

Influence of Aerobic Exercise on Cardiovascular Efficiency of Kabaddi Players

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Abstract: *The Purpose of the research is to study to measure cardiovascular adeptness variables of different subjects of age group of 20 to 25 years. Sample consisted of 40 Students's (two groups of each 20). The study was delimited to the male players. The subject was selected by using simple random sampling. The experimental period was of ten weeks. It is hypothesized that the aerobic exercise group will be significant different in cardiovascular efficiency variables. Cardiovascular efficiency was measure by Harvard step test. For the present study researcher uses Aerobic Dancing, Jogging & skipping. In this study data were analysis and interpreted with the help of statistical form.*

Keywords: Cardiovascular efficiency, Aerobic, skipping, Young Students

I. INTRODUCTION

Aerobic exercise is critical for improving cardiovascular fitness, which is a critical issue in sports and physical education. The efficiency with which the circulatory system distributes oxygen to working muscles during physical exercise is referred to as cardiovascular adeptness. Understanding how aerobic exercise affects this physiological element is critical for developing effective training strategies and boosting overall sports performance.

Regular aerobic exercise causes a variety of physiological modifications in the cardiovascular system. One of the key consequences is an increase in cardiac output, which means the heart pumps more blood every beat. This adaptation adds to increased stroke volume, which leads to more effective oxygen delivery to the muscles. Furthermore, aerobic exercise causes peripheral adaptations such as capillarization, which is characterised by an increase in the density of capillaries surrounding muscle fibres. This allows for better nutrition and oxygen exchange at the cellular level. Also, aerobic exercise has an impact that goes beyond structural adaptations. It has a beneficial effect on the autonomic nervous system, resulting in a better balanced sympathetic-parasympathetic response. This improves not just cardiovascular regulation during exercise, but also recuperation and overall well-being. Recognising the subtleties of aerobic exercise's influence on cardiovascular adeptness is critical for establishing personalised training programmes in the context of sports and physical education. Different sports and activities may necessitate varied degrees of cardiovascular fitness, and knowing these distinctions allows educators and trainers to tailor interventions to individual athletic needs.

The significance of the study helps to reduce the performance stress and developed endurance. The Purpose of the research is to study to measure cardiovascular efficiency variables of different subjects of age group of 20 to 25 years. Sample consisted of 40 Students's (two groups of each 20). The study was delimited to the male players. The subject was selected by using simple random sampling method. The experimental period was of ten weeks.

HYPOTHESIS:

It is hypothesized that the aerobic exercise group will be significant different in cardiovascular efficiency variables.

INSTRUMENT RELIABILITY:

18 inch high bench, score sheet, Stop watch.

EXPERIMENTAL DESIGN AND PROCEDURE:

The Harvard step test was used to assess cardiovascular efficiency. I was picked from one of two groups to perform aerobic exercise. The Group II control group did not exercise during the time required for the aerobic precision. The variable was estimated at the start of the pretest and at the end of the test period ten weeks later.

aerobic exercise:

Aerobic Dancing, Jogging & skipping.

Table -1: Pre test cardiovascular efficiency of Control and aerobic exercise group of High school going Students

*significant at 0.05 Tab t: 2.021

Group	N	Mean	SD	MD	df	SE	Calculated 't'
Control	20	66.10	3.8120	0.73	38	1.3321	0.560
Aerobic exercise	20	67.00	4.5920				

The estimated value 0.560 for degree of freedom 38 is not significant at the 0.05 level of significance since it is less than the table value 2.021, according to the test table No-1. It demonstrates that there is no significant difference in cardiovascular efficiency between the control and aerobic exercise groups. It means that the hypothesis starting that control group and aerobic exercise group students will different significantly with respect to their cardiovascular efficiency is rejected.

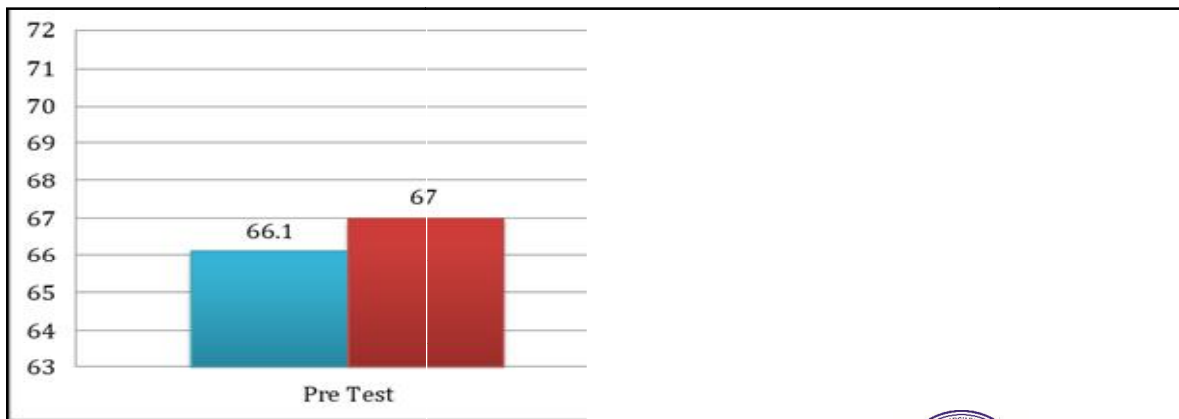
Table-2: Post test cardiovascular efficiency of Control and aerobic exercise group of High school going Students

Group	N	Mean"	SD	MD	df	SE	Calculated 't'
Control	20	67.90	3.8920	3.5	38	1.3847	2.528
Aerobic exercise	20	71.40	4.8166				

*significant at 0.05 Tab t: 2.021

The above the test table No-2 it reveals that calculated' value 2.528 for degree of freedom 38 is significant at 0.05 level of significant because calculator value is greater than the tabulated value 2.021. It show that the hypothesis starting that control group and aerobic exercise group students will different significantly with respect to their cardiovascular efficiency. It observe that there is significant different between control group and aerobic exercise group students.

Graph 1: Pre and post-test cardiovascular efficiency of Control and Aerobic exercise group of High school going Students



II. CONCLUSION

Aerobic exercise can help to improve cardiovascular fitness. At the 0.05 level of confidence, evidence in the post test indicated that cardiovascular adeptness was statistically significant. The results demonstrate that there is a significant difference between the control group and the aerobic exercise group students before and after the exam. Aerobic exercise has a diverse effect on cardiovascular fitness, involving structural, functional, and regulatory changes. As a Ph.D. student in sports and physical education, looking into the complexities of these adaptations might inform the creation of creative training approaches. This information not only improves comprehension of exercise physiology, but it also helps to optimise athletic performance.

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