A STUDY ON CARDIO RESPIRATORY FITNESS AMONG TRIBAL AND NON TRIBAL MALE STUDENTS

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ABSTRACT
Cardio respiratory fitness refers to the ability of the circulatory and respiratory systems to supply oxygen to skeletal muscles during sustained physical activity. Regular exercise makes these systems more efficient by enlarging the heart muscle, enabling more blood to be pumped with each stroke, and increasing the number of small arteries in trained skeletal muscles, which supply more blood to working muscles. Exercise improves the respiratory system by increasing the amount of oxygen that is inhaled and distributed to body tissue. Keeping in view this concept this study was framed to establish the relationship between cardio respiratory fitness among tribal and non tribal male students. Fifty (50) male school students from Thiruvananthapuram District were randomly selected as subjects and their age was between 14 and 18 years. The subjects were randomly assigned to two equal groups as Group I (Tribal male school students) and Group II (Nontribal male school students). Cardio respiratory Fitness level of each group was measured by Cooper 12 minutes run & walk test. To determine the significance of difference of cardio respiratory fitness of tribal and nontribal male school students groups, “t” test was applied. The results of this study was concluded that tribal male school students have better cardio respiratory fitness level by comparing with Non tribal male school students.

INTRODUCTION
Physical fitness comprises two related concepts: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. There are many benefits of cardio respiratory fitness. It can reduce the risk of heart disease, lung cancer, type 2 diabetes, stroke, and other diseases. Cardio respiratory fitness helps improve lung and heart condition, and increases feelings of wellbeing. The American College of Sports Medicine recommends aerobic exercise 3-5 times per week for 20–60 minutes per session, at an intensity that maintains the heart rate between 65-90% of the maximum heart rate.

Physical fitness has been defined as a set of attributes or characteristics that people have or achieve that relates to the ability to perform physical activity. The above definition from Physical Activity and Health: A Report of the Surgeon General is the most common currently used definition of physical fitness. It was originally used by Caspersen and has been used extensively. An alternative definition by Howley and Frank that provides additional descriptive information is: Physical fitness is a state of well-being with low risk of premature health
problems and energy to participate in a variety of physical activities. While either is a good definition, most experts agree that physical fitness is both multidimensional and hierarchical.

In previous years fitness was commonly defined as the capacity to carry out the day’s activities without undue fatigue. However, as automation increased leisure time, changes in lifestyles following the industrial revolution rendered this definition insufficient. In current contexts, physical fitness is considered a measure of the body’s ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypo kinetic diseases, and to meet emergency situations.

Physical fitness is defined as “a set attributes that people have or achieve that relates to the ability to perform physical activity. Being fit is not defined only by what kind of activity you do, how long you do it, or at what level of intensity. While these are important measures of fitness, they only address single areas Cardio respiratory endurance is the ability of the body’s circulatory and respiratory systems to supply fuel and oxygen during sustained physical activity. To improve your cardio respiratory endurance, the activity like walking, swimming, or bicycling that keep the heart rate elevated at a safe level for a sustained length of time.

A comprehensive fitness program tailored to an individual typically focuses on one or more specific skills, and on age or health-related needs such as bone health. Many sources also cite mental, social and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three points, which represent physical, emotional, and mental fitness. Physical fitness can also prevent or treat many chronic health conditions brought on by unhealthy lifestyle or aging. Working out can also help people sleep better. To stay healthy it is important to engage in physical activity.

Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment. Frequent and regular physical exercise boosts the immune system, and helps prevent the "diseases of affluence" such as heart, cardiovascular disease, Type 2 diabetes and obesity. It also improves mental health, helps prevent depression, helps to promote or maintain positive self-esteem, and can even augment an individual's sex appeal or body image, which is also found to be linked with higher levels of self-esteem. Childhood obesity is a growing global concern and physical exercise may help decrease some of the effects of childhood and adult obesity. Health care providers often call exercise the "miracle" or "wonder" drug alluding to the wide variety of proven benefits that it provides.

Cardio respiratory fitness is related to an individual’s ability to use the large muscles for prolonged period of dynamic, moderate-to-high intensity exercise. Level of cardio respiratory fitness is dependent on the condition of the respiratory, cardiovascular and skeletal muscle system. Analysis of cardio respiratory fitness is important because of its relations to health and wellness. The purpose of the study was to compare the cardio respiratory fitness among tribal and non tribal male school students of Thiruvananthapuram.

OBJECTIVES OF THE STUDY

The objective of the study is to find out the differences on cardio respiratory fitness among tribal and non tribal male school students of Thiruvananthapuram.
STATEMENT OF PROBLEM
To find out the cardio respiratory fitness among tribal and non tribal male school students of Thiruvananthapuram.

HYPOTHESIS
It was hypothesized that there would be significant difference in the cardio respiratory fitness among tribal and non tribal male school students of Thiruvananthapuram.

Cardio respiratory fitness
Cardio respiratory fitness is a measure of how well your body is able to transport oxygen to your muscles during prolonged exercise, and also of how well your muscles are able to absorb and use the oxygen, once it has been delivered, to generate adenosine triphosphate (ATP) energy via cellular respiration (cellular respiration is a chemical process in your body's cells that converts the energy stored in the food you eat into the ATP form of energy that is recruited for use by your muscles). Essentially, your cardio respiratory fitness level is a measure of the strength of your aerobic energy system. If you haven't already read the Exercise Energy Systems article you can do so to get a better understanding of what ATP is, what cellular respiration is, and what the aerobic energy system is (in addition to your body's other two energy systems).

METHODOLOGY
Fifty (50) male school students from Thiruvananthapurm District were randomly selected as subjects and their age was between 14 and 18 years. The subjects were randomly assigned to two equal groups as Group I (Tribal male school students) and Group II (Nontribal male school students).

Procedure of Data Collection
Cardio respiratory Fitness level of each group was measured by Cooper 12 minutes run & walk test. Scores were obtained by summing up of the number of completed laps and number of flags passed on the last lap by subjects. To determine the significance of difference of cardio respiratory fitness level among tribal and non tribal male school students, “t” test was applied.

Results and Discussion
Table 1 is showing Mean, Standard deviation, Standard Error and T-test of cardio respiratory fitness of tribal and nontribal male school students.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N</th>
<th>Mean</th>
<th>Std-Deviation</th>
<th>Std-Error Mean</th>
<th>T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIBAL</td>
<td>25</td>
<td>1062.5</td>
<td>195.27</td>
<td>55.97</td>
<td>2.77</td>
</tr>
<tr>
<td>NONTRIBAL</td>
<td>25</td>
<td>907.5</td>
<td>156.62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significance at 0.05 levels, Tab-T 0.05=2.000
For the purpose of the Study the level of significance was fixed at 0.05 level of confidence, which was deemed to be reasonable for the study.

DISCUSSION
To find out mean difference the researcher was using T-Test to find out whether the mean differences were significant or not. Data were collected from tribal male school students group (Group I) and non tribal male school students group (group II). From the above table it is clear that the computed T-Value (2.77) is higher than tabulated value (2.000) at 0.05 level of confidence. So, we can say that the rural area male school students were significantly better the cardio respiratory fitness level then the urban area male school students. This finding supports the hypothesis. The study was concluded that tribal area male school students have better cardio respiratory fitness level by comparing with non tribal area male school students.

REFERENCES
Larun L et. al. (2006). "Exercise in prevention And Treatment of Anxiety And Depression and Increasing Cardio Respiratory Efficiency Among Children And Young People", Cochrane Database Syst Rev. PP 19;3