

EFFECT OF AEROBIC EXERCISES TRAINING ON PULSE OXYGEN AND PULSE RATE OF INTER COLLEGIATE BASKETBALL PLAYERS



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ABSTRACT

The objective of the study was to find out the effect of six weeks (42 days) Aerobic Training Programme of pulse oxygen and pulse rate of SGB Amravati University, Amravati. For this purpose 60 intercollegiate basketball players (30 Control Group and 30 Experimental Group) of SGB Amravati University were selected randomly. The age groups of subjects were ranged in between 20 to 25 years. The data collected qualitatively on two different tests of Pulse Oxygen and Pulse Rate of Control group (N=30), and Experimental group (N = 30) were analyzed by using 't' test and Post-test and Pre-test means of both groups. The level of significant was set at 0.05 level of confidence. The finding of this study showed significant effect on Pulse oxygen and Pulse rate.

Keywords: Aerobic Exercise, Pulse Oxygen, Pulse Rate & Basketball Players.

INTRODUCTION

Everyone now these days wants to be look good, healthier and energetic. Different kind of activities and exercises are being done by different players to have the good performance in the sports. In between, the aerobic exercises have also shown the progressive report in the performance and ability development of players. The only variable of consistent performance is to remain fit for the excellence in the sports. Regular aerobic exercises undoubtedly improves the cardiovascular and cardio respiratory fitness by increasing our capacity to use oxygen by rapidly increasing the heart's capacity to send blood and oxygen to the muscles.

OBJECTIVE OF THE STUDY

The objective of the study was to find out the effect of six weeks (42 days) Aerobic Training Programme of pulse oxygen and pulse rate of SGB Amravati University, Amravati.

DESIGN OF THE STUDY

Simple random group experimental design was used in the present study. The experiment was conducted by considering two groups. The experimental group received the stimulus for a period of 6 weeks whereas the control did not. Therefore, researcher

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has chosen parallel group design by giving them odd and even numbers for classifying the subjects into the experimental and control groups. The subjects were examining with pre-test and post-test methods.

Selection of subjects and Population

For the present study 60 subjects of inter collegiate basketball players of SGB Amravati University, Amravati were selected randomly. The age of the students were ranging from 20 to 25 years. The 60 subjects were divided into two equal groups 30 Control group and 30 Experimental Group. Then the treatment was given on the experimental group and the treatment was continuous for six weeks. The Pre and Post-test were conducted on each group. The population for this study was the male basketball players of between the ages 20 to 25. Pulseoximeter was used to measure the Pulse rate and Pulse Oxygen.

Training programme

The training programme were of six weeks with six days a week accept Sunday. The subjects were divided into two groups i.e. Control group (N = 30) and Experimental group (N = 30) and training schedule was as shown in the given table:

Table No-I

Table showing the Training schedule (six weeks)

Training programme	Assemble	Warm-up	Name of aerobic exercises	Duration of aerobic exercises	Cooling down	Reassemble
1 st phase (two weeks)	2 Minutes.	5 Minutes.	Front kick, Side kick, Knee-up, Leg curve,	15 Minutes.	5 Minutes.	2 Minutes.
2 nd phase (two weeks)	2 Minutes.	5 Minutes.	Front kick, Sidekick, Knee-up, Leg curve, Superman	25 Minutes	5 Minutes.	2 Minutes.
3 rd phase (two weeks)	2 Minutes.	5 Minutes.	Front kick, Side kick, Knee-up, Leg curve, Superman, Toe touch	30 Minutes	5 Minutes.	2 Minutes.

Note: Timing 4:00 to 4:45p.m.

Post-training test

After six weeks of training the Post training tests were conducted on both groups.

STATISTICAL ANALYSIS

The level of significance to test the hypothesis will be set at 0.05 level of confidence which was considered adequate and reliable for the purpose of the study. The data collected on 60 subjects before and after six week training program on pulse Oxygen

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and Pulse Rate were analyzed by comparing the means of Pre and Post Tests of Control group and Experimental group and were again statistically analyzed by applying the “t” test to check the difference among selected variables. Therefore separate tables and graphs have been drawn for each item as follows:

Table No-II
Table showing the Pulse Rate during Pre-test of control group and Pre-Test of experimental group Age 20-25 Years.

Group	N	Mean	SD	DF	MD	Cal.T.	Tab.T.
Control pre-test	30	77.14	6.00	29	0.04	0.026	2.045
Experimental Pre-Test	30	77.1	5.62				

Level of Significance = 0.05

Tabulated ‘t’ 0.05(29) = 2.045.

Table No II reveals that there is no significant difference between means of Pre-tests between control group and experimental group. Because mean of Pre-test of control group is 77.14 is slightly higher than mean of Pre test of experimental group 77.1 and then mean difference is 0.04. To check significant difference between means of pre-test between control group and experimental group the data was again analyzed by applying ‘t’ test. Therefore after applying ‘t’ test it was found that was no significant difference between Pre-tests of Control group and experimental group because value of calculated ‘t’ is 0.026 which is less than tabulated ‘t’ is 2.045 at 0.05 level of confidence.

Graph-1

Graphical Representation of Pulse Rate during Pre-test of control group and Pre-Test of experimental Group Age 20-25 Years.

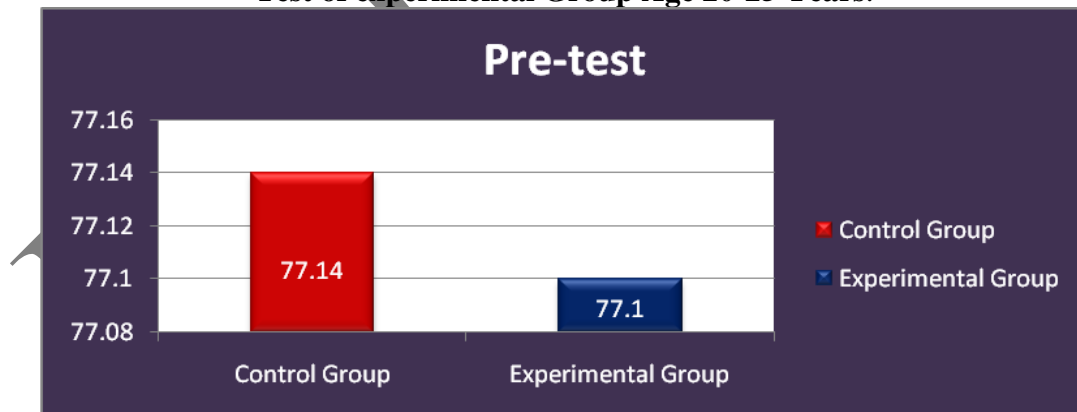


Table No-III

Table showing the Pulse oxygen During Pre-test of control group and Pre-Test of experimental group Age 20-25 Years.

Group	N	Mean	SD	DF	MD	Cal.T.	Tab.T.
Control	30	95.70	1.04	29	0.13	0.5	2.045
Experimental	30	95.83	1.01				

Level of Significance = 0.05

tabulated 't' 0.05(29) = 2.045.

Table no III shows that means of pre-test between control group and experimental group. Tests mean are 95.70 and 95.83 and mean difference is 0.13. The finding of this test shows that there is no significant difference between the mean of pre-test (control group and experimental group) as the calculated 't' value of 0.5 is less than the tabulated 't' value of 2.045 (29 degree of freedom at 0.5 level of significance).

Graph-II

Graphical Representation of Pulse oxygen During Pre-test of control group and Pre-Test of experimental Group Age 20-25 Years.

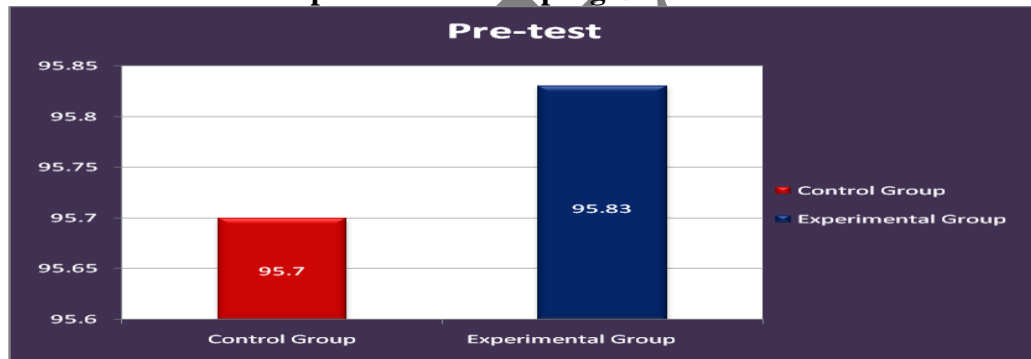


Table No-III

Table showing the Pulse rate during post-test of control group and post-test of experimental group Age 20-25 years.

Group	N	Mean	SD	DF	MD	Cal.T.	Tab.T.
Control	30	75.93	4.18	29	4.77	3.41	2.045
Experimental	30	71.16	6.43				

Level of Significance = 0.05

Tabulated 't' 0.05(29) = 2.045.

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Table No III reveals that there is significant difference between means of Post-tests between control group and experimental group. Because mean of Post-test of control group is 75.93 is slightly higher than mean of Post-test of experimental group 71.16 and then mean difference is 4.77. To check significant difference between means of post-test between control group and experimental group the data was again analyzed by applying ‘t’ test. Therefore after applying ‘t’ test it was found that was significant difference between Post-tests of Control group and experimental group because value of calculated ‘t’ is 3.41 which is higher than tabulated ‘t’ is 2.045 at 0.05 level of confidence, which shows that there is significant difference on Experimental group of six weeks training programme.

Graph-III

Graphical Representation of Pulse rate During Post-test of control group and Post-Test of experimental Group Age 20-25 Years.

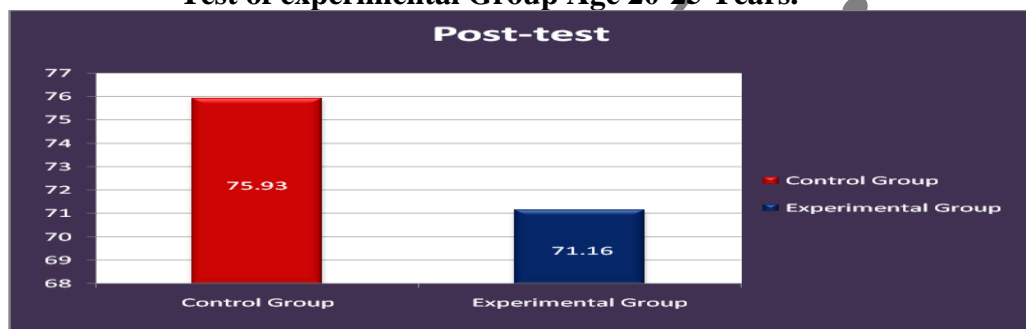


Table No-IV

Table showing the Pulse oxygen during post-test of control group and post-test of experimental group Age 20-25 years.

Group	N	Mean	SD	DF	MD	Cal.T.	Tab.T.
Control	30	95.76	1.08	29	1.07	4.11	2.045
Experimental	30	96.83	0.94				

Level of Significance = 0.05

Tabulated ‘t’ 0.05(29) = 2.045.

Table No IV shows that means of post-test between control group and experimental group. Tests mean are 95.76 and 96.83 and mean difference is 1.07.

The finding of this test shows that there is significant difference between the mean of post-test (control group and experimental group) as the calculated ‘t’ value of 4.11 is higher than the tabulated ‘t’ value of 2.045 (29 degree of freedom at 0.5 level of

significance), which shows that there is significant difference on Experimental group of six weeks training programme.

Graph-IV
Graphical Representation of Pulse oxygen During Post-test of control group and Post-Test of experimental Group Age 20-25 Years.

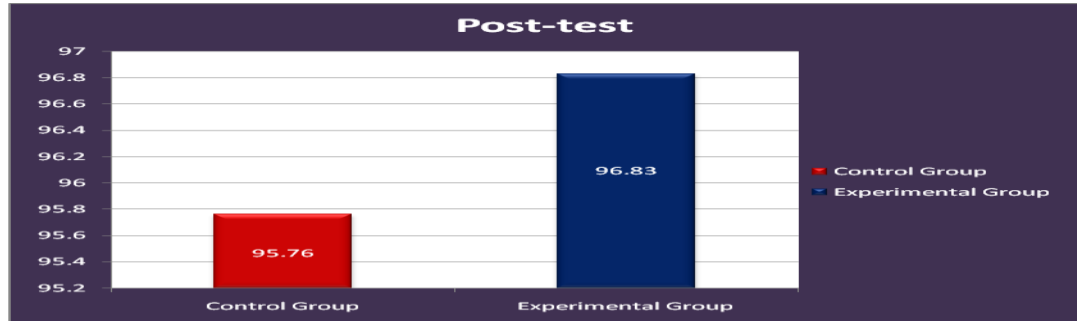


Table No-V
Table showing the Pulse rate during pre-test and post-test of control group and pre-test and post-test of experimental group Age 20-25 years.

Group	Test	Mean	DF	MD	T-ratio	Tab-T
Control Group	Pre-test	77.14	29	1.21	1.24	2.045
	Post-test	75.93				
Experimental Group	Pre-test	77.1	29	5.5	6.25	2.045
	Post-test	71.6				

Level of Significance = 0.05

Tabulated 't' 0.05(29) = 2.045.

Table No V reveals that there is no significant difference between means of Pre and Post-tests of control group, because means of Pre-test is 77.14 and 75.93 and mean difference is 1.24.

The finding of this test shows that there is no significant mean difference between the mean of control group (pre-test and post-test), as the calculated 't' value of 1.24 is less than the tabulated 't' value of 2.045 (29 degree of freedom at 0.05 level of confidence).

Similarly the means of experimental group between pre-test and post-test are 77.1 and 71.6 where as the mean difference is 5.5.

The finding of this test shows that there is significant difference between the mean of experimental group (pre-test and post-test), as the calculated 't' value of 6.25 is higher than the tabulated 't' value of 2.045 (29 degree of freedom at 0.05 level of confidence).

Graph-V
Graphical Representation of Pulse rate During Pre-test and post-test of control group and pre-test and Post-Test of experimental Group Age 20-25 Years.

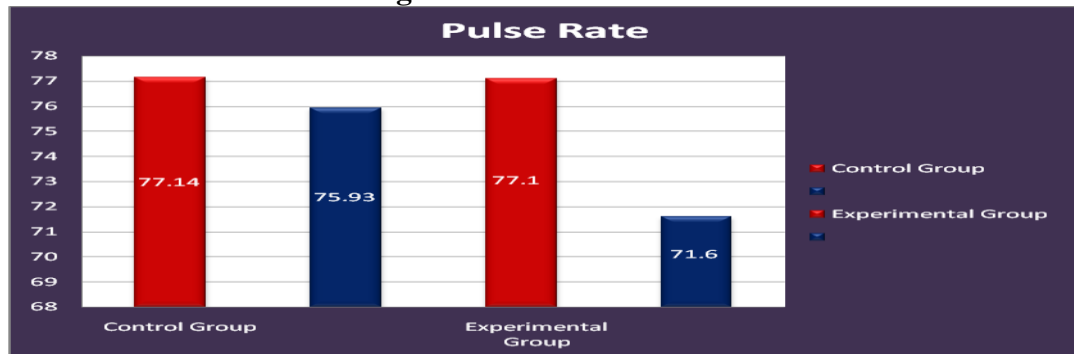


Table-VI
Table showing the Pulse oxygen during pre-test and post-test of control group and pre-test and post-test of experimental group Age 20-25 years.

Group	Test	Mean	DF	MD	T-ratio	Tab-T
Control Group	Pre-test	95.70	29	0.06	0.27	2.045
	Post-test	95.76				
Experimental Group	Pre-test	95.83	29	1.00	3.36	2.045
	Post-test	96.83				

Level of Significance = 0.05

Tabulated 't' 0.05(29) = 2.045.

Table No VI reveals that there is no significant difference between means of Pre and Post-tests of control group, because means of Pre-test is 95.70 and 95.76 and mean difference is 0.06.

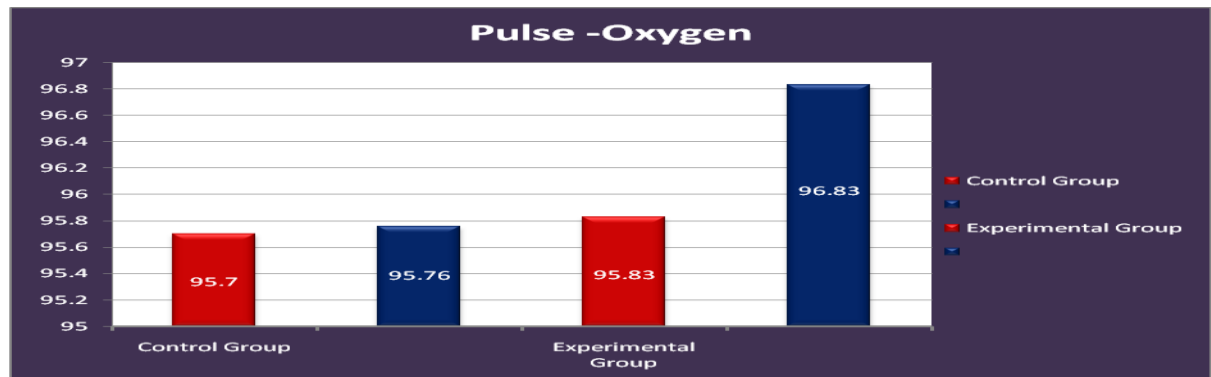
The finding of this test shows that there is no significant mean difference between the mean of control group (pre-test and post-test), as the calculated 't' value of 0.27 is less than the tabulated 't' value of 2.045 (29 degree of freedom at 0.05 level of confidence).

Similarly the means of experimental group between pre-test and post-test are 95.83 and 96.83 where as the mean difference is 1.00.

The finding of this test shows that there is significant difference between the mean of experimental group (pre-test and post-test), as the calculated 't' value of 3.36 is higher than the tabulated 't' value of 2.045 (29 degree of freedom at 0.05 level of confidence).

Graph-VI

Graphical Representation of Pulse oxygen During Pre-test and post-test of control group and pre-test and Post-Test of experimental Group Age 20-25 Years.



DISCUSSION ON FINDINGS

After statistical analysis the following findings were drawn:-

Pulse Rate

The result showed that there was a significant effect of Aerobic exercises on Pulse Rate after six weeks training programme on Experimental group.

Pulse oxygen

The result showed that there was a significant effect of Aerobic exercises on Pulse oxygen after six weeks training programme on Experimental group.

DISCUSSION OF HYPOTHESIS

In beginning of the study it was hypothesis that there significant effect of aerobic exercise training on pulse oxygen and pulse rate. Hence the hypothesis is accepted.

On the basis of the findings of the present study the hypothesis which was stated earlier that H1: “there was significant difference of aerobic exercise training on pulse rate of collegiate students” is accepted.

Further the hypothesis H1: “there was significant difference of aerobic exercise training on pulse oxygen of collegiate students” is accepted.

CONCLUSION

Within the limitation of the study and from statistical analysis the following conclusion was drawn.

There was significant effect of Aerobic exercises on Pulse Rate and Pulse oxygen.

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