

## Body Mass Index of Primary and Secondary School Boys in Punjab State

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### Abstract

The purpose of the study was to analysis the difference between body mass Index among primary and secondary level school boys of Punjab state, to fulfil this purpose of study a total of 50 primary and secondary school boys of Punjab state from the district Fatehgarh Sahib was selected. Though both the literature, pertaining to the problem, with the help of experts view and by researcher own understanding, the Body Mass Index was considered as a variable in the study. Body mass index was calculated by using the formula:

$$\text{BMI} = \frac{\text{Weight (Kg)}}{\text{Height (meter)}^2}$$

The standard instruments were used for collection of data such as vertical scale for height and Miller's weighing machine for body weight.

The collected data was analysed by applying the 't' test to examine the significance of mean differences at level of significance 0.05. Computational work of analysis was carried out through 'SPSS' version 17.0 for Windows software. Result indicates that a difference was found in the body mass index of the primary and secondary school boys in Punjab state from the district Fatehgarh Sahib.

**KEYWORDS:** Body Mass Index, Primary and Secondary School Boys

### Introduction

In the recent years greater stress has been laid on the quality rather than the quantity of training. The sports scientists and experts of sports want their sportsman to extract maximum achievement from their training procedure without causing too much strain on them. This is possible only if coaches and teachers of physical education apply the most economical manner for enhancing the performance of athletes. Physical fitness is growing in our country. The governments, and some voluntary sports organizations, are adopting various measures to make people aware of the importance of physical fitness.

Obesity is a risk factor in the development of, Cardiovascular Diseases, Cancer and Adult-onset diabetes. This is a major problem in developed countries as well as in developing countries including India. India is going to be “**capital of obesity**” in the world according to surveys done by different researchers across the world. . Fit citizens are a nation’s best assets and weak ones its liabilities. It is therefore the responsibility of every country to promote physical fitness as this is basic requirement for most of the tasks to be undertaken by an individual in his daily life.

### Selection of Subjects

For the purpose of the study a total of 50 primary and secondary school boys in Punjab state from the district Fatehgarh Sahib were selected.

## Selection of Variables:

Though both the literature, pertaining to the problem, with the help of experts view and by researcher own understanding, the Body Mass Index was considered variable in the study.

## Criterion Measure

### Body Mass Index

Body Mass Index of the subjects was determined by using the formula:

$$\text{BMI} = \frac{\text{Weight (Kg)}}{\text{Height (meter)}^2}$$

The standard instruments were used for collection of data such as vertical scale for height and Miller's weighing machine for body weight.

## Administration of Tests

The following procedure was used to collect data on various variables:

### 1. Weight

For measuring the body weight, the subject was asked to stand on the weighing machine gently in the middle of machine in a straight position. The pointer of the machine was set on the zero every time, before taking the measurement. Body weight of the subject was recorded to the nearest half a kilogram.

### 2. Height

Height was measured against a vertical scale marked on the wall. The subject was asked to stand straight without shoes and a horizontal board was kept on his head to locate the reading on the scale. The height was recorded in centimeters.

## Statistical Procedures

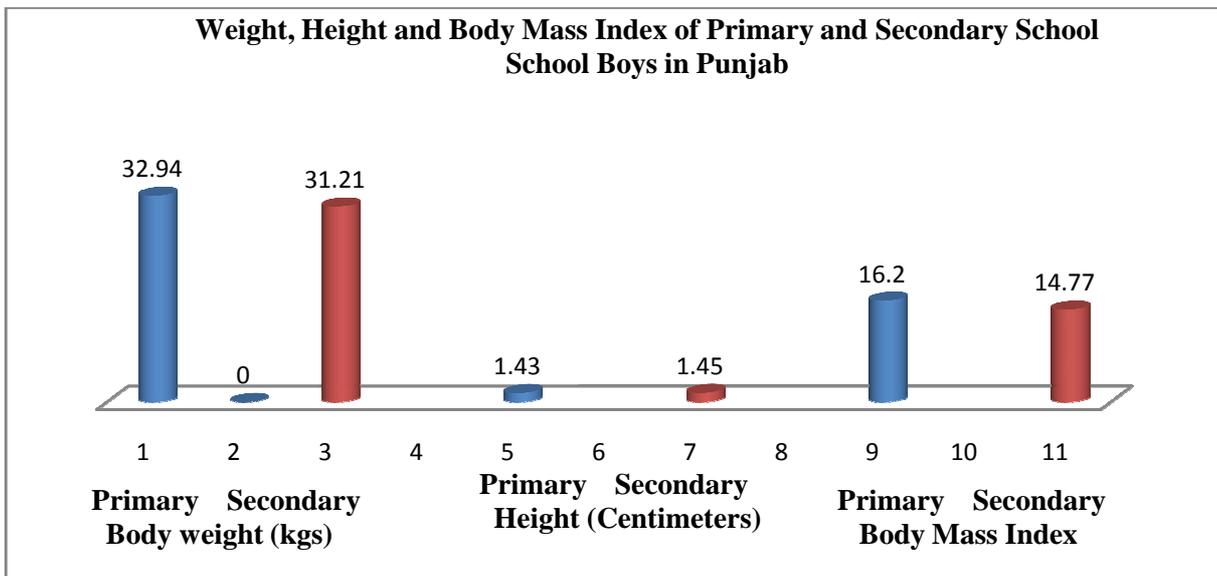
The collected data was analysed by applying the 't' test to examine the significance of mean differences at level of significance 0.05. Computational work of analysis was carried out through 'SPSS' version 17.0 for Windows software.

**Table-1**  
**Mean, Standard Deviation and t-ratio of Weight, Height and Body Mass Index of Primary and Secondary School School Boys in Punjab**

Variables	Primary		Secondary		t-ratio	Sig.
	Mean	SD	Mean	SD		
Weight (kg)	32.94	8.45	31.21	8.07	4.69	.000
Height (meters)	1.35	.15	1.65	.12	3.35	.001
Body Mass Index (Kg/m <sup>2</sup> )	16.20	4.05	14.77	3.02	9.01	.000

Table 1 depicts that a difference was found in the body mass index of the primary and secondary school boys in Punjab state from the district Fatehgarh Sahib as the mean  $\pm$  Standard Deviation of the scores are  $32.94 \pm 8.45$ ,  $1.43 \pm 0.15$ ,  $16.20 \pm 4.05$  respectively. Further, Sig value was also found 0.000, 0.001 and 0.000 which

are less than 0.05, So the null hypothesis of means of two groups have been rejected at level of significance 0.05.



**Fig No 1**  
**Graphical Representation of Weight, Height and Body Mass Index of Primary and Secondary School School Boys in Punjab**

**Discussion of Finding**

The purpose of the study was to analyse the difference between body mass Index among primary and secondary level school boys of Punjab state, to fulfil this purpose of study a total of 50 primary and secondary school boys of Punjab state from the district Fatehgarh Sahib was selected. Though both the literature, pertaining to the problem, with the help of experts view and by researcher own understanding, the Body Mass Index was considered variable in the study. Body mass index was calculated by using below mentioned the formula:

$$BMI = \frac{\text{Weight (Kg)}}{\text{Height (meter)}^2}$$

The standard instruments were used for collection of data such as vertical scale for height and Miller's weighing machine for body weight.

The collected data was analysed by applying the 't' test to examine the significance of mean differences at level of significance 0.05. Computational work of analysis was carried out through 'SPSS' version 17.0 for Windows software. Results indicate that a difference was found in the body mass index of the primary and secondary school school boys in Punjab state from the district Fatehgarh Sahib. This difference was occurred due to the reason that primary level school boys are not much aware about their health. They are more attracted towards the junk food like pizza, Chaumene, etc

Similar Study was conducted by Joanne P. Ikeda et al in 2006, they examined the BMI screening in schools: helpful or harmful.

Also a Similar study was conducted by Biswabara Rout et al in 2017; they determined the study of BMI and body fat% in adolescent boys.

The results, methodology, analysis procedure of the above mentioned studies were also adopted in the present study which supports the study.

### References

- Popkin BM, Adair LS, Ng SW. Global nutrition transition and the pandemic of obesity in developing countries. *Nutr Rev* 2012;70:3 21.
- R Khadgwat, R K Marwaha, N Tandon, N Mehan, AD Upadhyay, A Sastry and K Bhadra. Percentage of body fat in apparently healthy school children from northern India, *Indian paediatrics* 2013;50:859- 866
- UK Department of Health. Measuring Childhood Obesity: Guidance to Primary Care Trusts. Available at: <http://www.dh.gov.uk/Home/fs/en> Accessed: 27 January 2006.
- US Department of Agriculture. Childhood Obesity: Causes and Prevention. Symposium Proceeding. Available at: <http://www.usda.gov/cnpp/Seminars/obesity.PDF> Accessed: 18 January 2006.
- USSurgeon General and US Department of Health and Human Services. Call to Action to Prevent and Decrease Overweight and Obesity. Washington, DC. Available at: <http://www.surgeongeneral.gov/topics/obesity/> Accessed: 18 January 2006.