy for several physical and psychic disturbances of which modern man is the victim.

In all forms of life from the highest to the lowest the Prana is present as a living force. All the force is based on Prana; it is the origin of movement, gravity, magnetism, physical action, the nerve currents and the force of the thought. Without Prana there can be no life, for it is the soul of all force and energy. It is found in the air, water and food. Prana is the vital force inside each living being and thought is the highest and most refined action of Prana. As we breathe, the movement of the lungs inhaling air is the expression of Prana. Pranayama is not simply the breathing but the control of the muscular force activating the lungs. The control of Prana through the concentration of thought and regular breathing is called pranayama. It is through Pranayama that each part of body can be field with Prana. Once one is capable of performing it, one is master of the body and can dominate illness and suffering. Prana is accumulated where our mind is concentrated.

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Methodology

To achieve the purpose of the study 30 university players from various games and sports were randomly selected as subjects from Annamalai University, Annamalai nagar, Chidambaram, Tamilnadu. The age of the subjects were ranged between 18 to 25 years. The selected subjects were divided into two groups of 15 subjects each. Group I considered as experimental group and Group II considered as control group. The yogic practices selected as experimental variable and the breath holding time was selected as criterion variable for this study. The experimental group underwent yogic training for 5 days per week for 8 weeks. On every day of the training session the suryanamaskar, asanas, pranayama, kriya and followed by Relaxation techniques were practiced approximately 45 min. The control group did not participate in this training programme apart from their day to day regular practice. The experimental group underwent the following yogic practices under the instruction and supervision of the investigator. The data were collected before and after eight weeks of yogic practices on breath holding time and it was measured by using the stopwatch to the nearest 1/10th of a second as breath holding time. The collected data from the experimental and control group during pre and post tests on breath holding time. The analysis of covariance (ANCOVA) was applied to find out significant difference if any between the

experimental and control group as a result of eight weeks of yogic practices. In all cases .05 level of confidence was utilized to test the significance.

Results of the Study

Breath Holding Time

Analysis of covariance of data on breath holding time between pre and post tests of experimental and control group is given in table I.

Table I. analysis of covariance of data on breath holding time between pre and post tests of experimental and control group

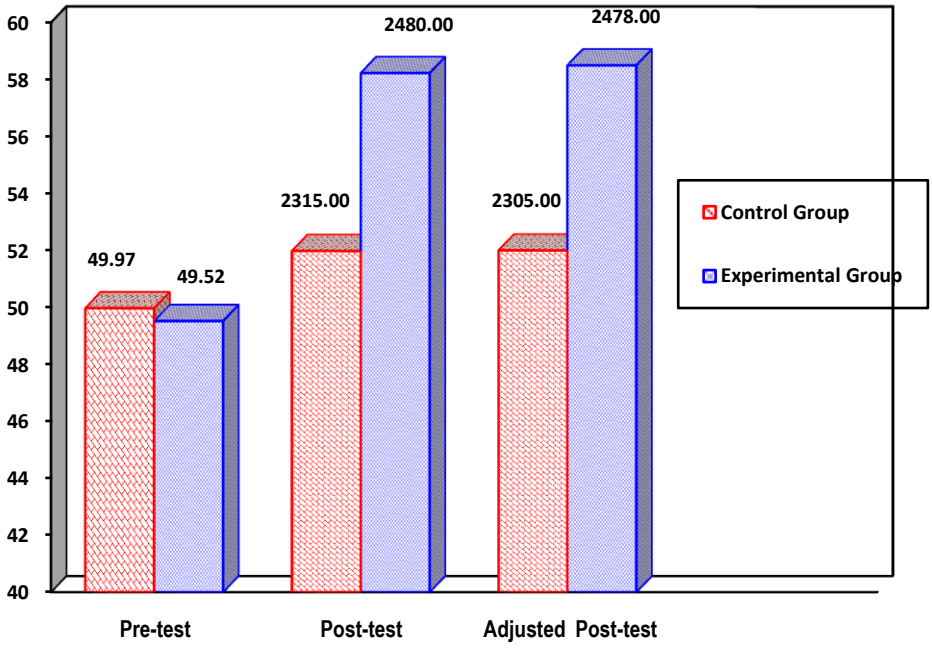
	Experimental group	**Control group**	*SOV*	**Sum of squares**	**df**	**Mean square**	*'F' RATIO*
Pre-Test							
Mean	49.52	49.97	B:	13.89	1	13.89	1.36
SD	1.02	1.21	W:	285.88	28	10.21	
Post-Test							
Mean	58.23	51.98	B:	312.55	1	312.55	5.02*
SD	0.98	1.11	W:	1743.28	28	62.26	
Adjusted Post-Test							
Mean	58.50	52.00	B:	302.81	1	302.81	5.72*
			W:	1429.38	27	52.94	

** Significant at 0.05 level of confidence.*
df-degrees of freedom; SD-Standard Deviation; S.O.V.-Source of Variance. B-Between; W-Within
The table value required for significance at 0.05 level with df 1 & 28, and 1 & 27 are 4.20 and 4.13 respectively.

Table-I shows that the pre-test means of experimental group and control group are 49.52 and 49.97 respectively. The obtained 'F' ratio of 1.36 for pre-test means is less than the table value of 4.20 for df 1 and 28 required for significance at 0.05 level. It indicates that there is no significant difference among the groups in the pre-test. The post-test means of experimental group and control group are 58.23 and 51.98 respectively. The obtained 'F' ratio of 5.02 for post-test mean is more than the table value of 4.20 for df 1 and 28 required for significance at 0.05 level. It implies that there are significant variations among experimental group and control group.

The adjusted post-test means of experimental and control group are 58.50 and 52.00 respectively. The obtained 'F' ratio of 5.72 for adjusted post-test is more than the table value of 4.13 for df 1 and 27 required for significance at 0.05 level. The result of the study indicates that there is significant difference between experimental group and control group on the changes in breath holding time after eight weeks of yogic practices. The mean values in breath holding time of yoga practice group and control group graphically represented in figure-I.

Figure I. The pre-test, post-test and adjusted post-test mean values of experimental group and control group on breath holding time



Findings

The above results indicated that the experimental group had significant changes in breath holding time when compared to control group and this might be due to the eight weeks of yogic practices. Results are conformity with the following studies:

(Aravind Kumar et al, 2013) have resulted that the breath holding time increased in experimental group as compared to control group due to ten weeks of yogic practices. The findings are in line with the findings of (Dabal, 2003) who investigated the relationship of breath holding capacity with pulmonary function and reported in his findings significant relationship between breath holding capacity with pulmonary function of male students. In a different study (Upadhyay et al. 2008) also reported same type of results; they studied the effects of pranayams on breath holding capacity and found significant relationship between pranayams and breath holding capacity of the subjects. (Sisodia and Tomar, 2009) in their investigation found contradict results, as they reported that there was no significant effect of pranayama on breath holding time. (Jesintha and Parthiban, 2007) studied the influence of yogic practices on resting pulse rate, breath holding time and cardio respiratory endurance of school kho-kho players. The study resulted resting pulse rate, breath holding time and cardio respiratory endurance showed significant difference between the groups.

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