



COMPARATIVE STUDY OF SELECTED PHYSIOLOGICAL PARAMETER AND CARDIOVASCULAR ENDURANCE OF LONG DISTANCE RUNNERS OF MEGHALAYA AND MAHARASHTRA

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ABSTRACT:

Researcher studied on comparative Study of selected Physiological Parameter and Cardiovascular Endurance of Long Distance Runners of Meghalaya and Maharashtra. The main purpose of the study was to compare the Cardiovascular Endurance, Heart Rate of Long Distance Runners of Meghalaya and Maharashtra. Researcher hypothesized that, there may be significance difference on Cardiovascular Endurance and Heart Rate of Long Distance Runners of Meghalaya and Maharashtra. Only 30 male State level long distance runners were selected as subject 15 Meghalaya and 15 Maharashtra. Age was between 18 to 25 years. Purposive sampling was used to select Long Distance Runners. Resting Heart Rate was measured by using pulse count in minute and recorded in numbers and Haward Step test was used to measured Cardiovascular Endurance of subjects and recorded in numbers. To analysed the data independent 't' test was employed at 0.05 level. Cardio-vascular Endurance of Long Distance Runners of Meghalaya and Maharashtra is same. Heart Rate of Long Distance Runners of Maharashtra is lower than the Long Distance Runners of Meghalaya.

KEYWORDS:

HEART RATE, CARDIOVASCULAR ENDURANCE, LONG DISTANCE RUNNERS, MEGHALAYA, MAHARASHTRA.

INTRODUCTION:

Long-distance or endurance runs a shape that runs continuously over at least 8km (5 miles) of removal. Physiologically, it is primarily aerobic and requires both endurance and mental strength. People are well adapted to mammals to keep a considerable distance, and running is interpreted, especially among primates. Endurance for the HOMO genus has been created. This is because passing through a wide area improved track options and sentence hunting is possible. The ability to withstand running is also seen in a limited number of terrestrial carnivorous people, including wandering hills and dogs, wolves and hyenas. In modern human society, long distances that practice some objectives, people can participate for economic reasons, exercise, relaxation, economic reasons. It can also be used as a long distance run. Means to improve cardiovascular health. Running improves aerobic fitness by increasing the activity of enzymes and hormones that encourage muscles and heart to function more efficiently. Endurance running is often part of physical military training. Professional running most often occurs in the sports field, but in the pre-industrial era, foot care boots stop and provide information in faraway places. Long distance performance is a form of tradition and ceremonies, and is also known in Hopitalahumara. Space running is also used as a bonding movement for family, friends and colleagues, and is also associated with the establishment of a nation. The social component of spacer implementation was associated with improved performance. In athletics sports, remote budget events are defined as races covering more than three kilometers.

Durability means the ability to repeat itself for a relatively

extended period of time at maximum speed and heavy loads. Endurance at such an important element of physical performance. Endurance during swimming events is extremely important for running distances. Sports lessons have long dealt with cardiovascular endurance measurements. This form of endurance included the continued activity of the entire organism. Meanwhile, greater circulatory and respiratory systems are needed, such as running, swimming, soccer, and hockey ball competition. Hearing time must depend heavily on the emotional functioning of the breath and circulatory systems rather than on the strength of the muscles involved in activity. Cardiopulmonary function refers to the ability to carry workloads for a relatively long period of time.

Cardiovascular durability is one of the most important general health measures. A person's cardiovascular endurance helps predict the likelihood of illness, quality of life, and the ability to respond to acute physical and mental stress. In healthy people, higher cardiovascular endurance indicates an increase in physical fitness. Every year, the fitness industry distributes excessive amounts of money that seek to develop developments to increase and improve cardiovascular endurance. Training regimes and training environments were research to find the most advantageous combinations. However, improvements in cardiovascular endurance are not exclusively trained. Currently, training in all different modes of supplements is being tested and developed to make athletes bigger, stronger and more durable. Research and discoveries shows that elite athletes benefit from moderate athletes

and ultimately supporting the general population. Maximum oxygen uptake (VO₂ MAX) is a recognized standard for measuring cardiovascular endurance. Maximal oxygen absorption is inhaled, absorbed, absorbed and used during full physical exercise. A step-by-step training test using open circuit spirometry is measured using metabolic cart analysis that breathes human air. The measurement is a simple comparison of the air around the area and the expelled air. This comparison includes the rate of change in oxygen and carbon dioxide (Co₂). When a person's heart cycle system is more efficient, more oxygen is provided and used for working muscles.

STATEMENT OF THE PROBLEM:

The researcher studied on "Comparative Study of selected Physiological Parameter and Cardiovascular Endurance of Long Distance Runners of Meghalaya and Maharashtra".

PURPOSE OF THE STUDY

The main purpose of the study was to compare the Cardiovascular Endurance, Heart Rate of Long Distance Runners of Meghalaya and Maharashtra.

HYPOTHESIS

Researcher hypothesised that, there may be significance difference on Cardiovascular Endurance and Heart Rate of Long Distance Runners of Meghalaya and Maharashtra.

DELIMITATIONS:

- Only male State level long distance runners were selected as subject.
- The age of the subject was ranging between 18 to 25 years.
- The study was conducted on 15 Meghalaya and 15 Maharashtra long distance runners who study in D.C.P.E., Amravati.

METHODOLOGY:

The collection of data pertaining to heart rate and cardiovascular endurance of long-distance runners of Meghalaya and Maharashtra. The study was conducted only 30 long distance runners 15 each from Meghalaya and Maharashtra who studied in Degree College of Physical Education, Amravati. Purposive sampling was used to select Long Distance Runners. Resting Heart Rate was measured by using pulse count in minute and recorded in numbers and Haward Step test was used to measured Cardiovascular Endurance of subjects and recorded in numbers.

ANALYSIS AND INTERPRETATION OF DATA

To find the differences among the cardiovascular endurance and Heart Rate of Long Distance Runners of Meghalaya and Maharashtra. The data were collected and analysed performed by computing the descriptive statistical techniques and independent 't' test was employed separately for each variable. To test the hypothesis level of significance was set at 0.05 level.

TABLE -1: DESCRIPTION OF MEAN, SD, T-RATIO FOR THE DATA ON CARDIOVASCULAR ENDURANCE OF LONG DISTANCE RUNNERS OF MEGHALAYA AND MAHARASHTRA

Groups	Mean	Std. Dev.	Mean Diff.	S.E.	t-ratio
Meghalaya	88.97	4.03	0.23	1.16	0.198@
Maharashtra	89.20	2.03			

@ Not Significant at 0.05 level

Tab $t_{0.05(28)}=2.048$

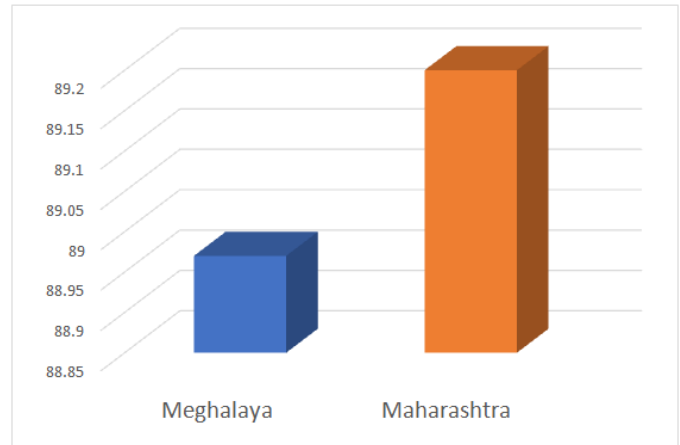


FIGURE 1: SHOWING MEANS OF CARDIOVASCULAR ENDURANCE OF LONG DISTANCE RUNNERS OF MEGHALAYA AND MAHARASHTRA

TABLE -2: DESCRIPTION OF MEAN, SD, T-RATIO FOR THE DATA ON HEART RATE OF LONG DISTANCE RUNNERS OF MEGHALAYA AND MAHARASHTRA

Groups	Mean	Std. Dev.	Mean Diff.	S.E.	t-ratio
Meghalaya	63.2	5.56	3.94	1.51	2.609*
Maharashtra	59.26	1.93			

@ Not Significant at 0.05 level

Tab $t_{0.05(28)}=2.048$

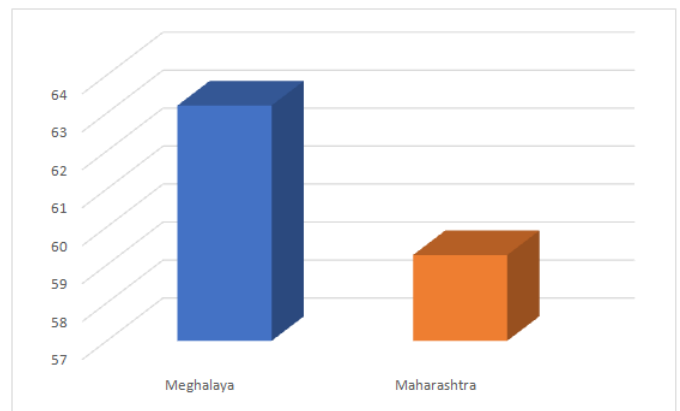


FIGURE 2: SHOWING MEANS OF HEART RATE OF LONG DISTANCE RUNNERS OF MEGHALAYA AND MAHARASHTRA

MAHARASHTRA

FINDINGS:

- There were no significant difference found in Cardio-vascular Endurance of Long Distance Runners of Meghalaya and Maharashtra.
- Significant difference observed in Heart Rate of Long Distance Runners of Meghalaya and Maharashtra.

Conclusions:

- It is concluded that Cardio-vascular Endurance of Long Distance Runners of Meghalaya and Maharashtra is same.
- But the Heart Rate of Long Distance Runners of Maharashtra is lower than the Long Distance Runners of Meghalaya.

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