



International Journal of Physical Education, Sports and Health

P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2020; 7(5): 88-91
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www.kheljournal.com
Received: 01-09-2020
Accepted: 13-09-2020

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Effect of yogasanas on physiological fitness of high school students of Shopion, Kashmir

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Abstract

The researcher wants to find out what impact yogasanas have on high school students' physical fitness. The researcher took forty (40) male subjects from high schools of the present study Storeholder. The participants were sorted out by simple method of random sampling, and their age range ranged from 12 to 18 years. The environmental conditions and the subjects' everyday routine work were Same. Same. All the topics within each category are divided into two groups of 20 subjects. One was classified as a group of experiments and the second was a group of controls. The Study group asks for selected testing Yogic asanas for two weeks, for six days in a row. Apart from their physical education programme, no instruction was given to monitor community. In order to assess physiological fitness variables for both the study and control groups, they were administered before affecting their training programme pre-test and after the two week testing post test. The Training Curriculum was conducted after the pre-test Gradually, and continued until the completion of the two-week treatment cycle. Halasana, Dhanurasana, Bhujangasana, Pawanmuktasana, Naukasana, and Shavasana included asanas in preparation. Praxis.

The study group was handed in for the duration of 2 (two) weeks under the experimenter's direct supervision, the prescribed selected asanas are included in the training schedule for three days in a week for 45 minutes per day. Both groups were also taken after the post-test training programme. To assess the impact of yogasanas on physiological fitness the data were collected by administering tests on selected variables before and after two weeks of training. For further analysis, the scores were determined by following the t-statistical technique in sowing.

Keywords: physiological fitness, high school students

Introduction

Physical education has been considered as an essential part of human life. Physical education is not a new word in Indian context. From time immemorial Indians have laid emphasis on yoga and physical exercise not only to keep fit but to prevent and treat the physical ailments. The great ancient Rishis, Vedas and Puranas attached much emphasis on physical fitness, Meditation, dhayana and spiritualism. Basically the survival of man in physical and movementor the activity is the first and foremost important thing one learns soonafter birth. It is the movement by which one expresses the desire for hunger and thirst. Speech comes much later in one's life. Secondly, physical activity is also required for proper growth and development. The literate meaning of physical' is body' which directly relates to physique, health, strength, endurance, speed, agility, flexibility and physical performance on the sports ground, a unique contribution towards physical development. The meaning of education refers to the on-going process of learning and total development that occurs throughout one's life span. Education in physical education helps pupil to be a good learner and a good mover. Physical education helps

teaching physical skills so as to develop neat, skilful, well controlled versatile movement. Physical 'when combined with education 'makes the education a complete process, which aim at the education of an individual through big muscle activity where in an individual's intellectual capacity is also stimulated resulting in all round development of the personality. As an outcome, one is physically fit, mentally alerts, emotionally balanced, socially adjusted, morally true and spiritually uplifted.

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Physical Fitness

Physical fitness is the positive state of well-being allowing you enough strength and energy to participate in a full, active life-style of your choice. Physical fitness is the general capacity to adapt favourably to physical effort. Individuals are physically fit when they are able to meet both the usual and unusual demands of daily life, safely and effectively with undue stress or exhaustion. Physical fitness is the capacity to carry out reasonably well various forms of physical activities without being unduly tired and includes qualities important to the individual's health and well-being. The fit person is one who is free of limiting and debilitating ailments, who has the stamina and skill to do the day's work and who has sufficient reserve of energy not only to meet emergencies but also to participate in leisure time activities. Physical fitness is one phase of total fitness, and it may be used interchangeably with motor fitness. Other phases of total fitness include social fitness, emotional fitness, mental fitness etc. The ability to meet the demands of daily living with energy to spare, possessing the functional capacities to do not only task that are required, but also those activities that one enjoys. Fitness is sometimes also described in quantitative terms using measures such as heart rate, endurance, blood pressure or blood cholesterol level. This valuable measure may be indicative of one's general state of health and thus are certainly related to fitness. Today, there is a growing emphasis on looking good, feeling and living longer. Increasingly, scientific evidence tells that one of the keys to achieving these ideals is fitness and exercise. Getting moving is a challenge because today physical activity is less a part of out daily lives. There are fewer jobs that require physical exertion. We have become a nation of observers with more people (including children) spending their leisure time pursuing just that – leisure. Consequently, statistics show that obesity and overweight, the problems that come with high blood pressure, 14diabetes, cardiac arrest, etc. are on the rise. But statistics also show that preventive medicine pays off, so one should not wait until his/her doctor gives an ultimatum. Everyone must take the initiative to get active now.

Objectives of the study

- i) To find out the Physiological Fitness level of the high school Students.
- ii) To find out the effect of yogasanas on Physiological Fitness of the high school students.

Methodology

Source of data

This experiment were attempted to find out effect of Yogasana on physiological fitness of high school male students of Shopain. For this present study the researcher were selected the male subjects from high schools of Shopain.

Selection of subjects

Among the high school of Shopain, only forty (40) male subjects were selected through simple random sampling method for this experimental study. Their age range varied from 12 to 18 years.

All the subjects belong to different socio-economic conditions.

Criteria measures

To find out the effect of Yogasanas on physiological fitness of high school male students of Shopain, the researcher

measured the following variables through the administered of test.

Physiological components

a) Pulse Rate

It was counted the number of beats palpitated on radial artery at wrist and score as the number of beats in a minute.

b) Respiratory Rate

It was counted by visually observing breathing movements of abdomen and chest in one minute.

c) Blood Pressure (Systolic and Diastolic)

It was measured through the Sphygmomanometer, stethoscope and recorded in mm/hg.

d) Vital Capacity:

It was measured through the dry spirometer and recorded in kg.

Administration of Test

After the selection of the subjects from high schools of Shopain the researcher administered physiological fitness tests to measure the physiological fitness variables before and after the yogic training programme of two weeks. All the physiological fitness variables were tested and measured through standard procedure with the help of expert and under the direct supervision of the experimenter. Research scholar administrated the following tests given below. 61

a) Resting Pulse Rate:

Purpose: To measure the pulse beats of radial artery per minute.

Equipment: A stop watch.

Procedure: The tips of three fingers or placed whether on the radial artery at the wrist or the carotid artery just below the neck. As soon as the pulse is found, counting is started saying zero when the seconds needle is at 12 or by starting the stop watch). The count is continued for 60 seconds or 30 seconds duration and multiplied by two.

Scoring: The numbers of beats counted is recorded as beats per minute.

b) Respiratory Rate

Purpose: breathing movements per minute

Equipment: A stop watch,

Procedure: The subject was tested in sitting position. The respiration rate was measured as inhale and exhale by the subject in per minute was counted by putting the hand on belly with the help of stop watch.

Scoring: The total number of inhale and exhale in per minute.

Purpose: To measure the blood pressure

Equipment: Sphygmomanometer, stethoscope

Procedure: The cuff of the Sphygmomanometer is wrapped securely around preferably, the naked upper arm while the subject is sitting in a chair or lying on a bed. The mercury scale is so placed on an even platform, say table or any shelf near the subject's arm, where the examiner can conveniently read the movement of mercury in the Sphygmomanometer. The stethoscope is placed on the anterior side of elbow joint of the examine. Now the pressure of the cuff is raised by pumping the hand

bladder of Sphygmomanometer, to a liable above the expected systolic pressure of the subject beaked. As soon as the mercury reaches 160mm on the scale stopped pumping,

the examiner loosens the screw to allow the pumped air to get out slowly while is on the stethoscope receivers and eyes on the mercury scale. As soon as the ears listen the first beat the reading of the mercury during the last beat listened is remembered. And the two readings at the start and at the end of listening of heart beats represents the systolic and diastolic blood pressure e.g., 120/80 etc. generally the reading is measured twice or thrice.

d) Vital Capacity

Purpose: To measure the amount of air kept in lungs

Equipment: Dry spirometer

Procedure: The subject was tested in standing position. After a couple of normal breaths the subject took deep inhalation and exhale slowly through the dry spirometer and completely exhale. The spirometer reading is recorded in kg.

Experimental Design

For the present study forty (40) male subjects were selected randomly from high school of Shopain. Their age ranged from 12 to 18 years. They were divided into two equal groups of 20 (twenty) subjects in each. One was treated as experimental (practice yogasanas) group, the second one was control group. The experimental group underwent prescribed yogaasanas practices, for 6 (six) days in a week, for 45 (forty five) minutes each day, for the period of two weeks under direct supervision of the experimenter. The control group did not undergo any specific training during the period of two weeks apart from the physical education programme. 64

Training Programme

The researcher prepared a suitable training programme for the experimental group with the help of experts in the field of physical education it's included in the following exercises.

Collection of Data

To find out the comparison of physiological fitness variables of high school students of Shopain researcher were collected data through administration of test on selected variables and data were collected through standard test and procedures. To see any significant differences \bar{t} test were used for farther statistical analysis with 0.5 level of significance.

Statistical Technique

E.G. – Experimental group, C.G. – control group, N – Number of subjects in group, M – Mean score, MD – Mean difference between pre and post scores, SD – Standard deviation of test score ,

\bar{t} – \bar{t} value, H – hypothesis, df – degree of freedom, \bar{t} follows t distribution with $(N_1 + N_2 - 2)$ in .05 level of significance.

Interpretation of data

All the data pertaining to the present study were examined by employing \bar{t} -test to find out whether any significance difference between the means of pre and post test score of the both groups after the period of two weeks yogic training programme. The following notations were used for all the subsequent tables for elaborations.

Results reveals that there is no significant of difference between the pre and post test means of experimental group and control groups on resting pulse rate, as the calculated t-value 0.67 and 1.76 respectively was less than the require value of t- 2.04 at 0.05 level of confidence. Therefore, it is indicated that there is no significant difference found between

the experimental and control groups. It was indicated that yogic asanas has no significant effect on resting pulse rate of experimental group. Hence the null hypothesis is accepted.

Results also reveals that there is no significant of difference between the pre test means of experimental group and control groups on respiratory rate, as the calculated \bar{t} value 1.06 was less than there quire value of \bar{t} 2.04 at 0.05 level of confidence. In case of post test there is significant difference found between the experimental and control groups, as the calculated \bar{t} value 3.92 was greater than there quire value of \bar{t} 2.04 at 0.05 level of confidence. It was indicated that yogic asanas has significant effect on respiratory rate of experimental group. Hence the null hypothesis is rejected. Results also reveal that there is no significant of difference between the pre and post test means of experimental group and control groupson systolic blood pressure, as the calculated \bar{t} value 0.95 and 1.43 respectively was less than the require value of \bar{t} 2.04 at 0.05 level of confidence. Therefore, it is indicated that there is no significant difference found between the experimental and control groups. It was indicated that yogic asanas has no significant effect on systolic blood

pressure of experimental group. Hence the null hypothesis is accepted.

Results reveals that there is no significant of difference between the pre test means of experimental group and control groups on diastolic blood pressure as the calculated t- value 1.24 was less than the require value of t-2.04 at 0.05 level of confidence. In case of post test there is significant difference found between the experimental and control groups, as the calculated t- value 3.98 was greater than the require value of t- 2.04 at 0.05 level of confidence. It was indicated that yogic asanas has significant effect on diastolic blood pressure of experimental group. Hence the null hypothesis is rejected.

Results also shows that there is no significant of difference between the pre test means of experimental group and control groups on vital capacity as the calculated \bar{t} value 0.97 was less than the require value of t- 2.04 at 0.05 level of confidence. In case of post test there is significant difference found between the experimental and control groups, as the calculated t-value 4.16 was greater than the requirevalue of t- 2.04 at 0.05 level of confidence. It was indicated that yogicasanas has significant effect on vital capacity of experimental group. Hence the null hypothesis is rejected.

Conclusions

Within the limitations of the present study, the following conclusions were drawn:

1. The present study shows that there exists significant effect on some physiological fitness variables of high school students after the yogasanas training of two weeks on the experimental group.
2. It was also concluded that there was significant differences on physiological fitness variables like respiratory rate, diastolic blood pressure and vital capacity of experimental group except resting pulse rate and systolic blood pressure.
3. The researcher found that the physiological fitness variables i.e. respiratory rate, diastolic blood pressure and vital capacity of experimental group except resting pulse rate and systolic blood pressure were improved after giving the 2 weeks of yogasanas training programme. It is due to the fact that yogasanas might be effect on cardio-vascular endurance and pulmonary ventilation of the experimental group. It might

be reason that prescribed specific exercises has got significant influence on heart and lungs; circulatory system might be properly functioned.

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