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“Effect Of Yogic And Aerobic Exercise On Physiological Variables Of High School Students”

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Abstract:

The purpose of the study was to find out the effects of yogic exercises and aerobic exercises on selected physiological variables namely cardio respiratory endurance, resting pulse rate, breath holding time,. The study has carried out and well designed to help to the practitioners in develop their personality factors. In this study the researcher has selected yogic and aerobic exercise training that is having more effect on physiological variables

Key Words: yogic exercises ,aerobic exercises and physiological

Introduction:

Health is the level of functional or metabolic efficiency of a living being. In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain.

The World Health Organization defined health in its broader sense in 1946 as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" Physical exercise is important for maintaining physical fitness and can contribute positively to maintaining a healthy weight, building and maintaining healthy bone density, muscle strength, and joint mobility, promoting physiological well-being, reducing surgical risks, and strengthening the immune system.

Endurance exercise before meals lowers blood glucose more than the same exercise after meals. According to the World Health Organization, lack of physical activity contributes to approximately 17% of heart disease and diabetes, 12% of falls in the elderly, and 10% of breast cancer and colon cancer

The beneficial effect of exercise on the cardiovascular system is well documented. There is a direct relation between physical inactivity and cardiovascular mortality, and physical inactivity is an independent risk factor for the development of coronary artery disease. There is a dose response relation between the amount of exercise performed from approximately 700 to 2000 kcal of energy expenditure per week and all cause mortality and cardiovascular disease mortality in middle-aged and elderly populations. The greatest potential for reduced mortality is in the sedentary who become moderately active

Proper nutrition is as important to health as exercise. When exercising, it becomes even more important to have a good diet to ensure that the body has the correct ratio of macronutrients whilst providing ample micronutrients, in order to aid the body with the recovery process following strenuous exercise.

Aerobic exercise and fitness can be contrasted with anaerobic exercise, of which strength training and short-distance running are the most salient examples. The two types of exercise differ by the duration and intensity of muscular contractions involved, as well as by how energy is generated within the muscle.

During aerobic exercise the body demands more oxygen, so the lungs must deliver more oxygen to the working muscles through the blood. As the depth of breathing increases, exchange of oxygen and carbon dioxide between the lungs and the blood occurs more rapidly and efficiently. Regular exercise increases the lungs capacity to deliver oxygen.

Yoga is a generic term for the physical, mental, and spiritual practices or disciplines which originated in ancient India with a view to attain a state of permanent peace.

The three main focuses of Hatha yoga make it beneficial to those suffering from heart disease. Overall, studies of the effects of yoga on heart disease suggest that yoga may reduce high blood pressure, improve symptoms of heart failure, enhance cardiac rehabilitation, and lower cardiovascular risk factors. For chronic low back pain, specialist Yoga for Healthy Lower Backs has been found 30% more beneficial than usual care alone in a UK clinical trial. Other smaller studies support this finding.

Yoga is a form of exercise that unites breath, mind, body, and spirit. The word and practice yoga conjures up images of Eastern philosophy and ancient practices. Modern day yoga practice has been discovered in the Western world by many people want to strengthen their bodies in a new way. Yoga is not the fast pace cardiovascular workout like running, dance class, or a sport like tennis. Yoga is learning how to slow your thoughts way down, place all your attention on the present moment, and create an oasis of stillness in your movements. Programme is the.

OBJECTIVES OF THE STUDY

1. To assess the effect of Yogic and Aerobic exercises practices on Physiological variables of high school students.
2. To find the relation between yogic practice and aerobic exercises with Physiological wellbeing of high school students.

HYPOTHESIS

It will be hypothesized that, as a result of Yogic and Aerobic exercises on Physiological variables of High School Students on both Experimental and Control Groups.

- It is hypothesised that there will be a significant effect of Yogic and Aerobic exercises on physiological variables, Vo2 max, Pulse Rate and Breath Holding of high school students.
- There will be a significant difference between Yogic Group and Aerobic Exercise Groups on Physiological variables of government high school students.

DEFINITIONS OF TERMS

Yoga

Is a way of life which can be practiced by any human being regardless of age and condition of health. Yoga is a gaining process of control over the mind, thereby improving the physiological and psychological behavior of an individual

Asana

Means holding the body in a particular posture to bring stability to the body and poise to the mind. The exercises of asana bring purity in tabular channels firmness to the body and vitality to the body and the mind.

Aerobics

Means 'with oxygen'. Aerobic exercise is designed to produce a sustained increase in heart rate and whose energy cost can be met by the body from aerobic sources, that is, from increased oxygen consumption. This is a particular strenuous exercise routine which requires plenty of oxygen, it is particularly helpful for strengthening the heart and lungs through using your bodies' muscles to increase the heart rate.

Aerobics Training

This is a particular strenuous exercise routine which requires plenty of oxygen, it is particularly helpful for strengthening the heart and lungs through using your bodies muscles to increase the heart rate.

Methodology

The purpose of the study was to find out the effects of yogic exercises and aerobic exercises on selected physiological variables. The purpose of the study was to find out the “Effect of Yogic exercise and Aerobic exercise on physiological variables of high school students”. To achieve this purpose 150, samples was selected randomly, the group ranging age from 14 to 16 years, subjects were divided into three groups of fifty each known as:

- a) Experimental group 1- Yogic exercise group
- b) Experimental group 2 -Aerobic exercise group
- c) Control group 3- Control Group

Experimental design:

The Selected subjects were divided in to three groups of 50 subjects, out of which two groups are Experimental groups and a control group. Experimental groups underwent the yogic exercise training Group-I, aerobic exercise training group-II in selected exercises. The training period of an experimental group was 16 weeks 5 days per week for duration of 60 minutes (the training was given between 6.30 a.m. to 7.30 a.m. Morning and evening 4.30.p.m. to 5.30 p.m.). Control group III did not undergo any training rather than their routine work.

The selection tests and the criterion variables are presented in following table.

Sl. No	Physiological Variables	Test /Tools Administered	Criterion Measures
1	Vo2 Max	Wet-Spirometer	Litters
2	Pulse Rate	Manual (redial pules method)	Number of counts
3	Breath Holding	Manual readings	In seconds

EXPERIMENTAL DESIGN AND STATISTICAL PROCEDURES

The pre and post-test random group design was used as experimental design in which 150 men subjects were randomly selected and divided into three equal groups of fifteen each. Group I underwent yogic exercises, Group II underwent aerobic exercises and Group III acted as control.

The subjects were tested on selected criterion variables at prior and immediately after the twelve weeks of training programme as pre and post-tests respectively. The collected data were analyzed statistically by using ANCOVA (analysis of covariance) to find out the effects of yogic exercises and aerobic exercises on selected physiological variables for each variable separately. Whenever, the obtained ‘F’ ratio for the adjusted post-test mean was found to be significant, the Scheffe’s test was applied as post hoc test to determine the paired mean

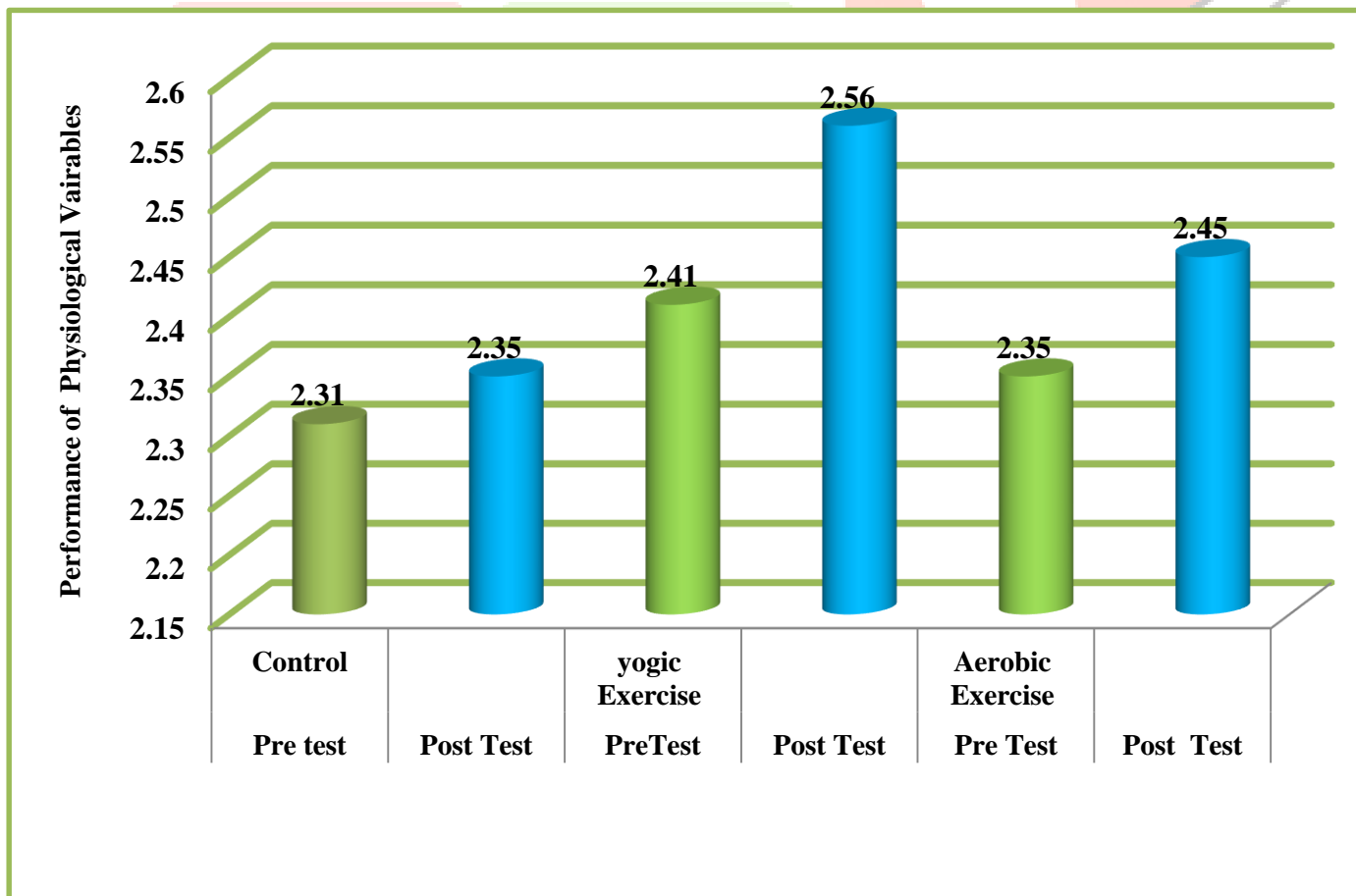
differences, if any. The .05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

RESULTS OF THE STUDY

Physiological Variables

Resting Herat rate And Breath holding Time

The results of the study showed that there was a significant difference among yogic exercises group, aerobic exercises group and control group on selected physiological variables such as resting pulse rate and breathe holding time. It also reveals that there was significant reduction on resting pulse rate due to yogic exercises and aerobic exercises after twelve weeks of training period. It further showed that there was significant improvement on breath holding time due to yogic exercises and aerobic exercises after twelve weeks of training period. Significant differences were found between yogic exercises group and aerobic exercises group in the reduction of resting pulse rate after twelve weeks of training period. And also there was a significant difference between yogic exercises group and aerobic exercises group in the improvement of breath holding time after twelve weeks of training period. However, the reduction on resting pulse rate and the improvement of breath holding time were in favor of aerobic exercises group.



SUMMARY

The present study was investigated the” effect of yogic and aerobic exercises on physiological variables of high school students” The physiological parameters are vo2 max, pulse rate, breath holding, have been chosen to assess the effects of aerobic and yogic training on dependent variables of secondary school students. To collect the require data various tools have been administered and conducted test, physiological variables such as Vo 2 max has measured by wet spirometer, pulse rate assessed with redial pulses method, Breath holding collected with manual reading .

Aerobic group has noticed the better V2 max consumption ability comparing to yoga training group. Aerobic group has noticed better pulse rate comparing to yoga group. Yoga group has exhibited better vital capacity comparing to aerobic training group. Yoga group has noticed lesser Diastolic ability comparing to aerobic training group. In case of systolic capacity yoga has noticed better performance comparing to aerobic training group.

Conclusion:

1. The aerobic training group has improved in V2 oxygen consumption ability among the yoga group comparing to yoga group, when it was assessing at pre-post session among the control and subgroup.
2. The group belonging to yoga has exhibited better performance in pulse rate comparing to aerobic and control group and when it was assessed at pre-post session of training.
3. The yogic exercises and techniques have made positive impact in developing vital capacity in yoga group comparing to counterpart groups.
4. Yoga group has shown better systolic and diastolic rate comparing to aerobic and control group of the research.

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