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Effect of Pranayama with Kriya Practices on Selected Respiratory Physiological Variables among Asthmatic Children

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Abstract

The purpose of the present study was to find out the effect of pranayama with kriya practice on selected Respiratory physiological variables among asthmatic children. The study was conducted on 30 asthmatic children in totally two groups, namely, control & experimental group. Experimental group consisted of 15 asthmatic children. They underwent twelve weeks practice in pranayama with kriya practice whereas the control group did not under go any type of training. Respiratory physiological variables weremeasured before and after the experimentation using the standardized tests and standard/modified questionnaires. The data were analyzed by Analysis of Covariance (ANCOVA) and it was concluded that the pranayama with kriya practice had significant (P < 0.05) effect on respiratory physiological variables among asthmatic children.

Keywords: Asthma, Pranayama, Kriya, Respiratory physiological.

Introduction

Asthma is a common and distressing condition that is characterized by recurrent attacks of spasm of the tubes of lungs resulting in wheezing, coughing and a sense of suffocation. Asthma originates most commonly in infancy and less so in middle life. It occurs with equal frequency in both sexes during youth .However males are more susceptible in later life then females. There are hereditary factors causing asthma but these do not render a cure impossible. Nervousness is intimately with the disease. Worry, smoking and pollution are major contributing causes. The causes of asthma are a combination of many factors, including an immunological reaction and over stimulation of the parasympathetic nerve fibres to the lungs, which constricts the bronchial tubes.

Yoga is the science of right living and, as such, is intended to be incorporated in daily life. It works on all aspects of the person: the physical' vital, mental, emotional, psychic and spiritual. The word *yoga* means 'unity' or 'oneness' and is derived from the Sanskrit work *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. Pranayama is an excellent means of dealing with tensions. By exercising and strengthening the lungs, rebalancing the autonomic nervous system, and strengthening the entire nervous system, it diminishes the possibility of a future asthma attack. Essentially pranayama is designed to allow us to master the body's energy systems. The practices lead to increased self-confidence and mastery of mind. Through greater control of prana, we gain greater control over ourselves. Kriya means action. Shat kriya consists of six groups of purification practices. These process intent to purify the body from its impurities and the three dhosas or humors in the body (i.e. –phlegm, wind and bile), and balance them to help the free flow of prana.

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Methodology

The purpose of the study is to find out the effect of Pranayama with kriya practices on selected respiratory physiological and variables among asthmatic children. For the purpose of this study thirty asthmatics children from Chennai, were selected as subjects and their age was ranged from 10 to 12 years. The subjects were divided into two equal groups of fifteen one an Experimental group and another Control group. The pre-tests and post-tests were conducted before and after the training. Pranayama with kriya practices was given for twelve weeks to the experimental group alone. To estimate the respiratory physiological function, Wright Peak Flow Meter was used. The collected data were statistically analyzed by using analysis of covariance (ANCOVA).

Selection of the Variables

Independent Variable - Pranayama with kriya

Dependent Variable - Peak expiratory flow rate measured by Spirometer

Training Schedule

Experimental Group : Pranayama with Kriya practice

Analysis and Interpretation

The statistical analysis comparing initial and final means of respiratory physiological variables due to pranayama with kriya practice among asthmatic children is presented in Table I.

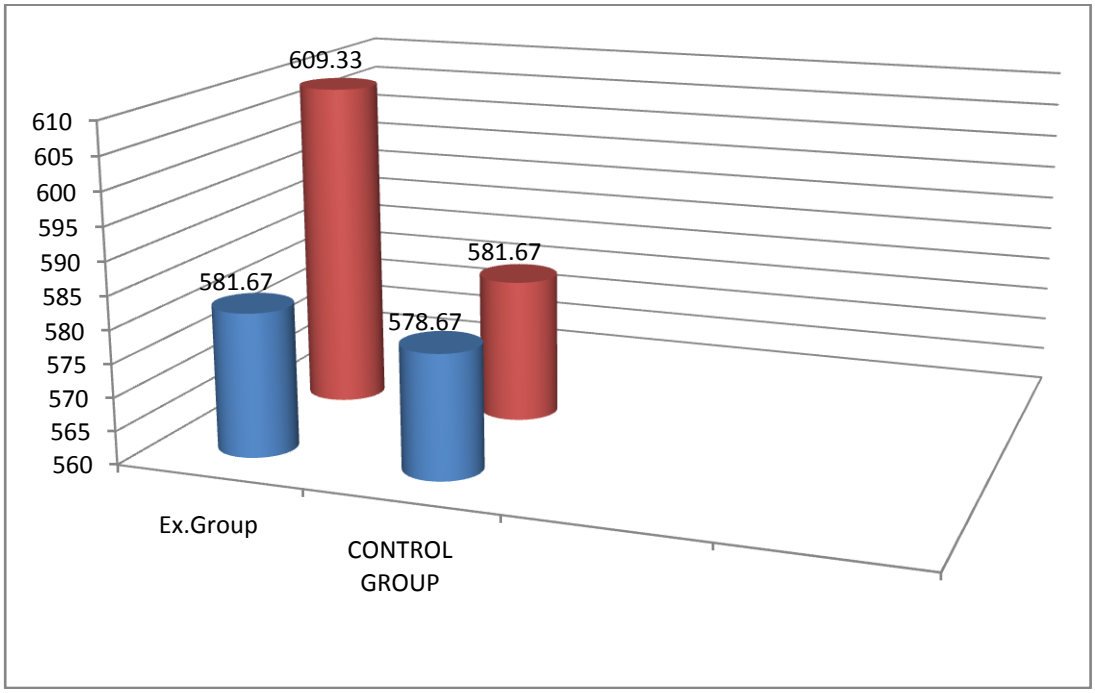
Table I. Computation of mean and analysis of covariance of peak expiratory flow rate of experimental and control group

Test	Exp. Group	Control Group	Source of Variance	df	Sum of Square	Mean Square	F
Pre-test mean	581.67	578.67	Between	1	67.50	67.50	0.07
			Within	38	29056.67	1037.74	
Post-test mean	609.33	581.67	Between	1	5740.83	5740.83	6.63
			Within	38	24226.67	865.24	
Adjusted mean	608.00	583.00	Between	1	4676.76	4676.76	99.12
			Within	37	1273.91	47.18	

*significant.

Table value for df 1 and 38 was 3.21 Table value for df 1and 37 was 3.22. The obtained adjusted mean values were presented through bar diagram in figure I.

Figure I. Bar diagram on ordered pre and post means of peak expiratory flow rate



Discussions on Findings

Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 99.12 was greater than the required value of 3.22 and hence it was accepted that the pranayama with kriya practice significantly improved the Respiratory physiological variables among asthmatic children. The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between pranayama with kriya practice group and control group on respiratory physiological and immunological variables. This proved that due to twelve weeks pranayama with kriya practice, on Respiratory physiological variables were significantly improved among asthmatic children.

Conclusion

The analysis of co-variance of Respiratory physiological variables indicated that experimental group II (Pranayama with kriya practice) were significantly improved the asthmatic children. It may be due to the effect Pranayama with kriya practice. Nearly everything in life requires balance. Pranayama with kriya practice on its own is a good step toward a healthy life style. However, as individual, it is important to malaise that we need to work on our body as well as our mind. We can Pranayama with kriya practice not only as part of a program to improve asthmatic children, but also as a way to assist in attaining other goals**.**

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