The Effect of Yoga and Physical Exercises on Resting Pulse Rate Variable of Secondary School Students

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Abstract:

The purpose of the study was intended to assess the effect of yogic and physical exercises on resting Pulse rate for this purpose hundred fifty students studying in various classes of Government high school Nagathan and Sanganbasaveshawar residential school of Vijayapaur in Karnataka state in age group of 14-16 years were selected. They were divided into three equal groups, each group consist of 100 subjects, in which group-I underwent yoga practices, group-II underwent physical exercises and group –III acted as control group who were not allowed to participated and receive any special treatment apart from their regular curriculum classes', The training period for this study was six days a week for twelve weeks the before and after the training period, the subjects were tested for resting pulse rate. The analysis of covariance (ANCOVA) was applied to find out which group has produced better results, whenever "F" ratio for adjusted test was found to be significant for adjusted post-test means Scheffe's test was followed, as a post hoc to determine which of the paired means differ significantly . It was drawn conclusions that after the training of yoga and physical exercise physical group training has decreased resting pulse rate , but significant decreases has found among the physical exercise group comparing their counterpart yoga group.

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Introduction: Yoga is the art and science of maintaining physical and mental wellbeing that has its origin in India, is among the most ancient yet vibrant living traditions that is getting increasingly popular today. A potent stress buster, yoga is an instrument of self-evolvement and enlighten, through physical and mental well-being. Math-dimension it enhances the quality of our lives at so many levels. One aspect of yoga's benefits is to explore the bond between health and beauty.

The word Yoga derived from Sanskrit word ''YUJ" meaning to yoke, join or unite. This implies joining or integrating all aspects of the individual body with mind with soul- to achieve a happy, balanced and useful life, and spiritually, uniting the individual with the supreme,

Physical exercise in any organised activity that involves continuous participation and effects on whole body. Exercise occupies a leading role in keeping a person fit. It will be quite difficult to adjunct one's life in terms on stress, diet, and sleep and so on without proper exercise.

Regular practices of asana maintain the physical body in an optimum condition and promote health even in an unhealthy body. Through asana practice, the dormant energy potential is released and experienced as increased confidence in all areas of life, yogasna have a deeper significance value in the development of the physical,mental,and spiritual personality, whereas pure exercise only have physical effect on muscles and bones

Physical exercises are performed quickly and with a lot of heavy breathing, yogasan are performed slowly with relaxation and concentration. The benefits of various yoga techniques have been professed to improve body muscular strength, performance, stress reduction, attainment of inner peace and self realization

Schools are dynamic setting for promoting health and wellness through various correlated areas such as physical education and sports. There is a growing awareness that the health and psycho-social wellbeing of young children is of paramount importance and schools can provide a strategic means of children's health, self-esteem, life skills and behaviour

The yoga and physical exercise are the means to notice all round and harmonious development among school students in the modern society, hence scholar made an attempt explore the "**The Effect of Yoga and Physical Exercise on resting pulse rate Variables of Secondary School Students**" The present study was carried out in the background of the experimental method.

Hypothesis:

1. There would be significant effect of yoga and physical exercises training on

improvement of resting pulse rate variables of secondary school students.

2. The is no significant difference of yoga and Physical Exercise training in improving resting pulse rate among students

Objectives:

1. To assess the effect of yoga and Physical exercises on pulse rate variables of secondary school students

Methodology

The purpose of the study was to find out effect of yogasana on selected physical variables pulse rate between yoga and Physical exercises group, to achieve the purpose of the study 300 students studying in the Government High School Nagthan and Sanganbasaveshawar residential school of Vijayapur district of Karnataka(Indi) has selected randomly as subject for the experiment, they were divided into two equal groups, each group consists of the 100 students. Group I and Group II underwent yogasan and physical; exercises training for six days per week for twelve weeks. Group III Acted as control that did not undergo any special training programme apart from their regular physical education classes programme. The following variables' namely Resting Pulse Rate was selected as criterion variables. All the subjects of two groups were tested on selected depended variables at prior to and immediately after the training programme. The analyses of covariance were used to analyze the significant difference if any between the groups. The 0.05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as an appropriate.

Analysis of the data

The data collected prior and the after the experimental period on resting pulse rate variables of yoga and physical exercise group were analyzes and presented in the following table –I

Pulse rate :

1. Hypothesis was formulated that after training of yoga and physical exercise, physical exercise may reduce the pulse rate than their counterpart group is assumed on the rational that meditation and few asana experimental and control group of the secondary school students.

   To determine the influence of yogic and physical exercise on pulse rate, ANNACOVA was employed. The obtained results pertaining to this been presented in table below

Tables-I

Computation of Covariance of Physiological Variables of Resting Pulse Rate of control Group, Experimental group 1(Yogic Exercises) and Experimental group 2 (Physical Exercises) of Secondary school students.

Source Variance	Df	Sum of the Square	Mean square	Remarks
Between the group	2	719.166	359.583	28.68
Within the group	296	3710.459	12.535	

Significant at 0.05 level

TABLE- I -A

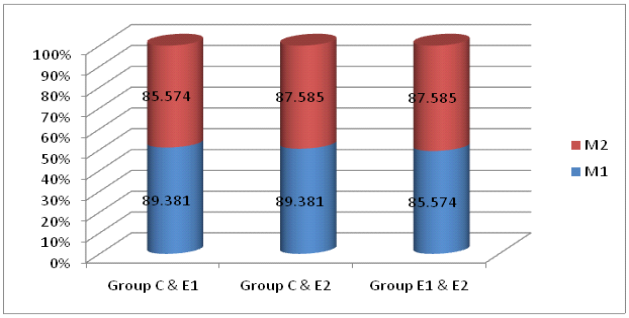
Resting pulse rate mean differences of control group (A), Experimental group 1(B) (Yogic Exercise) and experimental group 2(C)(Physical Exercise)

GROUP and fbc value	M1	M2	Diff	Remarks
Group C & E1	89.381	85.574	3.807	7.019
Group C & E2	89.381	87.585	1.796	
Group E1 & E2	85.574	87.585	-2.011	

The Stressful situations raise heart rate and blood pressure, and release stress hormones, which all can injure the heart and the blood vessels, especially during prolonged or repeated exposures. Yogic exercises helps to reduce stress and promote a calm relaxed state, which in turn reduces stress hormones, decreases the heart rate and lowers blood pressure.

The breath has a strong influence on the rhythm of the heart through the inner connections in the central nervous system. The autonomic nervous system (ANS) controls silently controls the function of the heart rate and blood pressure which is influenced by the two parts of the ANS: the parasympathetic and sympathetic nervous system. Slow deep breathing is encouraged by pranayama and recitation of mantras. And this smoothing and lengthening of the breath slows the heart rate, regulates the heart rhythm, oxygenates the blood, and induces a feeling of calm and well-being.

The graph showing the mean differences of Pulsing rate of experimental group recorded at the pre and post-test



Conclusion:

The Yogic exercises plays significant role in controlling and decreasing resting pulse rate contents , so modern science, technology and style of living has influenced health condition of school going students, hence it research outcome states that yoga education curriculum should be implemented and maintained effectively for the all-round and harmonious development of school personality

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