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ORIGINAL ARTICLE

EFFECT OF EVERYDAY YOGIC PRACTICE ON SELECTED PHYSIOLOGICAL VARIABLES OF SCHOOL BOYS

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Abstract:

The objective of present study was to investigate whether effect of everyday yogic practice on selected physiological variables of school boys. Thirty healthy, above weight untrained boys were selected from Pondicherry and their age ranged between 14 to 16 years. The subjects were equally divided into two groups namely experimental group and control groups. The experimental groups underwent yoga practice for forty five minutes duration in selected asana, pranayama and meditation, for ten weeks except Sunday. Control group was kept under control without any training. BMI and respiratory pressure were measured through scientific physiological instruments. Prior to and at the end of practice period all the subjects were tested on selected physiological variables. The results of pre and post test were statistically treated by using analysis of variance. To find out the impact of yogic practice on selected physiological variables the 'F' ratio test value was statistically analysed and tested for significant difference at 0.05 level of confidence.

KEYWORDS:

yoga practice, asana, pranayama, BMI, respiratory pressure.

INTRODUCTION:

Yoga is an ancient Indian science which teaches man how to live in unity within himself and with those around him. It is recognized as one of the most important and valuable heritages of India. More than 2000 years ago our ancestors developed it to bind the body, mind and spirit, as a harmonious whole. It has been growing in popularity with unbelievable rapidity over the years. Today the whole world is looking towards yoga for answers to the various problems the modern man is facing.

Yoga is a way of life. It is an integrated system of education for the body, mind and inner spirit. This art of right living was perfected and practiced in India thousands of years ago but, as yoga deals with universal truths, its teachings are valid today as they were in the ancient times. Yoga is a practical aid, does not belong to one religion and its techniques could be practiced by the Buddhists, Jews, Christians, Muslims, Hindus and the Atheists alike. Yoga is union with all1. It brings peace to the human beings by physical practices with or without a toner on spiritualism (Dorling Kindersley, 1996).

As we live in the age of modern science and technology, our lifestyle has become very fast. It is also becoming very hard and difficult to live a natural and normal life because of the changing scenario of the world. The very air is becoming unfit for human consumption. Our cities are growing noisier, dirtier and congested. All these do create tension. The mind is always under strain due to various social evils. When we are under stress, our digestion is not proper and we may suffer from some fairly serious ailments like Asthma and Spondilytis etc., and yoga comes to our rescue at this juncture.

In the treatment of almost all the chronic disorders and ailments, yoga can assist in a big way, when practiced along with other streams of treatment. However it is not a panacea for all health problems. It has its own limitations. At the same time, it cannot cure the acute infective disorders of traumas. Obviously it is

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not possible to carry out surgical operations with its help. But it can definitely help in the post operational therapy, under able guidance (Bharati Joshi 2005)2.

The aim of yoga is to attain perfection of the intellect, both of the head and the heart, so that, the artist becomes devoted, true and pure. This demands an almost total relinquishment of interest in other activities of life except the chosen path. The mind is fluid and runs after sensual pleasures. Art demands total undivided focal attention. Hence Patanjali explains that the mind must be controlled and then submitted to serve the artistic nature of yoga to its highest potency. Yoga or any art requires acute sharpness of intellect and alert organs of perception. In yoga there is no competition but it requires freedom to think and reconstruct with a desire to perform better. Then it brings to the yogi the most exalted enlightenment. From now on, wherever the yogi is and whatever he does, his thoughts are rooted in spiritual communion, which takes him to the Zenith of spiritual life(B.K.S. Iyengar 1993)3.

Methodology

The purpose of present study is to find out the effect of everyday yogic practice on selected physiological variables of school boys. To achieve these purpose thirty (30) male students were selected at random by lot sampling technique from Pondicherry University and their age ranged between 20 to 25 years. The subjects were equally divided into two groups namely experimental group and control group. The experimental group underwent yoga practice for forty five minutes duration for ten weeks except Sunday. Each yoga session consisted forty five minutes duration in selected asana(yoga posture) 25 minutes, pranayama (Breath-control exercise) 10 minutes, meditation 05 minutes and 05 minutes relaxation. The body mass index was calculated by measuring the height and weight of the subjects. The height was measured in meters by using stadiometer and the weight was measured in kilograms by using a weighing machine. The following equation was used to calculate the body mass index (BMI) i.e. BMI= weight in kg / height in meter square) and respiratory pressure (inspireatory and expiratory) was measured by using respiratory flow meter. The results of pre and post test were compared by using analysis of variance (ANOVA). It was used statistical technique to determine the significant difference between two groups on the selected physiological variables at 0.05 level of confidence.

TABLE-I
ANALYSIS OF COVARIANCE OF BMI, INSPIRATORY AND EXPIRATORY PRESSURE BETWEEN THE CONTROL GROUP AND EXPERIMENTAL GROUPS

Variables	Test		Control group	Exp I	Source of variance	Sum of square	df	Mean square	F ratio
BMI	Pre-test	Mean	21.27	21.74	B	1.89	1	0.95	0.21
		S.D	2.15	2.28	W	190.76	28	4.542	
	Post test	Mean	21.75	20.74	B	20.24	1	10.12	40.47*
		S.D	0.13	0.13	W	10.25	28	0.25	
Inspiratory pressure	Pre-test	Mean	4.84	5.00	B	0.59	1	0.30	1.01
		S.D	0.59	0.49	W	12.23	28	0.29	
	Post test	Mean	4.84	5.67	B	12.16	1	6.08	20.94*
		S.D	0.58	0.49	W	12.19	28	0.29	
Expiratory pressure	Pre-test	Mean	4.50	4.43	B	0.60	1	0.30	1.24
		S.D	0.45	0.59	W	10.14	28	0.24	
	Post test	Mean	4.38	5.50	B	9.43	1	4.72	19.22*
		S.D	0.46	0.50	W	10.30	28	0.25	

*Significant at 0.05 level.

The table value required for significant at 0.05 level of confidence with degree of freedom 1 & ; 1 and 28 respectively.

RESULTS

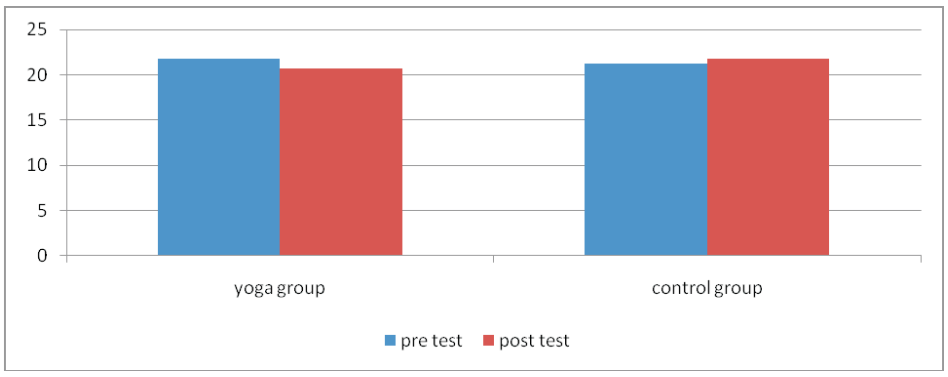
The pre test means of the control and experimental groups on BMI is 21.27+2.15 and 21.74+2.28. The obtained 'F' ratio value 0.21 for the pre-test mean is lesser than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. This reveals that there is no statistically significant difference between the control and the experimental group on BMI before the commencement of the experimental training. It is inferred that the selection of the subjects for the groups are successful. The post

test means of the control and experimental groups is 21.75+0.13 and 20.74+0.13. The obtained 'F' ratio value 40.47 for the post test data is greater than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. It discloses that there is a statistically significant difference between the control and the experimental group on BMI after the experimental training.

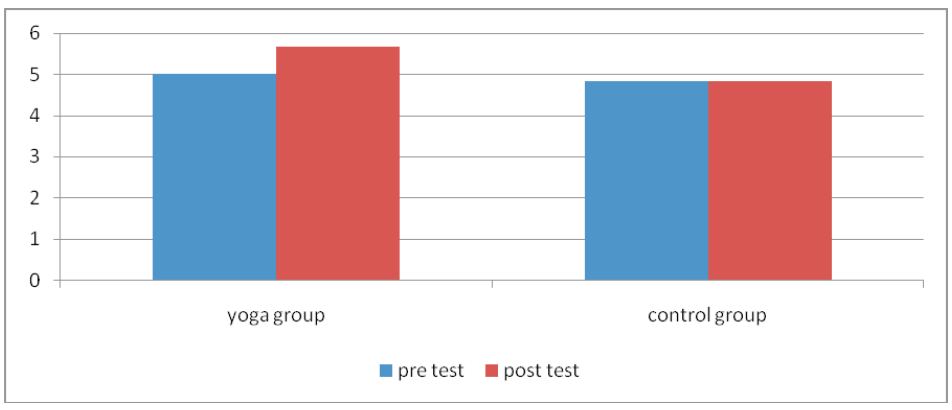
The pre test means of the control and experimental groups on inspiratory pressure is 4.84+0.59 & 5.12+0.54. The obtained 'F' ratio value 1.01 for the pre-test mean is lesser than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. This reveals that there is no statistically significant difference between the control and the experimental group on Inspiratory pressure before the commencement of the experimental training. It is inferred that the selection of the subjects for the groups are successful. The post test means of the control and experimental groups is 4.84+0.59 & 6.10+0.53. The obtained 'F' ratio value 20.94. The adjusted post test means of the control and experimental groups is 4.98 Vs 5.97 & 5.66 and the F ratio is 101.05 for the post test data is greater than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. It discloses that there is a statistically significant difference between the control and the experimental group on Inspiratory pressure after the experimental training.

The pre test means of the control and experimental groups on expiratory pressure is 4.50+0.45 & 4.43+0.59. The obtained 'F' ratio value 1.24 for the pre-test mean is lesser than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. This reveals that there is no statistically significant difference between the control and the experimental group on Expiratory pressure before the commencement of the experimental training. It is inferred that the selection of the subjects for the groups are successful. The post test means of the control and experimental groups is 4.38+0.46 & 5.50+0.50. The obtained 'F' ratio value 19.22 for the post test data is greater than the required table value 4.28 for 1 & 28degrees of freedom at 0.05 level of significance. It discloses that there is a statistically significant difference between the control and the experimental group on Expiratory pressure after the experimental training.

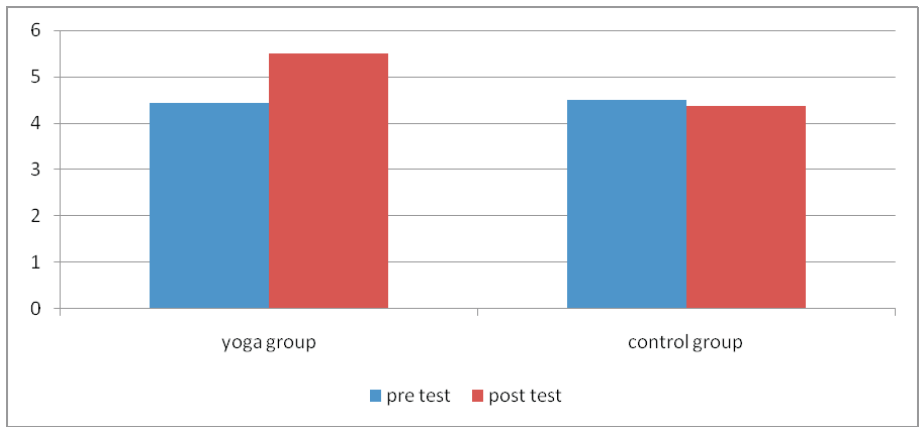
BAR DIAGRAM ON BMI



BAR DIAGRAM ON INSPIRATORY PRESSURE



BAR DIAGRAM ON EXPIRATORY PRESSURE



DISCUSSION:

Yoga is an ancient practice that helps create a sense of union in body, mind, and spirit. In summary, the results of this investigation indicate that 12 weeks of Yogasana can significantly improve physiological changes young, healthy, predominantly male subjects. However, in the present study no significant difference was seen between Yogasana and control group.

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