EFFECT OF UJJAYAI PRANAYAM ON SELECTED PHYSIOLOGICAL VARIABLES OF SCHOOL STUDENTS

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ABSTRACT

The purpose of the study was to find out the effect of ujjayai pranayam on selected physiological variables of school students. It was hypothesized that there would be significant differences on selected physiological variables due to the effect of ujjayai pranayam among school students. For the present study the 40 school students from Selvam Matriculation Higher Secondary. School, Namakkal, Tamilnadu were selected at random and their age ranged from 14 to 16 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of twenty each and named as Group 'A' and Group 'B'. Group 'A' underwent ujjayai pranayam and Group 'B' has not undergone any training. The data was collected before and after eight weeks of training. The data was analyzed by applying dependent 't test. The level of significance was set at 0.05. The ujjayai pranayam had positive impact on resting heart rate and breath holding time among school students.

***Key words**: Ujjayai Pranayam, Resting heart rate, Breath holding time, School Students.*

INTRODUCTION

Today yoga is being a subject of varied interest, gained world popularity. Recent research trends have shown that it can serve as an applied science in a number of fields such as education, physical education and sports, health and family welfare, psychology and medicine also one of the valuable means for the development of human resources for the better performance and productivity however their exist controversy in accepting yoga as medicine and therapy because it generally been believed that yoga is a spiritual science having emancipation a s its goal and hence cannot be treated only as a therapy. Yoga has its own way of strengthening the weak part of the body. Research in the field of yoga have established that the yogic Asana pranayam and Kriyas are the best and useful as they help not only to strengthen each organ and develop every muscle of the body but also regulate the circulation of body blood, purity of lungs, inspire the mind and thus develop the harmonious development of human personality.

A variety of Yogic practices are being done by top sportsman/ Olympian athletes of many countries like Brazil, Argentina, Poland, Germany, Canada etc. as a form of conditioning or relaxation exercise. Pranayam is science of respiration. The author of Hatha Pradipika gives eight varieties of Pranayam, one of which is Ujjayi. The chief characteristics of the Ujjayi Pranayam is the Loud noise produces, as will be seen in the technique, by partial closer of the Glottis. This Pranayam is called Ujjayi to distinguish it from other varieties or congtore is rendered to able, when we take into consideration the two following effects; first the prefix vd occurring in the name Ujjayi means aloud. Second Ujjayi, a variant reading noticed by Bhramananda in his commentary on Hatha Pradipika, actually means pronounced loudly. Pranayam include the circulation of blood and capable of producing very high pressure in the lungs and in the thorax. Pranayam is the one of the first exercise for a weak heart and weak lungs. If its physiology is properly known and if it is judiciously administered exercise is cap[able of giving wonderful

results. High abdomen pressure created in Pranayam by action and counter action of the different anatomical parts together with the upward area is responsible for awakening of kundalini

PURPOSE OF THE STUDY

The purpose of the study was to investigate the effect of ujjayai pranayam on selected physiological variables of school students, studying in Selvam Matriculation Higher Secondary. School, Namakkal, Tamilnadu.

METHODOLOGY

The purpose of the study was to find out the effect of ujjayai pranayam on selected physiological variables of school students. It was hypothesized that there would be significant differences on selected physiological variables due to the effect of ujjayai pranayam among school students. For the present study the 40 school students from Selvam Matriculation Higher Secondary. School, Namakkal, Tamilnadu. were selected at random and their age ranged from 14 to 16 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of twenty each and named as Group 'A' and Group 'B'. Group 'A' underwent yogic practices and Group 'B' has not undergone any training. The data was collected before and after eight weeks of training. The data was analyzed by applying dependent 't test. The level of significance was set at 0.05.

Table –I
Variables and Test

S. No	Variables	Test
1	Resting heart rate	Bio-Monitor
2	Breath holding time	Manual Method (Nose Clip)

RESULTS

The findings pertaining to analysis of dependent't' test between experimental group and control group on selected physiological variables of school students for pre-post test respectively have been presented in table II to III.

Table –II Significance of Mean Gains & Losses between Pre and Post Test Scores on Selected Variables of Ujjayai Pranayam Group (UPG)

S. No	Variables	Pre – Test Mean	Post – Test Mean	Mean Difference	Std. Dev (±)	σ DM	't' Ratio
1	Resting heart rate	73.45	68.18	5.28	1.45	0.38	16.40*
2	Breath holding time	36.90	47.78	12.80	5.20	1.28	11.27*

* Significant at 0.05 level

Table II shows the obtained 't' ratios for pre and post test mean difference in the selected variable of resting heart rate (16.40) and breath holding time (11.27). The obtained ratios when compared with the table value of 2.09 of the degrees of freedom (1, 19) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were significantly improved in physiological variables namely resting heart rate (5.20, $p < 0.05$) and breath holding time (12.80, $p < 0.05$).

Figure- I Comparisons of Pre – Test Means and Post – Test Means for Experimental Group in Relation to Physiological Variables

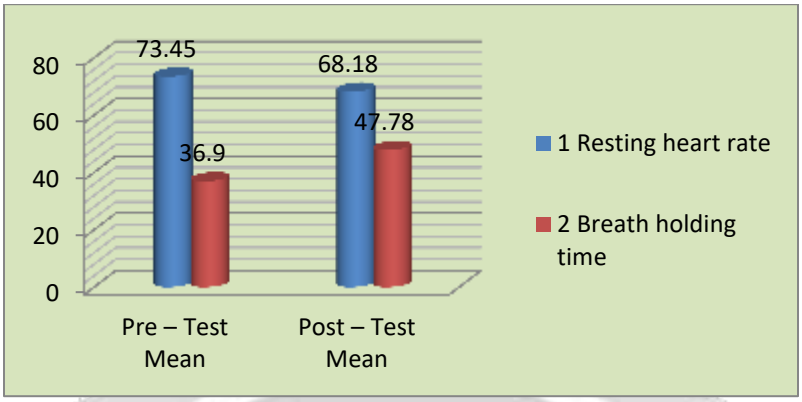


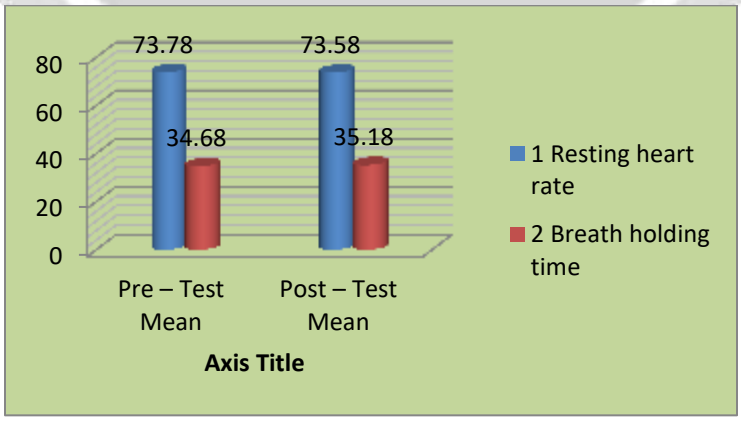
Table – III Significance of Mean Gains & Losses between Pre and Post Test Scores on Selected Variables of Control Group (CG)

S. No	Variables	Pre – Test Mean	Post – Test Mean	Mean Difference	Std. Dev (±)	σ DM	't' Ratio
1	Resting heart rate	73.78	73.58	0.24	1.60	0.38	0.55
2	Breath holding time	34.68	35.18	0.50	1.62	0.37	1.25

* Significant at 0.05 level

Table III shows the obtained 't' ratios for pre and post test mean difference in the selected variable of resting heart rate (0.55) and breath holding time (1.25). The obtained ratios when compared with the table value of 2.09 of the degrees of freedom (1, 19) it was found to be statistically insignificant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were not insignificantly improved in physiological variables.

Figure II Comparisons of Pre – Test Means and Post – Test Means for Control Group in Relation to Physiological Variables



CONCLUSION

On the basis of findings and within the limitations of the study the following conclusions were drawn:

1. The yogic practices had positive impact on resting heart rate and breath holding time among school students.

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