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Effects of Yogic Practices on Vital Capacity among Adolescents

Rajendra Singh*
Durvesh Kumar**

ABSTRACT

The purpose of the study was to investigate the effect of Yogic practices (Asana, Pranayama and meditation) on vital capacity of school boys. Sixty (60) subjects were the sample of this study. All were boys, selected through the simple random sampling technique from D. S Inter College Aligarh, Uttar-Pradesh. In this study there were two groups, yogic group 'A' and control group 'B', 30 subjects in each group. Experimental group performed Asana Pranayama and meditation training program for 12 weeks, one hour daily and 5 days in a week, and control group acted as a control (no yogic practices). The collected data from both groups were taken before and after the experiment and statistically analysed by using t-test. The result of the study showed that the vital capacity of the experimental group has increased significantly through asana, pranayama and meditation in comparison with the control group.

Keywords: Yogic Practices, Vital Capacity.

Introduction

The word "Yoga" is derived from the Sanskrit root "Yuj" which means union, joining, harnessing, or connection. **Muktibodhananda S. (2013),** in Hath Yoga Pradipika, says,yoga is a union between the individual awareness and the universal awareness. It is the fusion of a healthy body with a healthy mind for the purpose of spiritual development. Yoga is also blissful contact with the supreme power, higher than the highest of the known elements. Yoga is the harnessing of one's inherent inner power, as well as the wider natural forces from which one has emerged. It is an inseparable part of the Indian life and culture. It has come down to us from ancient times with an unbroken tradition.

Yogic practice mainly consists of Asanas (posture- a particular position of the body which contributes to steadiness of body and mind), Pranayama (to extension or control the breath in lungs, a way to get maximum benefits)and meditation it produces regular physiological changes and have sound and have sound scientific basis.**Gopal et al (1973)**In recent times, medical fraternity is much attracted towards beneficial effects of Yogic practices. We are well

*Associate professor, Department of Physical Education, Aligarh Muslim University, Aligarh

**Research Scholar, Department of Physical Education, Aligarh Muslim University, Aligarh

aware of the fact that any sort of yogic exercise done regularly is beneficial to our body. Yoga is considered to be a good quality exercise for maintaining proper health and also has a profound effect on the respiratory functions of an individual.It is stated that yogic exercises help in prevention, control and rehabilitation of many lungs diseases. In view of this, the present study was undertaken to see whether yoga has any effect on vital capacity of lung functions,which depend on compliance of respiratory organ (lungs, thorax, and airway resistance and strength of respiratory muscles).Singh (1977)Regular practice of asanas and Pranayama and meditation maintain the physical body in an optimum condition and promote health even in unhealthy body. Through the practice of asanas and pranayama, the governed energy is released and experienced as increase confidence in all area of life. (June 2008) With this background in consideration, the present work was planned to find effects of short term Yoga practice on vital capacity.

Methodology

The study was formulated as a simple random group design, consisting of pre-test and post-test the subject were (n=60) randomly selected to equal group of school students age the age range from 14 to 18 years among the two groups the control group was strictly under control, without undergoing any yogic practices. The experimental group 'yogic group' had to undergo with the experimental treatments. Group A was provided asana pranayama and meditation to school boys for a period of 12 weeks and 5 days in a week from 7:30 to 8:30 o clock A.M in the D.S Inter College Aligarh Uttar Pradesh. The control group was not allowed to participate in any of the training program except their daily routine works. The subjects were trend for a period of 12 week and after this period significant improvement was measured in the vital capacity of school students. The data were analysed by applying t-test technique. The level of significance was set at 0.05.

Training Programme:

Table no 1. Yogic Training Programme.

Asanas			Pranayamas	Meditation
Shavasana	Garunasana	Janushirasana	Nadishodhana	Om meditation
Makrasana	Nokaasana	Shashankasana	Ujjayi	Imaginary meditation
Chakrasana	Padamasana	Brakshasana	Bhastrika	
Trikonasana	Bakasana	Pavanmuktasana	Shitali	
Dhanurasana	Bhujangasana	Mayoorasana	Sheetkari	
Sarvangasana	Matayasana	pashichimotanasana	Bramari	

During the training period the yogic group underwent their respective training programme 5 days in a week for 12 weeks in addition to their regular daily routine on the training days, practices lasted in the morning from 7:30 to 8:30 A.M. The control group did not involve in any training program except their daily routine.

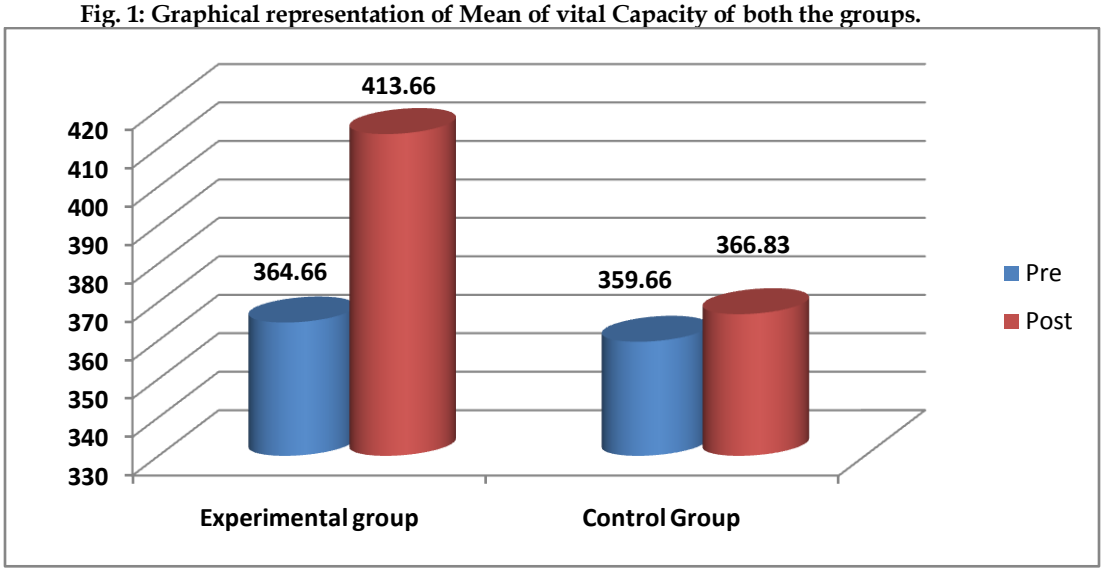
RESULTS

Table 2: significance difference in mean scores between the pre and post test of experimental and control groups of adolescents.

Groups	Test	N	Mean	S.E	t	p (sig)
Experimental	Pre	30	364.66	12.82	5.769	.000
	Post	30	413.66	9.50		
control	Pre	30	359.66	11.98	1.431	.163
	Post	30	366.83	12.33		

*Significant value at 0.05 level.

Fig. 1: Graphical representation of Mean of vital Capacity of both the groups.



Discussion

At the baseline the level of vital capacity was almost same in both the group but after the 12 weeks of yogic practices, the yogic group had better vital capacity in comparison to the control group. **L.N. Joshi et al (1992)** find out significant improvement in FVC, FEV1 and PEFR after six weeks Pranayama practice. **R.K Yadav et al (2001)** observed significant increase in FVC, FEV1 and PEFR in young females after 12 weeks Yogic practice which included (prayer, asans, pranayama and meditation). **RituSoni, et al (2006)** found significant increase in FVC, FEV1, MVV and PEFR after Pranayama practice in asthmatic patients .**Chhibber R., et al (2006),** found significant improvement in FVC, FEV1 %, and PEFR at 6th and 12th week of Pranayama practice in healthy females. As shown in table 2 all the parameters in males show statistically significant improvement with regular practice of yoga. These effects can be explained on the following basis: Yoga postures (asanas) involve isometric contraction which is known to increase skeletal muscle strength. Yoga training improves the strength of expiratory as well as inspiratory muscles. **Madan Mohan (1992)**Bhastrika Pranayama is a bellows type breathing in which one breaths forcefully and rapidly and thus, exercises inspiratory as well as expiratory muscles. In breathing exercises like Kapalbhati, short powerful strokes of Exhalation in quick succession with contraction of abdominal and diaphragmatic muscles trains the subject to make full use of diaphragm and abdominal muscles in breathing. It also helps in removal of secretions from bronchial tree, clearing up respiratory passages and the alveoli making room for more air. Pranayama is characterized by slow and deep inhalation and prolonged exhalation. The stress is on more prolonged expiration and efficient use of abdominal and diaphragmatic muscles. This act trains the respiratory apparatus to get emptied and filled more completely and efficiently.

Conclusion

In this study we may conclude that Yoga practice can be advocated to improve of Vital capacity among adolescents' and hence to prevent respiratory diseases in future. And it will definitely help in other physiological benefits too.

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