

A STUDY ON EFFECT OF CONTINUOUS RUNNING AND AEROBIC DANCE ON THE CARDIOVASCULAR EFFICIENCY OF SCHOOL GOING STUDENTS

Dr. Kanhaiya Kumar Singh

Asst. Professor, Lovely Professional University, Phagwara, Jalandhar, Punjab

INTRODUCTION

For years we knew that endurance led to a reduction in the heart rate at rest and sub maximal workloads and to an increase in the stroke volume, the amount blood pumped with each beat of heart. That is why we used the term cardiovascular to describe training effect. Aerobic fitness is synonymous with endurance or stamina, it describes the ability part inherited and part trained, to preserve or persist in strenuous and prolonged endeavor. Those who persevere fare more enhanced health and performance.

Aerobic fitness, defined as the maximal capacity to take in, transport and utilize oxygen. In the pattern of developing fitness aerobic exercises requires oxygen for a longer duration the aerobic exercises helps in increasing the ability of preserving oxygen. Aerobic exercise results into advantageous changes in lungs, heart and cardiovascular system. To be accurate such daily exercise increases the inhaling capacity of the lungs and it also increases the percentage of total blood. Generally aerobic exercises are related with endurance activities required less speed as jogging and aerobic dance etc.

OBJECTIVE OF THE STUDY

The finding of the study may benefit to common men since they can choose aerobics and continuous running to improve their suppleness of body. Aerobics and continuous running may be used as an alternative means for enriching health and fitness level not only for boys aged 14-18 years population but also all population in general.

RESEARCH DESIGN OF THE STUDY

The population of the present study was the school boys in the age range 14-18 years. A total 90 male subjects were selected randomly and participated in this study. They subjects were selected from Police Modern School, Ghaziabad after verifying their age from the school records and divided in three groups as Experimental group 1(Continuous running) n=30, Experimental group 2 (Aerobic dance group) n=30 and Control group n=30. A cardiovascular fitness test namely Harvard step test has been applied to measure cardiovascular efficiency of the school going students.

METHODOLOGY

Pre test data has been taken through administrating Harvard step test. To administrate the cardiovascular efficiency test subjects were thoroughly instructed about the test as well as demonstrated properly by the researcher. After pre data collection actual training schedule training has been started for both experimental group 1& 2 i.e continuous running group and aerobic dance group respectively. Different training schedules were drawn with the help of experts for 30 min each. The training schedule for 30 minute every day, six days a week ruined up to 8 weeks was administrated. Continuous running was administrated with different varied pace in between 100-120 beat heart rates/per minute on Experimental Group-1. Aerobic dance classes with varied pace was administrated for experimental group 2 with the rage of 100-120 heart beat/ per minute. Post test data collection was completed as the same procedure used in pre test.

RESULTS

Table1

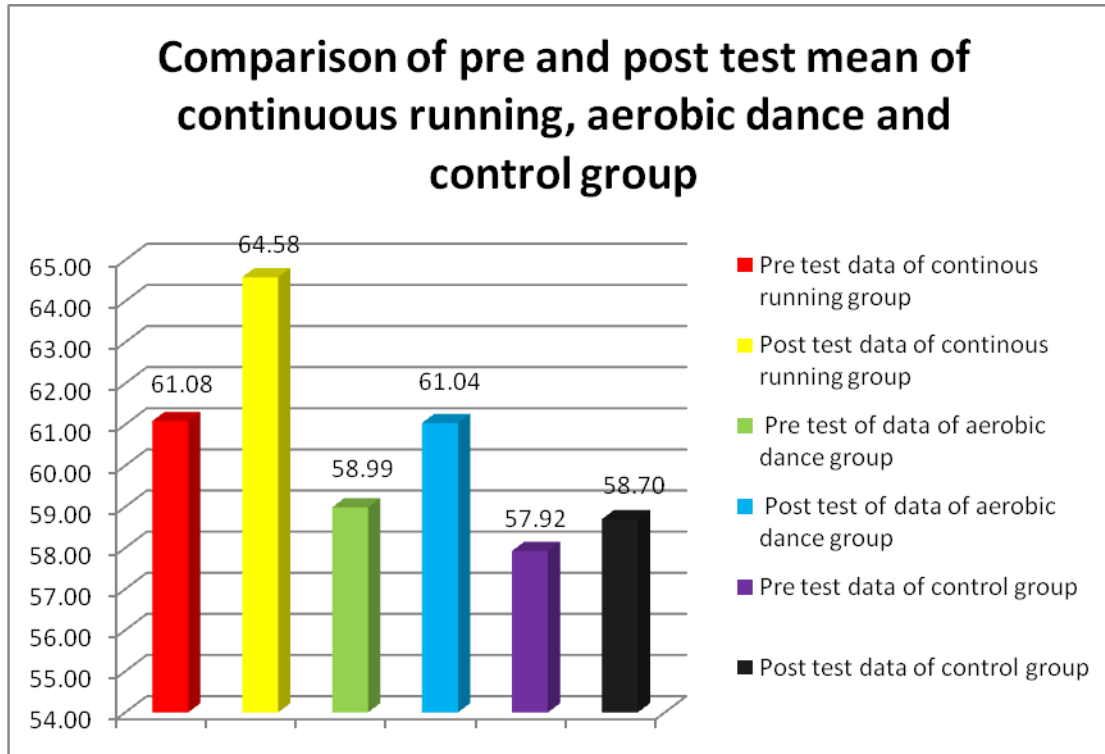
Table showing calculation of student's' test

Groups	Mean	S.D.	Mean Difference	SE	't' Value
Continuous Running (pre test)	61.08	1.94			
Continuous Running (post test)	64.58	2.98	-3.497	0.35	19.44*
Aerobic Dance (Pre test)	58.99	4.74			
Aerobic Dance (Post test)	61.03	2.42	-2.051	10.77	0.68
Control Group (pre test)	57.92	7.11			
Control Group (post) test)	58.70	6.82	-0.774	10.72	0.24

* Significant at 0.05 level of Significance $t_{(0.05)(29)}=2.045$

Discussion on findings: Table-1 showed the comparison of pre and post test score of Experimental and Control Groups respectively. Where the mean score of pre and post test of Continuous running group was 61.08 and 64.58 and standard deviation was 1.94 and 2.98 respectively. The calculated 't' value of 19.44 was found to be significant at 0.05 level of confidence which shows that the continuous running group have better cardio vascular efficiency than other groups. The table further showed the comparison of pre and post test score of Aerobic dance group. Where the mean score of pre and post test of Control Group was 58.99 and 61.03 and standard deviation is 4.74 and 2.42 respectively, the calculated 't' value of 0.68 was found to be insignificant at 0.05 level of confidence. Again table showed the comparison of pre and post test score of Control Group. Where the mean score of pre and post test of Control Group was 57.92 and 58.70 and standard deviation

was 7.11 and 6.82 respectively. The calculated 't' value 0.24 is found to be insignificant at 0.05 level of significance.



Interpretation and Discussion: Among the three groups only the continuous running group had significant mean difference after the interventions of 8 weeks of continuous running. But when we think about the aerobic dance group which shown insignificant different between the mean after 8 weeks of aerobic dance training. It may be happened because 8 weeks of aerobic training is not sufficient to improve the cardiovascular efficiency or the steps selected for the aerobic training would not be appropriate to improve the cardiovascular efficiency. In case of continuous running this study supports the study of baker and In case of aerobic dance it supports the study of smith.

Conclusion: Under the limitations of the study, after discussion on findings it can be concluded that 8 weeks Continuous running is effective to improve the cardiovascular efficiency of the male adolescents of aged 14-18 years.

References:

Brian J Sharkey. "Fitness and Health" fifth edition, human kinetics, U.K, 2001, p 72.

P.M Kusundra, "A Study of a Effect of Yoga and Aerobic Exercises on Physical Fitness Components, Physiological Variables and Aerobic Capacity, Vyayam Vidyan. Vol. 39 (2) p. 61.

D. Thomson and D.L. Balor, "Physiological Response During Aerobic Dance of Individual Group by Aerobic Capacity and Dance Experience", **University of Wisconsin**, 1991 March, 32(1) page no 68-72

D.L Blessings, "The Psychological Effect of a Week Aerobic Dance with and without Hand Held Weight". General article, department of health and recreation, Urban University, Alabama, A.36849.

Smith Sokena, "The Effect of Six Week Aerobic Jogdding Programme on Cardio Vascular Efficiency And Body Fat Percentage on the Girls". **Dissertation Abstract International** Vol. 30,1979.

Baker John A; "Comparison of Rope And Jodding as a Method of Improving Cardiovascular Efficiency of College Men", *Research Quarterly*, May 1963, p. 440.

Nelson and Johnson, *Practical Measurement for Evaluation in Physical Education*, 3rd Edition, Surjeet Publication, pp. 154-157.