International Journal of Physical Education and Sports Sciences
Vol. 10, Issue No. 17, July-2016, ISSN 2231-3745

Conditioning Programme Effect on Physiological Variables

Dr. Anurag Pandey[1]* Dr. Brijesh Kumar Yadav[2]

[1]Assistant Professor, Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India

[2]Assistant Professor, Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India

Abstract – The purpose of this study was to find out the effect of eight (08) week conditioning programme on selected physiological variables. The conditioning programme consisted of free hand exercise, circuit training, continuous training and fartlak training involving all the body parts. The conditioning programme was administered during the morning session timing at 06.00 A.M. to 06.40 A.M. daily with five days a week For the purpose of this study thirty (30) male and female students who were pursuing Bachelor of Physical Education and Master of Physical Education course from Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India were randomly selected as the subjects for this study and divided into two equal groups namely experimental group and control group. The subject age was ranged between 20 to 25 years. The pre-test and post-test were taken before and after the completion of eight (08) week of conditioning programme on selected physiological variables. In order to find out the effect of eight (08) week conditioning programme on selected physiological variables paired 't' test was applied and the level of significance was set at 0.05. The study reveals that eight (08) week of conditioning programme have significant effect on physiological variables.

Keywords: Conditioning Programme, Resting Heart Rate and Vital Capacity.

----------♦----------

INTRODUCTION:-

Conditioning is the ability to reproduce skillful work at the right time, under pressure, throughout a competition. Physical fitness also has different components namely physiological, health related, skill related and sports related. The physiological aspects of physical fitness are metabolism, morphology and bone integrity. Health related aspects include body composition, cardiovascular fitness, flexibility, muscular endurance and muscular strength. Skill related aspects include agility, balance, motor coordination, power, speed and reaction time. Sports are categorized into team games and individual games. These components are equally important and contribute significantly to a general physical fitness.

METHODOLOGY

Selection of Subjects:

In this study thirty (30) male and female students were selected through simple random technique by drawing lots from Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India as subjects for this study. All the subjects were divided randomly into two groups namely experimental group and control group. Each group consisted of fifteen (15) subjects. Experimental group performs a specific conditioning programme. Whereas control group did not performs any kind of training.

Selection of Variable:

The variables selected for this study were as follows:-

- Resting Heart Rate
- Vital Capacity
- Peak Flow Rate
- Systolic Blood Pressure
- Diastolic Blood Pressure

Criterion Measure:

The following tests were selected and score was considered as criterion measure for this investigation.

- **Resting Heart Rate** was measured by stopwatch and score was recorded in beats per minute.

- **Vital Capacity** was measured by dry spirometer and score was recorded in liters.
- **Peak Flow Rate** was measured by peak flow meter and score was recorded in liter per minute.
- **Systolic Blood Pressure** was measured by sphygmomanometer and stethoscope and score was recorded in mm/Hg.
- **Diastolic Blood Pressure** was measured by sphygmomanometer and stethoscope and score was recorded in mm/Hg.

Research Design:

Pre-post random group design was selected for this study.

Statistical Technique:

To find out the effect of eight (08) week conditioning programme on selected physiological variables paired 't' test was used and the level of significance was set at 0.05.

RESULTS OF THE STUDY

The analysis of data on selected variables that were resting heart rate, vital capacity, peak flow rate, systolic blood pressure and diastolic blood pressure collected on thirty (30) students. Fifteen (15) students from each group i.e. experimental group and control group from Department of Physical Education, Institute of Professional Studies, Madhya Pradesh, India. The data was analyzed by paired 't' test to investigate the effect of eight (08) week conditioning programme on selected physiological variables.

Table No.01

Comparison of Pre-test and Post-test of Resting Heart Rate of Experimental Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	67.20	2.48	1.60	2.86*
Post-test	65.60	3.48		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.01 indicates that there is significant difference between pre-test and post-test of resting heart rate of experimental group as calculated 't' value 2.86 is more than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had significant effect on resting heart rate of experimental group. Graphical representation of above table is made in figure no.01.

Figure No.01 Mean and Standard Deviation Values of Pre-test and Post-test of Resting Heart Rate of Experimental Group

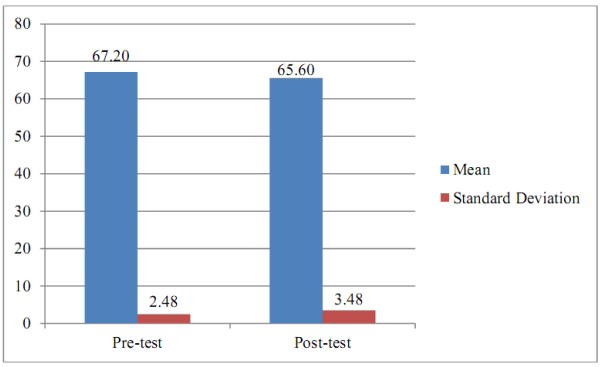

Table No.02

Comparison of Pre-test and Post-test of Resting Heart Rate of Control Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	63.20	2.80	0.67	1.23
Post-test	62.53	4.03		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.02 indicates that there is insignificant difference between pre-test and post-test of resting heart rate of control group as calculated 't' value 1.23 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on resting heart rate of control group. Graphical representation of above table is made in figure no.02.

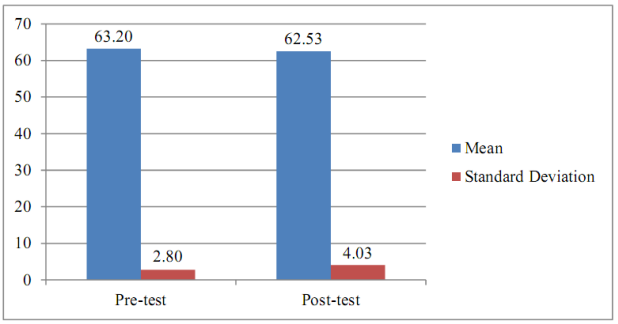

Figure No.02 Mean and Standard Deviation Values of Pre-test and Post-test of Resting Heart Rate of Control Group

Table No.03

Comparison of Pre-test and Post-test of Vital Capacity of Experimental Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	3.29	0.85	0.14	4.11*
Post-test	3.43	0.89		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.03 indicates that there is significant difference between pre-test and post-test of vital capacity of experimental group as calculated 't' value 4.11 is more than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had significant effect on vital capacity of experimental group. Graphical representation of above table is made in figure no.03.

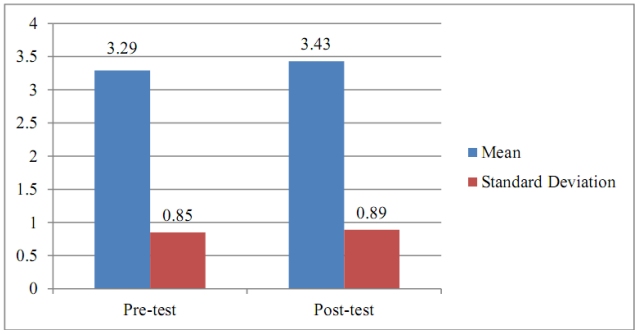

Figure No.03 Mean and Standard Deviation Values of Pre-test and Post-test of Vital Capacity of Experimental Group

Table No.04

Comparison of Pre-test and Post-test of Vital Capacity of Control Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	3.17	0.49	0.10	0.87
Post-test	3.07	0.67		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.04 indicates that there is insignificant difference between pre-test and post-test of vital capacity of control group as calculated 't' value 0.87 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on vital capacity of control group. Graphical representation of above table is made in figure no.04.

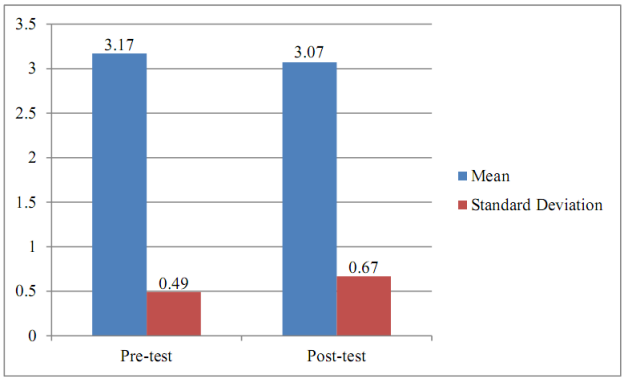

Figure No.04 Mean and Standard Deviation Values of Pre-test and Post-test of Vital Capacity of Control Group

Table No.05

Comparison of Pre-test and Post-test of Peak Flow Rate of Experimental Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	4.40	0.49	0.38	3.96*
Post-test	4.78	0.61		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.05 indicates that there is significant difference between pre-test and post-test of peak flow rate of experimental group as calculated 't' value 3.96 is more than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had significant effect on peak flow rate of experimental group. Graphical representation of above table is made in figure no.05.

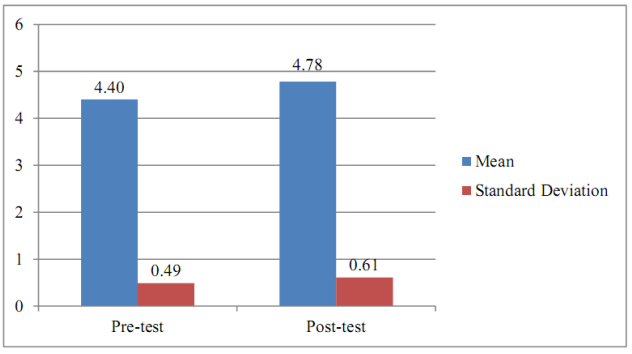

Figure No.05 Mean and Standard Deviation Values of Pre-test and Post-test of Peak Flow Rate of Experimental Group

Table No.06

Comparison of Pre-test and Post-test of Peak Flow Rate of Control Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	4.56	0.09	0.23	3.09*
Post-test	4.79	0.01		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.06 indicates that there is significant difference between pre-test and post-test of peak flow rate of control group as calculated 't' value 3.09 is more than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had significant effect on peak flow rate of control group. Graphical representation of above table is made in figure no.06.

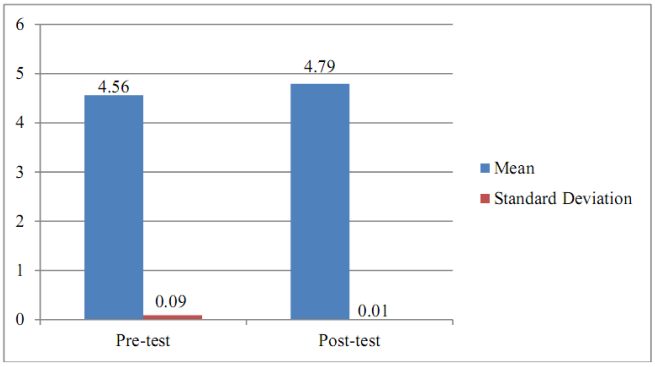

Figure No.06 Mean and Standard Deviation Values of Pre-test and Post-test of Peak Flow Rate of Control Group

Table No.07

Comparison of Pre-test and Post-test of Systolic Blood Pressure of Experimental Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	83.86	7.50	0.13	1.00
Post-test	83.73	7.00		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.07 indicates that there is insignificant difference between pre-test and post-test of systolic blood pressure of experimental group as calculated 't' value 1.00 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on systolic blood pressure of experimental group. Graphical representation of above table is made in figure no.07.

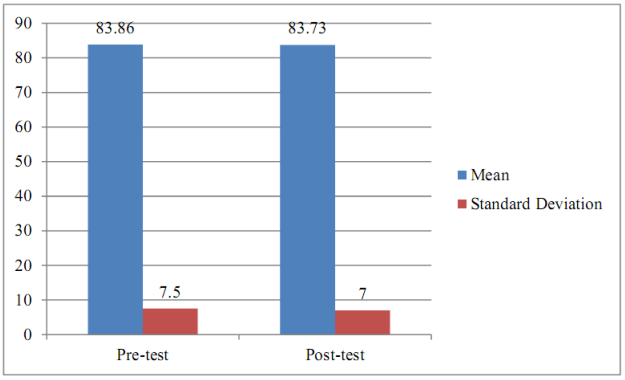

Figure No.07 Mean and Standard Deviation Values of Pre-test and Post-test of Systolic Blood Pressure of Experimental Group

Table No.08

Comparison of Pre-test and Post-test of Systolic Blood Pressure of Control Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	84.53	3.93	1.60	0.88
Post-test	86.13	5.97		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)} = 2.05$

Table no.08 indicates that there is insignificant difference between pre-test and post-test of systolic blood pressure of control group as calculated 't' value 0.88 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on systolic blood pressure of control group. Graphical representation of above table is made in figure no.08.

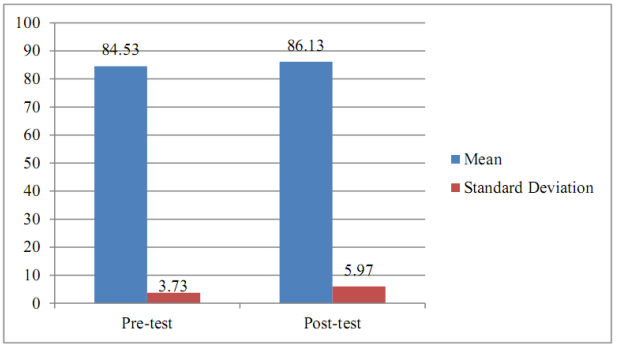

Figure No.08 Mean and Standard Deviation Values of Pre-test and Post-test of Systolic Blood Pressure of Control Group

Table No.09

Comparison of Pre-test and Post-test of Diastolic Blood Pressure of Experimental Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	1.23	7.03	0.01	1.87
Post-test	1.22	6.62		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)}$ = 2.05

Table no.09 indicates that there is insignificant difference between pre-test and post-test of diastolic blood pressure of experimental group as calculated 't' value 1.87 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on diastolic blood pressure of experimental group. Graphical representation of above table is made in figure no.09.

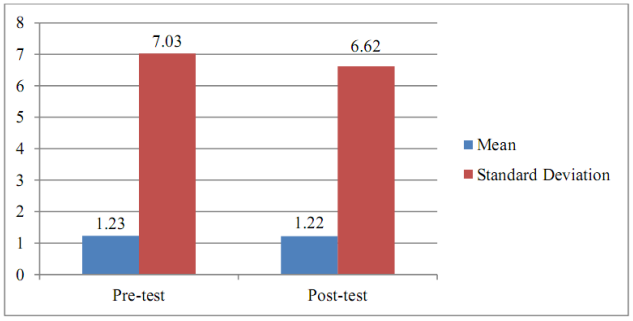

Figure No.09 Mean and Standard Deviation Values of Pre-test and Post-test of Diastolic Blood Pressure of Experimental Group

Table No.10

Comparison of Pre-test and Post-test of Diastolic Blood Pressure of Control Group

Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	1.23	3.66	0.01	0.88
Post-test	1.22	5.40		

*Significant at 0.05 level tab 't' $_{(0.05)\,(14)}$ = 2.05

Table no.10 indicates that there is insignificant difference between pre-test and post-test of diastolic blood pressure of control group as calculated 't' value 0.88 is less than tabulated 't' value 2.05. Thus it clearly evident that eight (08) week of conditioning programme had no significant effect on diastolic blood pressure of control group. Graphical representation of above table is made in figure no.10.

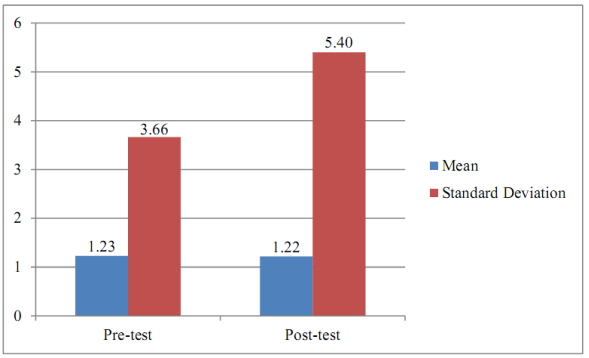

Figure No.10 Mean and Standard Deviation Values of Pre-test and Post-test of Diastolic Blood Pressure of Control Group

DISCUSSION OF FINDINGS:

- There is significant difference between pre-test and post-test of resting heart rate. Thus, it evident that eight (08) week of conditioning programme had significant effect on resting heart rate.
- There is significant difference between pre-test and post-test of vital capacity. Thus, it evident that eight (08) week of conditioning programme had significant effect on vital capacity.
- There is significant difference between pre-test and post-test of peak flow rate. Thus, it evident that eight (08) week of conditioning programme had significant effect on peak flow rate of experimental group.
- There is significant difference between pre-test and post-test of peak flow rate. Thus, it evident that eight (08) week of conditioning programme had significant effect on peak flow rate of control group.
- There is insignificant difference between pre-test and post-test of systolic blood pressure. Thus, it evident that eight (08) week of conditioning programme had no significant effect on systolic blood pressure of experimental group.
- There is insignificant difference between pre-test and post-test of systolic blood pressure. Thus, it evident that eight (08) week of conditioning programme had no significant effect on systolic blood pressure of control group.
- There is insignificant difference between pre-test and post-test of diastolic blood pressure. Thus, it evident that eight (08) week of conditioning programme had no significant

effect on diastolic blood pressure of experimental group.

- There is insignificant difference between pre-test and post-test of diastolic blood pressure. Thus, it evident that eight (08) week of conditioning programme had no significant effect on diastolic blood pressure of control group.

REFERENCES:

Donald, D. Harper, Charles, D. Billing and Donald, D. Mathew (1969). "Comparative Effects of Two Physical Conditioning Programme on Cardiovascular Fitness in Men", Research Quarterly, 1969: pp. 290-293.

Edmund, J. Burke (1976). "Validity of Selected Laboratory and Field Test of Physical Working Capacity", Research Quarterly, Volume No.47, p.95.

Gerald, D. Tharp (1985). "Comparison of Sprint and Run Times with Performance on the Wingate Anaerobic Test", Research Quarterly for Exercise and Sport, Volume No.56, 1985: p.73.

Kumar, Krishan (1985). "Effect of Conditioning Programme on Physiological Variables", Unpublished Master of Physical Education Thesis, Institute of Professional Studies, Jiwaji University, Gwalior, Madhya Pradesh, India.

Victor, A. Buccola and William, J. Stone (1976). "The Effects of Jogging and Cycling Programme on Physiological and Personality Variables in Aged Men", Research Quarterly, Volume No.46, Issue No.02, 1976:pp.134-139.

Corresponding Author

Dr. Anurag Pandey*

Assistant Professor, Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India

E-Mail – brijesh.cricket@gmail.com