

Impact of Yogic Practices on Breath-Holding Time of OBESE Boys

Dr. K. Usha Rani

Professor and Head, Department of Physical Education and Health Sciences

Alagappa University, Karaikudi

Abstract

The present study investigates the effect of yogic practices on the breath holding time (BHT) of pre-obese adolescent boys. A total of 45 boys aged 14 to 16 years were supposed through purposive sampling and were equally given to the group with the experimental group and the control group. A structured yogic training program consisting of specific asana, pranayama and meditation was given to the experimental group for a period of six weeks and the control group did not receive any such intervention. Then, to determine what changed in BHT, pre & post tests were run with statistical tools such as ANCOVA and Scheffe's post hoc test. Interestingly, findings showed that the participants of the experimental group significantly improved their breath holding time compared with the control group. Physical improvements cannot be denied as with regular practice of yoga shows a physiological positive impact on the respiratory efficiency of preobese adolescents.

Keywords: Yogic Practices, Asanas, Breath-Holding Time, Meditation

மலர்: 12

சிறப்பிதழ்: 1

மாதம்: மே

வருடம்: 2025

P-ISSN: 2321-788X

E-ISSN: 2582-0397

DOI:

<https://doi.org/10.34293/sijash.v12iS1-May.8980>

Introduction

Meaning and Concept of Yoga

Yoga means Union, joining, harnessing, contact, or connection, it is the word form is derived from the Sanskrit root "Yuj." The bond at union is between the individual self and universal self. The fusion of a fit body with controlled mind to aid in spiritual development is called it. It is also yoga, blissful contact with the supreme element, above all that which might be known with regard to any of the elements. The harnessing of that man's innate, inner power, and the natural forces (from which one has sprung) that is wider. Indian life and culture can't understand without yoga. The tradition has an unbrokenness: It comes down to us from antiquity. Putting together and controlling the same judiciously is integration. This agrees with the definition of Yoga of "Bhagavad Gita", 'Smatvameva Yoga Uchyate' meaning equanimity is Yoga. Yoga is equipoise in success and failure, gain and loss, victory and defect etc. in its truest meaning. 'Samatva' may also be translated as equilibrium, or.. harmonious development of the physical, mental and spiritual aspect of human personality. Thus, the characteristics of Yoga are equanimity and equilibrium. Then, they help with a skilled performance of an action.

All aspects of yoga are an art: the most practical and the highest. It is an art of the spiritual because it transforms the seer and takes him into his inner soul. It is an art of a fine art because it is aesthetic, artistic, visual art; the body is made to form geometrical designs, lines, architectural shapes, etc., all of which are beautiful to look at. It is presented as a performing

All aspects of yoga are an art: the most practical and the highest. It is an art of the spiritual because it transforms the seer and takes him into his inner soul. It is an art of a fine art because it is aesthetic, artistic, visual art; the body is made to form geometrical designs, lines, architectural shapes, etc., all of which are beautiful to look at. It is presented as a performing art for viewer but it is essentially a useful art for the doer. Yoga is a form of art, which is rhythmic in practice and creative in its form. It's ennobling. That is the beginning of wisdom and purest of knowledge where wisdom goes to know the nature as the nature knows love experienced by the lover and his beloved.

1. Yoga is not meant for the ordinary person, the house-holder but is only for a select few.
2. Yoga is associated with the idea of the supernatural or linked with miracles.
3. Yoga is equated with mysticism, black magic or various types of mortification.
4. Yoga is a system of therapy which can cure all diseases.
5. Yoga is a system of philosophy dealing with metaphysical theories about the universe.
6. Yoga is just a system of practices.

Yoga had thus evolved to several stages and thus there emerged different schools wherein the various techniques and practices were developed. However there were schools of Yoga which laid an emphasis on certain practices, but there was one basic aim which all of the Schools of Yoga had always aimed at — of controlling its aspects in their highest integration through control of the modifications of mind. Some schools have the direct approach to the mind via a method of practice, some have indirect means through the body in servicing the mental process. Thus, all the yogic practiced can be group under Asanas, Pranayamas, Bandhas and mudras, Kriyas, Meditation and Attitude training practices among others. Each one of these has group practice of several practice within it. Now we shall glance at such groups.

Selection of Subjects

Subjects of 45 obese boys were selected to execute the investigation using purposive sampling. The subjects selected were chosen from Viswadeepthi Matriculation Higher Secondary School, unjavelampatty, Pollachi District, whose range was from 14 to 16 years. The subjects were divided into two random equal groups. The two groups are the yogic practices experimental group 1 and control group 1. Feasibility, criteria, availability of instruments, equipment and the relevance of the variables there to the study were reviewed by The Investigator based from discussion with experts and from the available scientific literature. The following variables are selected for the study.

Independent Variables

Yogic Practices

Physiological Variables

Breath Holding Time

Experimental Treatment and Design

The sampling design of the investigator was a purposive design with pretest and posttest. Fifty five subjects (N=45) were equally assigned to two groups. One of the experimental group, experimental group I yogic practice, and the other control group were assigned to the groups. All the 45 pre obese boys were pre tested on selected variables. After the pre test, the subjects of training experimental group I followed yogic practices. The training went on for 6 weeks and there was no training for the control group. After practicing yogas for 6 weeks, the post-tests on the selected dependent variables were then carried out.

Table I Tests Selection

Variables	Name	Test	Units
Physio-logical variables	Breath Holding Time	Manual	Seconds

Table II Yogic Practices Training Programme Duration is 6 Weeks for 3* alternative days

S.No	Yogic Practices	1 st & 2 nd week	3 rd & 4 th Week	5 th & 6 th Week
1	Loosening Exercise	4 Min	6 Min	6 Min
2	Paschimottanasana	2 Min	3 Min	4 Min
3	Yoga Mudra	2 Min	3 Min	4 Min
4	Pawanamuktasana	2 Min	3 Min	5 Min
5	Bhujangasana	2 Min	3 Min	5 Min
6	ArdhaMatsyendrasana	2 Min	3 Min	5 Min
7	Breath Counting Meditation	2 Min	3 Min	5 Min
8	Relaxation	4 Min	6 Min	6 Min
9	Total Duration	20	30	40

Analysis of Data and Interpretation of the Study

The analysis of data recorded from the samples under study have been discussed in this chapter. This study aimed at finding the influence of Yogic practices on Breath-Holding Time upon school preobese boys. Therefore, to fulfill the aim of the study, pre obes boys from viswadeepthi comprised the sample. Matriculation. Hr. Purposive sampling was used

for selecting the Sec School, Unjavelampatti, Pollachi District. Their age was 14 - 16 years. These were divided into 2 groups, namely, experimental group I and control group. These people were then experimented with yogic practices (experimental group I) and control group was not provided any experimental conditions. Breath holding time is to be selected as the physiological variables for this study.

Table III Pre, Post and Adjusted Post Test Means Values for Yogic Practices Group and Control Group on Breath Holding Time

(Scores in Seconds)

Test	Yogic Practices Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	F ratio	Table Value
Pre Test Mean	23.33	23.86	Between	2.31	2	1.15	0.12	3.22
			Within	402	42	9.57		
Post Test Mean	29.26	23.93	Between	248.17	2	124.08	16.72*	3.22
			Within	311.6	42	7.41		
Adjusted Post Test Mean	29.47	23.78	Between	273.74	2	136.87	44.18*	3.23
			Within	27.01	41	3.09		

*Significant at 0.05 level of confidence

The mean values of yogic practices group and control group on the pre-test Breath Holding Time recorded in the table 4.7 was 23.86 and 23.33 respectively. In practice, it has a value less than table value, that is the 'F' ratio 0.12 for pre-test mean which is less than 3.22 at df 2 and 42 for significance at 0.05 level of

confidence on Breath Holding Time. Means of the Post Test scores on Breath Holding Time in yogic practices group and control group are respectively 29.26 and 23.93. The table value 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on Breath Holding Time is greater than the obtained 'F' ratio

16.72 for post-test mean. Post-test means of the yogic practices and control groups are 29.47 and 23.78 respectively. The obtained 'F' ratio of 44.18 on the adjusted post – test mean was more than table value 3.23 for df2 and 41 required to be significant at.05 level of confidence Breath Holding Time. To know the paired mean difference further, Scheffe's post hoc test was applied and presented on Table- 4.

Table IV Scheffe's post hoc Test for the Difference between Paired Means on Breath Holding Time (Scores in Seconds)

Mean value			
Yogic Practices Group	Control Group	Mean Difference	Required CI
29.26		0.8	2.37
	23.93	4.53*	2.37
29.26	23.93	5.33*	2.37

*Significant at 0.05 level of confidence

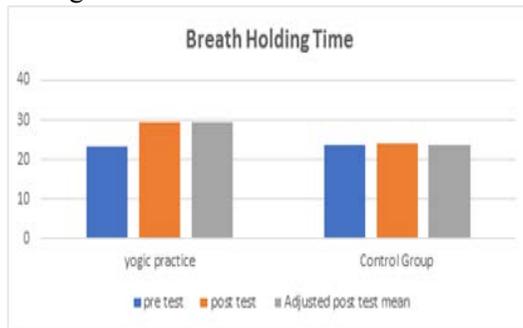


Figure I :The Bar Diagram Shows the Pre, Post and Adjusted Post Test Mean Values of Yogic Practices Group and Control Group on Breath Holding Time

The results of the study revealed that there was a significant difference in breath-holding time due to the effect of yogic practices hence the hypothesis was accepted.

Conclusions

Conclusively, the following were drawn within the limitation of the study. Breath holding time was much more improved because of yogic practices.

The results are then based on the observations that the yogic practices group is better in breath holding time.

References

1. Arngrimsson SB, Richardsson EB, Jonsson K, Olafsdottir AS. [Body composition, aerobic fitness, physical activity and metabolic profile among 18 year old Icelandic high-school students]. 2012 May;98(5):277-82. [Article in Icelandic]
2. Asayama K, Hayashi K, Hayashibe H, Uchida N, Nakane T, Kodera K, Nakazawa S. Relationships between an index of body fat distribution (based on waist and hip circumferences) and stature, and biochemical complications in obese children. 1998 Dec;22(12):1209-16.
3. Asayama K, Hayashibe H, Dobashi K, Uchida N, Nakane T, Kodera K, Shirahata A. Increased serum cholesteryl ester transfer protein in obese children. 2002 Jun;10(6):439-46.
4. Asayama K, Oguni T, Hayashi K, Dobashi K, Fukunaga Y, Kodera K, Tamai H, Nakazawa S. Critical value for the index of body fat distribution based on waist and hip circumferences and stature in obese girls. 2000 Aug;24(8):1026-31.
5. Baltaci G, Un N, Tunay V, Besler A, Gerçeker S. Comparison of three different sit and reach tests for measurement of hamstring flexibility in female university students.