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ORIGINAL ARTICLE

EFFECT OF AEROBIC EXERCISES ON PHYSICAL FITNESS AND BODY COMPOSITION OF SCHOOL BOYS

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Abstract:

The main purpose of the study was to see the effect of aerobics exercises on physical fitness and body composition of school boys. The selected 40 student were equally divided into two equal groups consisting 20 subjects in each group assigned in experimental and control groups. The pre and post test were conducted on the physical fitness variables, abdominal strength, speed and cardiovascular endurance and body composition.

KEY WORDS:

Aerobic Exercises , Physical Fitness , Body Composition , cardiovascular endurance .

.INTRODUCTION

Physical fitness and health are the integral part of human life. Fitness and wellness of person are correlated to each other. In fitness body proportion and composition are important parameters and which has roles relevance with health related fitness.

Maintenance of physical fitness is needed of the day in human society. In this age of stress and tension, low level of fitness leads towards, the exposure of degenerative and psychosomatic disorders including other in effective suffering. A lot of people live with fitness myths, having their own concepts and theories of fitness and health when it comes to fitness there are many that believe strongly in the dictum 'ignorance is bliss'.

Aerobics is a physical exercise combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements (flexibility, muscular strength and cardio-vascular fitness) it is usually performed to music and may be practiced in a group setting led by an instructor, although it can be done solo and without musical equipment with the goal of preventing illness and promoting physical fitness, practitioners perform various routines comprising a number of difference dance like exercise formal aerobics classes are divided into different level of intensity and complexity. Aerobics classes may allow participants to select their level of participation according to their fitness level.
Physiologically the term aerobic means the activities with oxygen gradual practice facilities oxygen and nutrients to the extremities and heart. So that demands of the body are satisfied. Muscles become stronger and more enduring whereas body becomes more agile and flexible by following over loading principles in aerobic dance and combination of other aerobic activities leads to favourable change in circular-respiratory system body composition and certain fitness factors. Research reports also revealed that aerobics training has favourable influence on psycho-hormonal developments.

METHODOLOGY:

The main purpose of the study was to see the effect of aerobic exercise on physical fitness and body composition of collegiate student. A group of 40 boys student were randomly selected as subjects for

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this study from Yugantar high school, Sadar, Nagpur. They were in the age group of 15-17 years. The selected 40 subjects were equally divided into two equal groups, consisting of 20 subject in each group assigned in experimental and control groups. The experimental group under 8 weeks of aerobics exercise training 6 days in the week, in an evening session whereas the control group did not undergo any training.

The pre test and post test were conducted for both the experimental and control group on the selected physical fitness variables, abdominal, strength, speed and cardiovascular endurance and body composition. Training programs on aerobic exercise where scheduled separately in the gymnasium hall of the Tirpude college of physical education, Sadar.

The following tools to measures the selected dependent variables and their reliability was tested by using the test and retest. Tricep, supra-illiac and thigh skin fold was measured by using lunge calliper and recorded in millimetre.

Abdominal strength was tested administering sit-ups test and recorded in numbers, speed was tested by 50 yard tested recorded in seconds. Cardiovascular endurance was measured with the help of 9 minutes run and walk test and recorded in distance covered. The data were analyzed using the 't' test. Result of selected variables on the experimental group (within group)

Table-1- The comparison of the mean between the pre and the post test of the selected variables of the experimental group.

Variables	Score unit	Pre-test Mean ±SD	Post-test Mean ±SD	MD	SE	't' value	Sig.
Abdominal strength	Points	17.70 ±1.56	22.40 ±2.04	4.7	0.16	28.69	0.000 (p<0.05)
Speed	Sec.	8.26 ±0.44	7.81 ±0.42	0.45	0.02	24.33	0.000 (p<0.05)
Cardio-vascular endurance	Meter	1219.50 ±28.75	1549 ±57.48	329.50	6.29	48.56	0.000 (p<0.05)
Body composition	MM	8.80 ±1.15	7.35 ±1.09	1.45	0.17	8.54	0.000 (p<0.05)

Tabel-2- the comparison of mean scores between the pre and post tests of selected variables of the control group.

Variables	Score unit	Pre-test Mean ±SD	Post-test Mean ±SD	MD	SE	't' value	Sig.
Abdominal strength	Points	17.70 ±1.38	18.50 ±1.15	0.8	0.14	5.81	0.000 (p<0.05)
Speed	Sec.	8.53 ±0.51	8.34 ±0.44	0.19	0.03	5.73	0.000 (p<0.05)
Cardio-vascular endurance	Meter	1290.00 ±21.25	1260 ±22.48	51.00	2.04	25.01	0.000 (p<0.05)
Body composition	MM	9.15 ±1.09	8.85 ±1.09	0.30	0.24	1.24	0.000 (p<0.05)

Table-3- the comparison of mean gain in selected variable between control group and experimental group (between group n:40)

Variables	Group Compared	Mean Gain	M D	Std Error mean gain	't' value	Sig.
Abdominal strength	Experimental Vs Control	0.80 4.70	3.90	0.21	18.22	0.000 (p<0.05)
Speed	Experimental Vs Control	0.19 0.45	0.26	0.38	6.85	0.000 (p<0.05)
Cardio-vascular endurance	Experimental Vs Control	51.00 329.50	278.50	7.09	39.31	0.000 (p<0.05)
Body composition	Experimental Vs Control	0.30 1.45	3.89	0.30	1.15	0.000 (p<0.05)

FINDINGS:

From the above analysis and interpretation of the data, the following findings may be drawn:-
Aerobic training contributes significantly for the promotion of abdominal strength.
Aerobic training contributes significantly for the promotion of speed.
Aerobic training contributes significantly for the promotion of cardio-vascular endurance.
Aerobic training contributes significantly for the promotion of body composition.

CONCLUSIONS:

The aerobic exercise showed a significant effect on abdominal strength of school boys.
The aerobic exercises showed a significant effect on speed of school boys.
The aerobic exercises showed significant effect on cardio-vascular endurance of school boys.

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