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ACUTE EFFECTS OF TREADMILL RUNNING ON CARDIOVASCULAR VARIABLE ON PHYSICAL EDUCATION STUDENTS

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Physical education is unique to the college curriculum and provides opportunity to the students with to learn physical fitness, mental health leisure activities physical skills, health related fitness. the health related benefit gained from physical activity include: prevention rehabilitation and cure of different disease , safety and injury prevention fatigue onset, minimize morbidity and premature mortality, and improve mental health.

PE means preparation for healthy, leisure and unique life. It should help every individual to become all he is capable of becoming. Education must be concerned with developing optimum organic health, vitality emotional, stability, social, consciousness, knowledge, wholesome attitude and spiritual and moral qualities. **(A.Bucher- 1960).**

These educational objectives can be better achieved through PE as the PE aims at the development of physically fit, mentally sound, emotionally balanced socially adjustable individuals. Thus PE has a vital Role to play as an integral part of general education which aims at enabling an individual to live enriched and abundant life in an every changing world. As PE helps in the development of total personality of an individual, no one deny its significance in the development of fundamental skills essential for the daily life activities of the human beings and social skills, which aid and making him a well adjusted and useful member of the society. PE contributes in no small measure to bring about social and national integration, and to instill the worthy ideal civic responsibilities.

PE have long been concerned with the measurement of cardio-vascular endurance. This form of endurance involves the continued activity of the entire organism during which major adjustments of the circulatory and respiratory systems are necessary as the running, swimming, soccer, hockey, and hand ball competitions here, endurance is not dependent upon the strength of the muscles involved into activity but must rely greatly on the effective functioning systems. The cardio respiratory endurance refers to the ability to carry workload for relatively prolonged period. It has very significant in long distance running in track and field. Basketball, Soccer.Boxing and other vigorous and long duration games.**(Schneider,1923).**

Definition according to Bucher, "PE is an integral part of total education processes, in a field of endeavor that has its aim of the improvement of human performance through the medium of physical activities that have been selected with a view to realizing this outcome"

PE is one phase of the total educational processes and that is utilizes activities derives that are in order to develop a personal organically, neuromuscular, intellectually, emotionally. Thus outcomes are realized when ever PE activities are conducted in such a place as the playground, gymnasium, track and swimming pool, out of the many outcomes of PE visualized by professional leaders.

PE have long been concerned with the measurement of cardio-vascular endurance. This form of endurance involves the continued activity of the entire organism during which major

adjustments of the circulatory and respiratory systems are necessary as the running, swimming, soccer, hockey, and hand ball competitions. Here, endurance is not dependent upon the strength of the muscles involved into activity but must rely greatly on the effective functioning systems.

Statement of the problem:

The investigators become interested in determining the effectiveness of treadmill running on cardio vascular variable on physical education students The problem was stated as “Acute effects of **treadmill running on cardiovascular variable on Physical education students.**” taken up to assess the level of familiarity of these subjects among physical education students.

Objectives of the study:

1. The objectives of the study was to determine the acute effects of treadmill running on cardiovascular variable with respect to Heart rate on Physical education students.
2. The objectives of the study was to determine the acute effects of treadmill running on cardiovascular variable with respect to Respiratory rate on Physical education students.

Hypothesis:

1. It is hypothesized that “there is significant effect of treadmill running on cardiovascular variable with respect to resting heart rate of Physical education students.
2. It is hypothesized that “there is significant effect of treadmill running on cardiovascular variable with respect to Respiratory rate of Physical education students.

Delimitation of the Study:

This study will be delimited on the following.

- 1.The study will be delimited to the male physical education students.
- 2.Subjects age ranging from 18 to 25 years.
- 3.Only physical education students of was taken.
- 4.The study was further delimited to the following cardio vascular variables.

(a) Resting Heart rate

(b) Respiratory rate

Procedure Methodology:

In this chapter selection of subject, Research Design Administration of the test, Data collection, statistical techniques, tools of the study was described for the present study. The purpose of this study was to examine the acute effects of treadmill running on cardiovascular function on Physical education students.

Selection Of The Subject :

Two groups were targeted experimental & control. The Physical education students of SRTM university as a experimental group and other physical education students as a control group would be selected as subject for present study and their age ranged between 18- 28. Only training was given to the experimental groups.

Research Design:

This study involves the effects of Treadmill running on cardiovascular variable in physical education students of SRTM University an experimental design.

Demographic Information:

The data was collected through respondents in the form of different experimental tests. The demographic information about Age, height, weight etc. was obtained before seeking responses.

Inclusion and exclusion criteria: The inclusion and exclusion criteria for participants were as follows:

The inclusion criteria are:

1. The participant was agree to participate in the study
2. The participants must be Physical education students aged range was 18 to 25 years.
3. The participants were not rotating through other health facility at the time of study.

The exclusion criteria are:

1. Active Physical illness. The participants advised not to participate if under any injuries and management within 2 weeks of study.
2. Inability to obtain the consent of the respondent.
3. Presence of chronic medical conditions such as asthma, heart disease or any other condition.
4. Participants free from the smoking, drug abuse and alcohol consumptions during the experimental period

Cardiovascular variable assessment:

Pre and post Cardiovascular variable was taken by the following procedure.

Resting heart rate:

Resting heart rate of each subject was recorded before & after training. Before recording Resting heart rate the subject was instructed to remain lying on their bed to record the heart rate, Heart rate was recorded by the palpation at radial artery per minute. The score was express in number of heart rate per minute.

Respiratory rate:

The Respiratory rate of each subject was recorded before & after training. Before recording Respiratory rate the subject was instructed to remain lying on their bed in supine lying position. The tester then record rate of respiration in units per minute by carefully watching the movements of the subjects abdominal. Total number of respiratory movement per minute finally recorded.

Measurement of the Unit of Parameters.

Sr. No	Parameters	Unites
1	Resting Heart Rate	Numerical numbers
2	Respiratory rate	Milion per c.umm
3	Height	Numerical numbers
4	Weight	KG

Normal Rang of Selected Parameters

Sr. No	Parameters	Unites
1	Resting heart rate	<u>72-80 per minutes</u>
2	Respiratory Rate	<u>15-18 per minutes</u>

Source of Data:

The study depends mainly on primary source of data. The data was collected through respondents from PE student. In collecting the data, the researcher Follow to ethical guidelines, principles, and standards for studies conducted with human beings.

Statistically Techniques:

The statistical computation of Pre & Post formdata of the present study is used by using MS-Excel package in the computer. The result computed also crosschecked by using following statistical variables. Mean, standard deviation, and T-Test was utilized by the investigator. The level of significance was keep at 0.05 level of confidence to test the hypothesis.

Result**Table-1****Morphological characteristics of Control groups**

Sr. No.	Components	Means Scores	Standard Deviations
1	Age (Year)	22.44	4.40
2	Weight (Kg)	67.20 kg	9.98
3	Height (cm)	172.21	15.99

Table -1 depicted the morphological characteristics of control group, the Mean Scores (S.Ds.) age of control group was 22.44 (4.40) years, mean scores (S.Ds.) weight was 67.20 (9.98) Kg, mean scores (S.Ds.) and height was 172.21 (15.99) cm.

Table-2**Shows Mean Scores and Standard Deviations of Morphological characteristics of the Experimental groups**

Sr. No.	Components	Means Scores	Standard Deviation
1	Age (Year)	21.60	4.61
2	Weight (Kg)	66.55	9.17
3	Height (cm)	171.60	16.76

Mean Score (S.Ds.) age of experimental group was 21.60 (4.61) years, mean score (S.Ds.) weight was 66.55 (9.17) kg., mean score (S.Ds.) and height was 171.60 (16.76) cm,

Table 3

Mean score and standard deviation of Heart rate in pre and post-test of control group.

Cardio-vascular Variable	Test	Number	Mean	S.D.	T-Test
Heart Rate	Pre Test	35	74.35	8.11	0.11
	Post Test	35	74.98	8.02	

As per Table -3 Shows that mean scores and standard deviation of selected physiological efficiency with respect to heart rate of pre and post-test of control group.

With regards to cardiovascular variable with respect to heart rate of pre and post-test of control group they have obtain the mean value (SDs) of **74.35(8.11)** and **74.98(8.02)** respectively.

Table 4

Mean score standard deviation and t-ratio of cardiovascular variable with respect to Heart rate in pre and post-test of Experimental group.

Efficiency	Test	Number	Mean	S.D.	T-Test
Heart Rate	Pre Test	35	74.98	7.15	4.05*
	Post Test	35	82.89	9.07	

Table -4 Shows that mean scores and standard deviation of selected physiological efficiency with respect to heart rate of pre and post-test of Experimental group.

With regards to selected physiological efficiency in heart rate of pre and post-test of Experimental group they have obtain the mean value (DSs) of **74.98(7.15)** and **82.89(9.07)** respectively .

Table 5

Mean score and standard deviation of cardiovascular variable with respect to Respiratory rate in pre and post-test of control group.

Efficiency	Test	Number	Mean	S.D.	T-Test
Respiratory Rate	Pre Test	35	17.12	4.01	0.06
	Post Test	35	17.18	4.05	

As per Table -5 Shows that mean scores and standard deviation of cardiovascular variable with respect to respiratory rate of pre and post-test of control group.

With regards to cardiovascular variable with respect respiratory rate of pre and post-test of control group they have obtain the mean value of **17.12(4.01)** and **17.88(4.05)** respectively .

Table 6

Mean score and standard deviation of cardiovascular variable with respect to Respiratory rate in pre and post-test of Experimental group.

Efficiency	Test	Number	Mean	S.Ds.	T-Test
Respiratory rate	Pre Test	35	17.67	4.78	2.92*
	Post Test	35	21.32	5.67	

As per Table -6Shows that mean scores, standard deviation and t-ratio of cardiovascular variable with respect to Respiratory rate of pre and post-test of Experimental group.

With regards to cardiovascular variable with respect to respiratory rate of pre and post-test of Experimental group they have obtain the mean(SDs) value of 17.88(4.78) and 16.87 (5.67) respectively.

Conclusions:

1. Significant effect of treadmill running on cardiovascular variable with respect to resting heart rate of Physical education students.
2. Significant effect of treadmill running on cardiovascular variable with respect to respiratory rate of Physical education students.

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