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Effect of yoga training on physiological variables of school level student

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Abstract

The Purpose of this study was to investigate the effect of yoga training on physiological Variables of school level students. Another purpose of the study was to improve the physiological level of students. 30 subjects were selected randomly from Govt. Sr. Sec. School, Ugalan, Dist. Hisar (Haryana). The studied physiological variables are Pulse rate, systolic blood pressure, diastolic blood pressure and Respiratory rate. The mean and T-test were applied for interpretation of data. The level of significance was set at .05. The result revealed that there was significant ($p < .05$) effect of yoga training on physiological variables of school students.

Keywords: Physiological Variables, Heart Rate, Systolic Blood Pressure, Diastolic Blood Pressure, Respiratory rate.

1. Introduction

Physical fitness of Indian school level students, today, is really questionable. Easily access of modern amenities restricts them to do hard physical labour. Gradually, they become sedentary. In their sedentary lives, physical inactivity leads towards most common metabolic disorders that may cause not only the morbidity and mortality, but also cause numerous health complications. In fact, physical inactivity among school students often carries a negative social stigma that affects health along with declined physical fitness. To achieve their normal improvement of factors of physical fitness in growing age, various researches investigated the effects of different physical activities on sports performance and associated variables of physical fitness (Mac Raw, 1989; Sherwood and Selder, 1979; Spirduso and Clifford, 1978; Spirduso *et al.* 1988). Similar studies in the area of Yoga exercises also revealed that Yoga proved to be a better intervention for improving physical fitness variables of schools students (Bera and Rajapurkar, 1993; Ganguly, 1981; Gharote, 1976 a; Gharote, 1976 b; Moorthy, 1983). Other associated reports revealed that both physical exercise, yoga and their combination showed significantly better as well as consistent results to improve the variables of health and fitness (Moorthy, 1982; Yoga is a science that has been practiced for thousands of years. It consists of ancient theories, observations and principles about the mind and body connection which is now being proven by modern medicine. Substantial research has been conducted to look at the health benefits of yoga from breathing (pranayam) and meditation. The information is group into two categories - physiological and psychological effects. Furthermore, scientists have laid these results against benefits of regular exercise. Yoga is a way of life, which can be practiced by any human being regardless of age, sex and condition of health, thus it is based on general physical and spiritual laws which operate all mankind alike. Yogic exercise is a kind of bodily movement with mental concentration. Yoga exercise can help a person to develop his health along with control at various emotions like lust, affection, anger, greediness and provide firm control over body and mind, especially to overcome most of dangerous diseases. For this reason at present scenario the importance of yoga is felt by a large number of persons in most of the nations. It is now being realized in all parts of the globe that yoga is not only for better development of mind, socio-control and spiritual moral aspect but is also a therapy. Regardless of the testimony of celebrities or the documented physiological benefits of regular yoga or mindbody practices, even the most motivated individuals find it challenging to find time to implement any of the worthwhile yoga techniques available to them. With various organized classes ranging from 45 to 90 minutes in length, it is often difficult to incorporate a daily or weekly yoga practice given the time already appropriate to regular cardiovascular or resistance training routines.

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Carving time for yoga or flexibility training with a schedule that is already full morning to night is nearly impossible for most people. In most cases, facilitating mind and body flexibility is easily put aside when it is probably needed the most. The aim of yoga is to attain perfection of the intellect, both of the head and the heart, so that, the artist becomes devoted, true and pure. This demands an almost total relinquishment of interest in other activities of life except the chosen path. The mind is fluid and runs after sensual pleasures. Art demands total undivided focal attention. Hence Patanjali explains that the mind must be controlled and then submitted to serve the artistic nature of yoga to its highest potency. Yoga or any art requires acute sharpness of intellect and alert organs of perception. In yoga there is no competition but it requires freedom to think and reconstruct with a desire to perform better. Then it brings to the yogi the most exalted enlightenment. From now on, wherever the yogi is and whatever he does, his thoughts are rooted in spiritual communion, which takes him to the Zenith of spiritual life (B.K.S. Iyengar 1993) 3 Methodology. The Purpose of this study was to investigate the effect of yoga training on physiological Variables of school level students.

Objectives of the Study

1. To find out the better yoga training programs for the subjects.
2. To find out the effect of yoga training programs on physiological variables (Heart Rate, Systolic blood pressure, Diastolic blood pressure and Respiratory rate) of the subjects.
3. To improve the physiological level of the school level students.

Delimitations

1. The subjects for the study were selected from the Govt. Sr. Sec. School, Ugalan, Dist. Hisar, (Haryana) India
2. The Study will be delimited to the following Physiological variables:
 - a. Pulse Rate
 - b. Systolic blood pressure
 - c. Diastolic blood Pressure
 - d. Respiratory Rate

Materials and Methods

30 male students were randomly selected from Govt. Sr. Sec. School Ugalan (Hisar) for the study. The age of the subjects were ranged between 16 to 18 years. Tools and Technique Selected Physiological variables i.e. Pulse Rate, Systolic blood pressure, Diastolic blood Pressure, Respiratory Rate. were used and measured in this study to know the effect of yoga training on its. The duration of yoga training programme was of 12 weeks in which students will receive the training for 6 days per week and 1 hour per day. Keeping in mind the objective of the study that yoga training programme was prepared in such a way which helps to improve the selected physiological variables.

Yoga Training Program

Sr. No.	Day	Yoga Asana
1.	Monday	Tadasana, Dhyana, Pranayama and Shavasana
2.	Tuesday	Pranayama and Shavasana
3.	Wednesday	Vajrasana, Bhujangasana, Dhanurasana and Shavasana, Pranayama
4.	Thursday	Tadasana, Dhyana, Pranayama and Shavasana
5.	Friday	Vajrasana, Bhujangasana, Dhanurasana and Shavasana, Pranayama
6.	Saturday	Pranayama and Shavasana

Procedure

On the selected subjects a Pre-test with respect to measure the physiological variables was conducted at very first stage of study than as far as experimental treatment is concerned the 12 weeks yoga training programme was administered as per scheduled and then post test was conducted to measure same physiological variables with the help of reliable tools of measurement to find out the significant difference and to find out the suitable yoga training programs for School students.

Statistical Technique

To find out the effect of yoga training in physiological characteristics of School students, the t-test was used at .05 level of significance.

Results

Variables	Mean of Pre test	Means of Post test	Mean difference	t- value
Pulse Rate	63	55.7	7.3	5.4
Systolic Blood Pressure	122.4	119.6	2.8	2.9
Diastolic Blood Pressure	85.5	80.9	4.6	2.7
Respiratory Rate	16	13.7	2.3	4.4

*.05(level of significance) (1.96)

Discussion

Significant differences were found in Pulse Rate, Systolic Blood Pressure, Diastolic Blood Pressure and Respiratory Rate, which showed that positive effect of yoga training on physiological characteristics of School level students. The findings of the study are in agreement with the findings of Lohan and rajesh (2002) [7], Mohan (2003) who proved Physiological Variables of adult could be improved through yoga asanas.

Conclusions

Effect of Yoga Training on Physiological Characteristics of School level Students. The results of the study were two folded as the physiological component data were computed for three different objectives. The first objective of the study was to find out a better yoga training program for the subjects. The result in the direction of M. Saroja (2010) studies, which has revealed that there is a better yoga training program on selected physical, physiological and bio-chemical variables among aged people. The second objective of the study was to find out significance difference on the effect of yoga training programs on physiological variables of the subjects. The results supported by Sushil Lega (2010) [6] studies, which has revealed that there is a significant difference effects of yoga training on cardio- respiratory functions of school children. The third objective of the study was to improve the physiological level of the under school students by yoga framing. The result with respect to effect of yogic practice and walking on selected physical, physiological and bio-chemical variables among aged people was significant and this has been supported by the M. Saroja (2010) study

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