IMPACT OF AEROBIC EXERCISE ON BODY COMPOSITIONS AND CARDIO-RESPIRATORY FITNESS AMONG SEDENTARY STUDENTS

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Abstract:

Objective:
The primary aim of the research is to find out the effects of Aerobic exercise on. The data was collected through 40 collegiate students in the form of different tests.

Introduction:
A sedentary lifestyle is defined as low energy expenditure resulting from prolonged sitting or lying down: working while sitting, watching television, traveling by car, etc. In simple words, it corresponds to the time spent sitting or lying down every day.

Methods
The demographic information about, age, height, weight etc. was obtained before seeking training. This study involves a cross sectional, comparative pre and post-test of experimental research, so this study was conducted in an experimental design. Resting heart rate and Respiratory Rate of each subject was recorded before & after training. Physical Exercise programme was design by the investigator and the reliability and validity find out by the researcher on the basis of pilot study. The Physical Exercise programme was planned for 4 days a week 60 minutes in a day for 12 weeks including 10 minutes warm up period and 05 minutes cooling down. the findings of the study revealed that there was insignificant difference of RHR was found between.

Results
The findings of the study revealed that there was no significant difference of Cardio-Vascular Endurance was found between pre and post of Control group. the result of the study revealed that there was significant difference of Cardio-Vascular Endurance was found between pre and post of Experimental exercise group. the findings of the study revealed that there was no significant difference of Body Composition was found between pre and post of Control group. , the study indicates that there was significant difference of Body Composition was found between pre and post of among Experimental exercise group.

Keywords: BMI, CRF, Exercise, Fitness

I. INTRODUCTION

A sedentary lifestyle is defined as low energy expenditure resulting from prolonged sitting or lying down: working while sitting, watching television, traveling by car, etc. In simple words, it corresponds to the time spent sitting or lying down every day.

Nowadays many people are leading an inactive lifestyle. A sedentary lifestyle is a type of lifestyle that involves no habitual physical activity.

Sedentary lifestyle has its own problems because when one does not do physical activity then all muscles remain unused, which leads to poor blood circulation throughout the body, leading to obesity, heart disease, weakening muscles, diabetes, osteoporosis and Other health problems arise.

Due to sedentary lifestyle, laziness fills the body. Don't feel like doing any work. Energy decreases and one feels weak all the time. Due to sitting for a long time, pain starts in the muscles.

sedentary lifestyle can be very dangerous for cardiovascular system. Due to lack of physical activity, there is a deficiency of good cholesterol in your body and bad cholesterol starts accumulating in your arteries. This increases the risk of heart attack or other cardiovascular diseases. Health experts consider sedentary lifestyle as one of the serious disease factors. The habit of sitting for long periods of time or lying down most of the time, as well as lack of exercise in the daily routine, increases the risk of lifestyle inactivity and the health problems it causes. If any individual inactive for a long time, start with shorter sessions (10 to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Gradually work your way up to being active for at least 30 minutes a day most days of the week. Drink plenty of fluids before, during, and after exercise.

Sedentary lifestyle causes your hip flexor muscles to shorten, which can cause problems with your hip joints. Sedentary lifestyle for long periods of time can also cause problems with your back.

II.   METHODS

The data was collected through respondents in the form of different descriptive tests. The demographic information about, age, height, weight etc. was obtained before seeking training. Purposive sampling method was used, as the researcher selected young adults with a specific purpose. Forty young sedentary students of veterinary college selected as a subject for present study . Training was given to Experimental group whereas no training given to the control group. This study involves a cross sectional, comparative pre and post-test of experimental research. Since experimental group was taken by the investigator and there was control group so this study was conducted in an experimental design.

Selection of variables:
The following variables was selected as follows.

I.   Cardio – Vascular Endurance or Cardio – Respiratory Endurance was measure by using 12 minute Run & Walk Test.

The 12 minute run test requires the person being tested to run or walk as far as possible in a 12 minute period. The objective of the test is to measure the maximum distance covered by the individual during the 12 minute period and is usually carried out on a running track by placing cones at various distances to enable measuring of the distance. A stopwatch is required for ensuring that the individual runs for the correct amount of time. When time is over, at that time investigator gives signal to stop. Subject will stand right there where he stops. Then investigator measures the crossed distance by the subject.

Body Mass Index
Body Mass Index was measured by individual's body mass divided by the square of his height

Aerobic Exercise Programme:

Exercise programme was design 12 week by the investigator and the reliability and validity find out by the researcher on the basis of pilot study.

The exercise session was designed as follows:
a)   The warm up period was approximately 10 minuets: - This was combining walking, jogging and callisthenic types stretching exercises.

b)   The main activity period was up to 45 minutes: - Progressive aerobic activity that was increased the heart rate. Like running, Split Squat Jump, Standing broad jump, Pull ups, Bent Knee Sit Ups, Split Squat Jumps, Bench Press, Side Step Jumps, Squat Thrust, Straddle thrust were involved.

c)   The cool down period was up to 05 minutes: - That was combining static stretching exercises and light jogging.

A)   **Statistical Analysis**
The obtained data was in Pre & Post form therefore to analyse the obtained data Mean, Standard Deviation and t-test was utilized by the investigator. The level of significant was set up at 0.05 level.

III. RESULTS

The results concerning this are presented in the form of tables and also clarified with the help of suitable figures, wherever was necessary. For the methodological presentation of the results, following order has been adopted.

Table – 1
Table- 1 DEMOGRAPHIC INFORMATION OF CONTROL GROUP

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	22.89	2.67
2.	Weight (Kg)	67.91	6.17
3.	Height (cm)	174.20	11.23

Table-1 shows, Mean Scores and Standard deviations of Control Group of selected demographic information.

Figure-1 shows, Mean Scores and Standard deviations of Control Group of selected demographic information
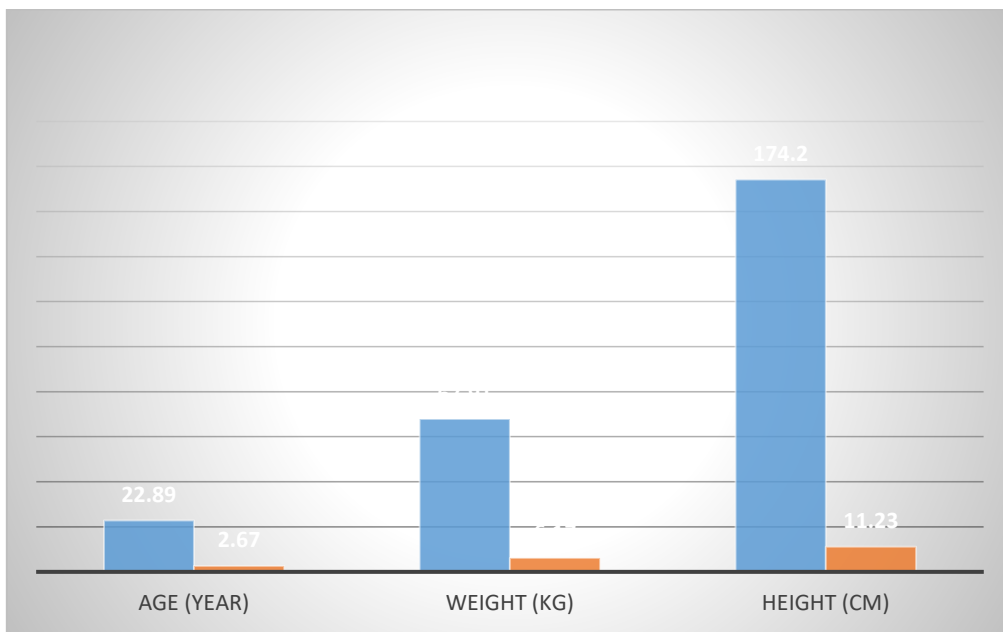

TABLE – 2
DEMOGRAPHIC INFORMATION OF EXPERIMENTAL GROUP

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	22.46	2.58
2.	Weight (Kg)	67.80	5.67
3.	Height (cm)	177.89	11.45

Table-2 shows, Mean Scores and Standard deviations of experimental group of selected demographic information.

Figure-2 shows, Mean Scores and Standard deviations of experimental group of selected demographic information.
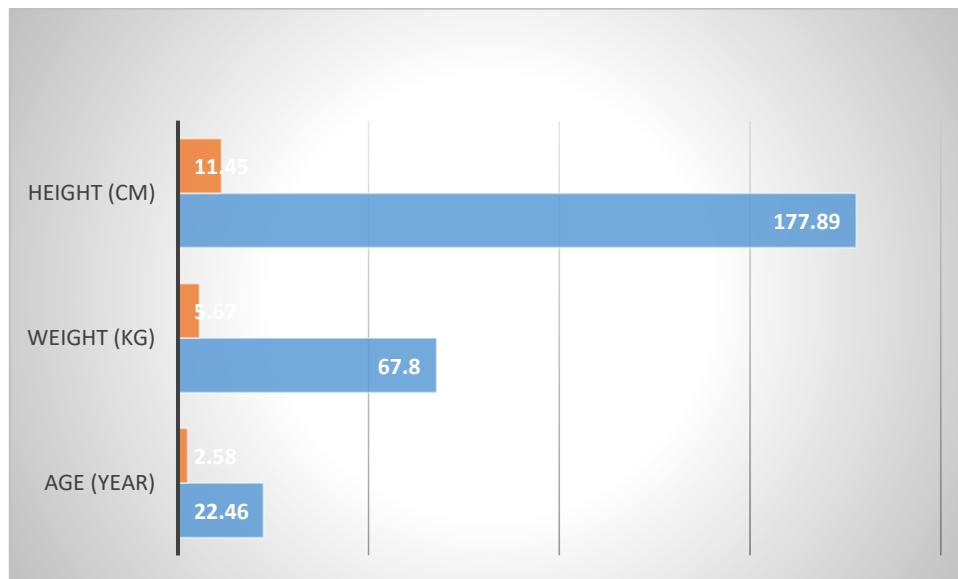

Table 3
MEAN SCORES , STANDARD DEVIATIONS AND T-TEST OF PRE AND POST - TEST OF HEALTH RELATED PHYSICAL FITNESS WITH RESPECT TO CARDIO - VASCULAR ENDURANCE OF CONTROL GROUP.

Variable	Stages	No	Means	S. D.s	T-ratio
Cardio-Vascular Endurance	Pre-test	40	1765.22	31.27	NS
	Post-Test	40	1769.04	31.34	

*= Significant

Table 3 show the Mean Scores and Standard Deviations of Pre and Post – Test with t-test of Cardio-Vascular Endurance among Control group.

Figure- 3 show the Mean Scores and Standard Deviations of Pre and Post – Test with t-test of Cardio-Vascular Endurance among Control group.
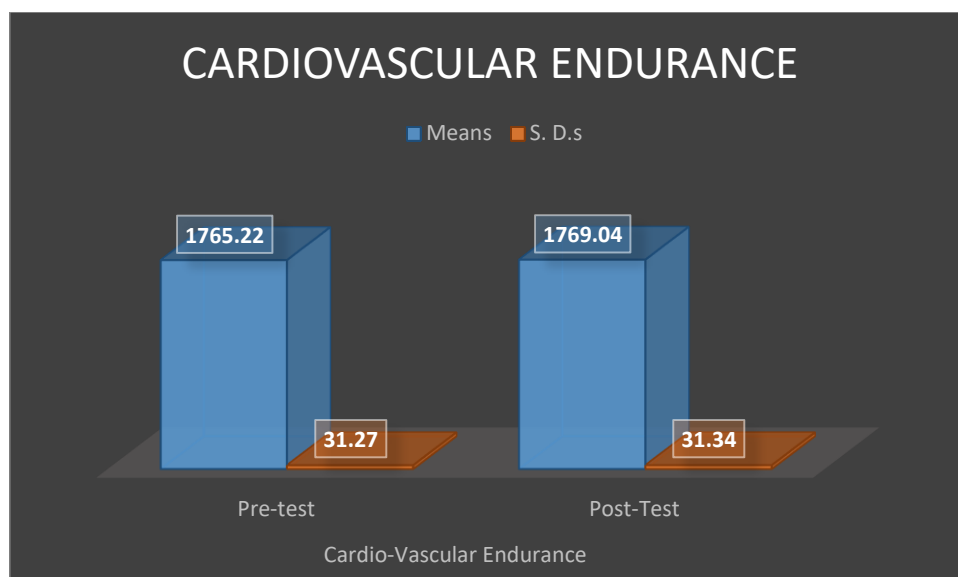
Table 4
MEAN SCORES , STANDARD DEVIATIONS AND T-TEST OF PRE AND POST - TEST OF HEALTH RELATED PHYSICAL FITNESS WITH RESPECT TO CARDIO - VASCULAR ENDURANCE.

Variable	Stages	No	Means (Mts)	S. D.s	T-ratio
Cardio – Vascular Endurance	Pre-test	40	1761.54	259.76	P,<.05
	Post-Test	40	1968.21	271.51	

*= *Significant*

Table 4 show the Mean Scores and Standard Deviations of Pre and Post – Test with t-test of Cardio-Vascular Endurance among Experimental exercise group.

Figure- 4 illustrates the descriptive test of Pre and Post – Test of Cardio-Vascular Endurance among Experimental exercise group.
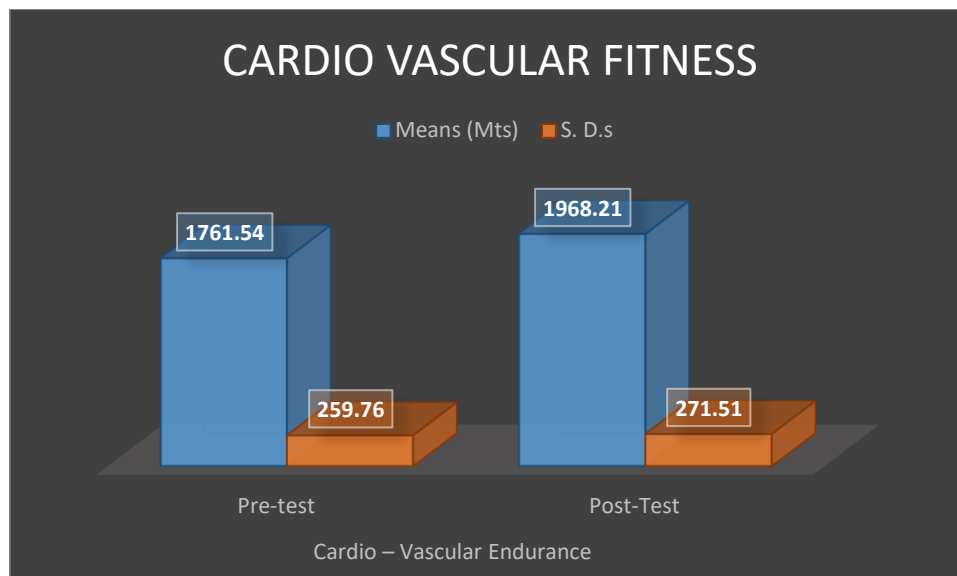

TABLE 5
MEAN SCORES , STANDARD DEVIATIONS AND T-TEST OF PRE AND POST - TEST OF BODY MASS INDEX (BMI) OF CONTROL GROUP.

Variable	Stages	No.	Mean	S. D.	T-Test
Body Composition	Pre-test	40	19.67	2.63	NS
	Post-Test	40	19.60	2.51	

*= Significant

Table 5 show the Mean Scores and Standard Deviations of Pre and Post – Test with t-test of Body Composition among Control group.

Figure 5 illustrate the Descriptive test of Pre and Post – Test with t-test of Body Composition among Control group
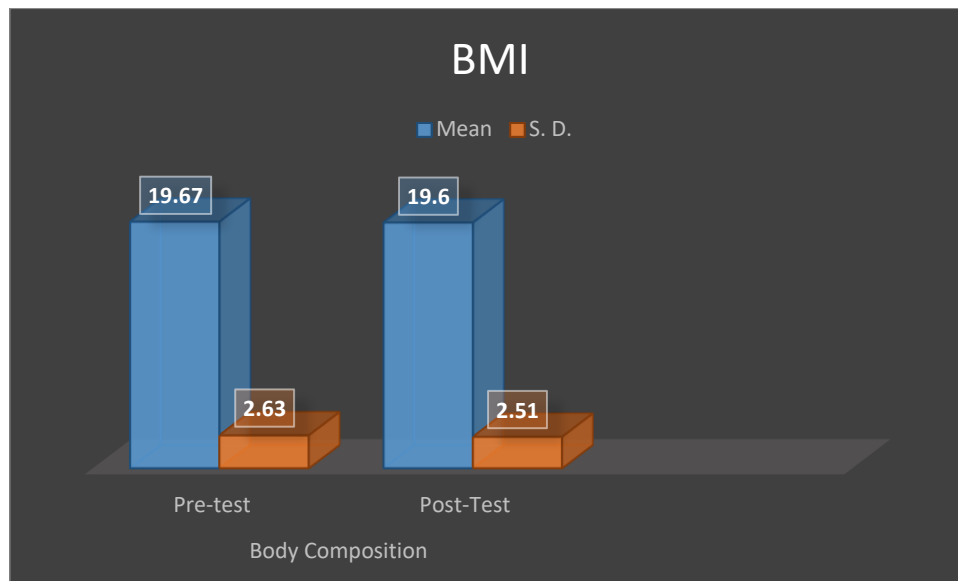

TABLE-06
MEAN SCORES , STANDARD DEVIATIONS AND T-TEST OF PRE AND POST - TEST OF BODY MASS INDEX (BMI) OF EXPERIMENTAL GROUP

Variable	Test	No	Means	S. D.s	T-Test
Body composition	Pre-test	40	20.67	2.40	P,<.05
	Post-Test	40	17.89	2.85	

*= Significant at 0.05 level

Table 06 show the Mean Scores and Standard Deviations of Pre and Post - Test with t-test of Body Composition among Experimental exercise group.

Figure-06 show the Mean Scores and Standard Deviations of Pre and Post - Test with t-test of Body Composition among Experimental exercise group
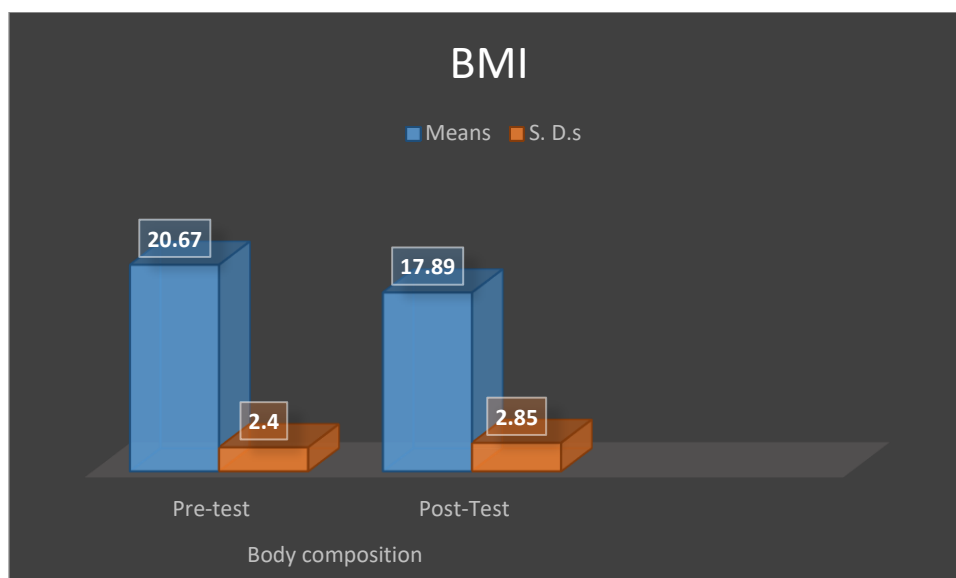
IV.   DISCUSSION

The aim of the present research is to find out the effects of physical fitness related exercise programme on work cardiovascular endurance and body composition , With respect to age and standard deviation experimental group was 20.46 and 2.58 years respectively. In addition the mean scores and Standard deviations of experimental group with respect to weight was 67.80 and 5.67 Kg. respectively. Whereas, the Mean Scores and Standard deviations of experimental with respect to height was 177.89 &11.45 cm Respectively. With regard to pretest of Cardio-Vascular Endurance among Control group, they have obtained mean values 1765.22 and the standard deviation was 31.27 respectively. Furthmore, the Post-test of Cardio-Vascular Endurance among Control group, they have obtain mean values 1769.04 and the standard deviation was 31.34 respectively, which are given in table- 3, the findings of the study revealed that there was no significant difference of Cardio-Vascular Endurance was found between pre and post of Control group. With regard to pretest of Cardio-Vascular Endurance among Experimental group, they have obtained mean values 1761.54 and the standard deviation was 259.76 respectively. Furthmore, the Post-test of Cardio-Vascular Endurance among Experimental exercise group, they have obtain mean values 1968.21 and the standard deviation was 271.51 respectively, which are given in table- 4, the findings of the study revealed that there was significant difference of Cardio-Vascular Endurance was found between pre and post of Experimental exercise group.

With regard to pretest of Body Composition among Control group, they have obtained mean values 19.67 and the standard deviation was 2.63 respectively. Furthmore, the Post-test of Body Composition among Control group, they have obtain mean values 19.60 and the standard deviation was 2.51 respectively, which are given in table- 5, the findings of the study revealed that there was no significant difference of Body Composition was found between pre and post of Control group.

With regard to pretest of Body Composition among Experimental exercise group, they have obtained mean values 20.67 and the standard deviation was 2.40 respectively. Furthmore, the Post-test of Body Composition among Experimental exercise group, they have obtain mean values 17.89 and the standard deviation was 2.85 respectively, which are given in table- 12, the findings of the study revealed that there was insignificant difference of Body Composition was found between pre and post of among Experimental exercise group.

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