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A survey study on the impact of yogasanas, pranayama and meditation on breath-holding time of school boys

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Abstract

The aim of the present study is to determine the impact of yogasanas, pranayama, and meditation on the breath-holding time of high school boys. The sample for the study comprises 80 boys between the ages of 14 and 16 years. The sample was further divided into two groups: (I) Experimental Group (40) and (II) Control Group (40). The subjects of the Experimental Group went through a yogasanas, pranayama, and meditation training for 12-week under the direct supervision of researchers. The control group was engaged in daily routine work. The subjects of both the groups were tested before and after the experimental period of 12-weeks. The data analyzed statistically by applying ANCOVA. The results show that there is a significant change in the breath-holding time as a result of the experimental training. Since the result has revealed that there is a significant difference, the hypothesis is accepted.

Keywords: Breath-holding time, yogasanas, pranayama, meditation

Introduction

Yoga is usually defined as a union: union between the limited self and the Divine Self. The aim of Yoga is not really to unite us with anything, for we are already united. It is to help us realize our identity with the Divine Self, to make us know and tune into our intrinsic nature.

There are many definitions of Yoga, which apply to all levels of existence and awareness. At the physical level, we need to harmonize the functions of different organs, muscles and nerves so that they do not hamper or oppose each other. Disharmony in various body parts and systems brings about inefficiency and lethargy or clumsiness. Moreover, it manifests in diseases in the body.

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. It is an art and science of healthy living. The word 'Yoga' is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite'. As per Yogic scriptures the practice of Yoga leads to the union of individual consciousness with that of the Universal Consciousness, indicating a perfect harmony between the mind and body, Man & Nature. According to modern scientists, everything in the universe is just a manifestation of the same quantum firmament. One who experiences this oneness of existence is said to be in yoga, and is termed as a yogi, having attained to a state of freedom referred to as mukti, nirvana or moksha. Thus the aim of Yoga is Self-realization, to overcome all kinds of sufferings leading to 'the state of liberation' (Moksha) or 'freedom' (Kaivalya). Living with freedom in all walks of life, health and harmony shall be the main objectives of Yoga practice. "Yoga" also refers to an inner science comprising of a variety of methods through which human beings can realize this union and achieve mastery over their destiny. Yoga, being widely considered as an 'immortal cultural outcome' of Indus Saraswati Valley civilization – dating back to 2700 B.C., has proved itself catering to both material and spiritual upliftment of humanity. Basic humane values are the very identity of Yoga Sadhana.

Yoga is a physical, mental, and spiritual practice aimed at attaining permanent peace within. This practice for permanent inner peace originated in ancient India, and it also belongs to the six schools of Hindu philosophy or six "astika." Yoga is also considered as a form of exercise due to its physical forms and postures that have physical benefits to the body, and it is also considered as meditation due to the mental and emotional benefits.

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It gives as well as it is also considered spiritual because it involves getting in touch with your spirit or beyond physical nature. This is why yoga is known as a combination of physical, mental, and spiritual exercise and development or creating a union with your inner self which can benefit life.

The word yoga means “unity” or “oneness” and is derived from the Sanskrit word yuj, which means “to join.” This unity or joining is described in spiritual terms as the union of the individual consciousness with the universal consciousness. On a more practical level, yoga is a means of balancing and harmonizing the body, mind, and emotions. This is done through the practice of asana, pranayama, mudra, bandha, shatkarma, and meditation and must be achieved before a union can take place with the higher reality.

Methodology

The present study aims to determine the effect of yogasanas, pranayama, and meditation on the breath-holding time of high schoolboys. The sample for the study comprises 80 boys between the ages of 14–16 years. The sample was further divided into two groups: (I) Experimental Group (40) and (II) Control Group (40). The subjects of the Experimental Group went through a yogasanas, pranayama, and meditation training for 12 weeks under the direct supervision of researchers. The Control Group was engaged in daily routine work. The subjects of both the groups were tested before and after the experimental period of 12 weeks. The data analyzed statistically by applying ANCOVA. The results show that there is a significant change in the breath-holding time as a result of the experimental training. Since the result has revealed that there is a significant difference, the hypothesis is accepted.

Training Program

The subjects are classified into two groups that one is a Control Group which is not exposed to any treatment and another one is an Experimental Group which is exposed to yogasanas, pranayama, and meditation training treatment. Weekly 6 days, i.e., Monday to Saturday, from 7.00 am to 8.00 am for a period of 12 weeks. All the subjects involved in this study were carefully monitored throughout the training program to be away from injuries. They were questioned

about their health status throughout the training program. None of them reported any injuries or discomfort. However, muscle soreness appeared in the earlier period of the training program and was reduced in due course.

Table 1 shows that the pre-test means scores of the breathholding time of the control and experimental groups of high schoolboys students. It is observed that mean scores of pre-test of the control and experimental groups of high schoolboys students are 13.5763 and 13.8320, and their standard deviation is 1.39,373 and 1.43,633, respectively. The obtained “F” ratio value is ($F = 0.421$, $1,78$, $\alpha = 0.05$) 0.421 at 5% level of significance, which is less than the table value ($F = 4.0$); hence, the null hypothesis is accepted, it can be concluded that the breath-holding time level between the experimental group and control group found almost similar among the high schoolboys students.

Further, it is observed that mean scores of post-test of the control and experimental groups of boys high school students are 13.1840 and 14.7353; their standard deviation is 1.17,446 and 1.30,682, respectively. The obtained “F” ratio value is ($F = 31.179$, $1,78$, $\alpha = 0.05$) at 31.179 5% level of significance, which is much more than the table value ($F = 4.0$); hence, the null hypothesis is rejected and the alternative hypothesis is accepted. It can be concluded that there is a significant difference found between the experimental group and control group with respect to the breathholding time level of boys high school students. This indicates that the breath-holding time level is more among the control group when compared to the experimental group. Finally, it can be concluded that yogasanas, pranayama, and meditation training has made a significant impact on the control of the breathholding time level of the high schoolboys students.

The adjusted post-test means scores on the breath-holding time of the control and the experimental groups are 13.241 and 14.685, respectively. The obtained “F” ratio value is ($F = 33.821$, $1,76$, $\alpha = 0.05$) 33.821 at 5% level of significance, which is much higher than the table value ($F = 4.0$); hence, the null hypothesis is rejected and the alternative hypothesis is accepted. It can be concluded that there is a significant difference that is found between the experimental group and control group with respect to breath-holding time level of high school boys students.

Table 1: The analysis of covariance for pre-test and post-test on the breath-holding time of the control group and experimental group of high schoolboys

Type of Test	Control Group	Experimental Group	Source of Variance	Sum of the Squares	df	Mean Square	F ratio
Pre-test mean	13.5763	13.8320	Between	1.308	1	1.308	0.421
SD	1.39373	1.43633	Within	156.215	78	2.003	
Post-test mean	13.1840	14.7353	Between	48.128	1	48.128	31.179
SD	1.17446	1.30682	Within	120.398	78	1.544	
Adjusted posttest mean	13.241	14.685	Between	41.356	1	41.356	33.821
			Within	92.932	76	1.223	

*Significance $\alpha = 0.05$, table value = 4.0

Discussion on findings

Breath-holding Time

In this study, it is found that there is a significant difference between pre-test control and experimental group in breathholding time, but there is a significant difference in the posttest of the control and experimental groups due to 12 weeks of the yogasanas, pranayama, and meditation training program. The results, by and large, were in conformity with the findings of Singh *et al.*, (2009).

Conclusions

Result of this study, it was concluded that through the 12 weeks of yogasanas, pranayama, and meditation training of high schoolboys were significantly improved breath-holding time compared to control group.

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