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COMPARISON OF VITAL CAPACITY AND BODY MASS INDEX BETWEEN SCHOOL STUDENTS OF PUNE AND RAIPUR CITIES

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Abstract: The main purpose of this study was to compare study of vital capacity and Body Mass Index between school students of Pune and Raipur city**.** For this study total 100 School students were selected 50 from Pune city and 50 from Raipur city. The subject's age range were between 12 to 16 years. The data was collected from both the cities. The height and weight was measured for BMI and forced vital capacity was measured by spirometer. T- test was used as a statistical tool for analysing the data. The result of study revealed that school students of Pune city have better Body Mass Index and Vital Capacity than Raipur city school students.
Keywords*: Body Mass Index, Vital Capacity, School students.*

1. Introduction:

Body Mass Inde**x** BMI is a measurement that compares a person's weight to their height. It's a quick way to screen for underweight, overweight and obesity. The formula is - BMI = (Weight in kilograms) divided by (Height in meters squared). A normal BMI score is one that falls between 18.5 and 24.9. Vital Capacity is the maximum volume of air that can be exhaled after a maximum inhalation. It is about 3.5-4.5 liters in the human body. Vital capacity is very essential for the games where the players have to perform with endurance and strength endurance for a longer period with breathing mechanism. The players of all the games need to have larger lung volume to supply sufficient amount of oxygen to working muscle groups for effective performance. Similarly the proportion of body mass index is also very essential in all the games and sports.

2. Methodology:

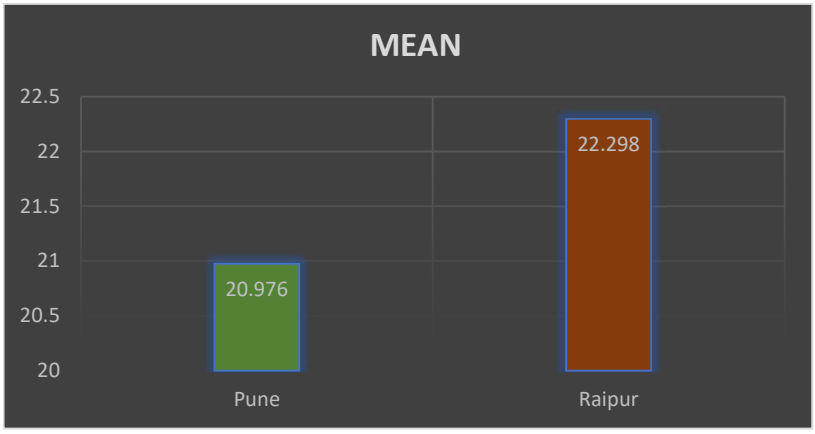
This survey study was to find out who have better Body Mass Index and Vital Capacity between Pune and Raipur School students. For this study total 100 School students were selected 50

from Pune city and 50 from Raipur city. The subject's age range was between 12 to 16 years. The data was collected from both the cities. The height and weight was measured for BMI and forced vital capacity was measured. t- test was used as a statistical tool for analyzing the data. The result of study revealed that Pune city School Students have better Body Mass Index and Vital Capacity than Raipur city School Students.

Table no. 1 Body Mass Index (BMI) of Pune City and Raipur city.

City	N	MEAN	Cal "t"	"t" value
Pune	50	20.976	2.037428	2.000
Raipur	50	22..298		

GRAPH 1: Body Mass Index

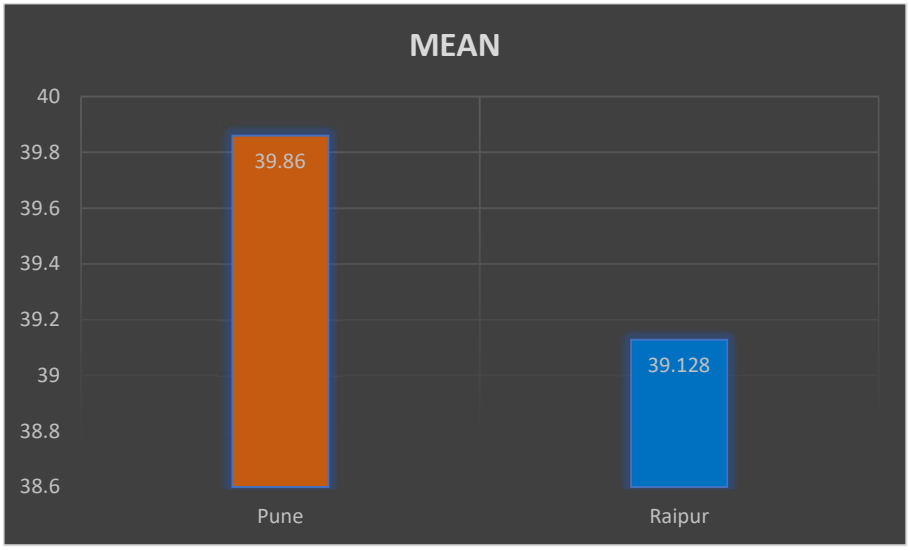


Graphical Representation of Mean of Body Mass Index of Pune City and Raipur city

Table no. 2 Vital Capacity (VC) of Pune and Raipur city.

City	N	MEAN	Cal "t"	"t" value
Pune	50	39.86	2.238044	2.000
Raipur	50	39.128		

GRAPH 2: Vital Capacity of Pune City and Raipur City



3. **Conclusion:**

The study indicates that Body Mass Index (BMI) and Vital Capacity (VC) compared to their counterparts in Raipur. This can be attributed to several factors, such as Pune's more favourable air quality, promoting better lung health and physical activity. Pune's urban lifestyle encourages regular physical exercise, and schools often emphasize fitness and outdoor activities. Additionally, Pune's higher socioeconomic status might provide better access to nutrition and healthcare. In contrast, Raipur may face challenges such as poorer air quality, limited access to recreational spaces, and different lifestyle habits that could hinder students' overall physical health.

4. Result:

According to study's findings both the Body Mass Index and Vital Capacity of Pune city School students is better than Raipur city school students.

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