



## FAT PERCENTAGE BETWEEN B.P.ED AND M.P.ED STUDENTS: A COMPARATIVE STUDY

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### Abstract

#### Purpose

The purpose of the study was to compare the fat percentage between B.P.Ed and M.P.Ed students.

#### Method

To fulfill the purpose a total of 40 male (20 B.P.Ed and 20 M.P.Ed students) subjects were selected as subjects from L.C.C., Lucknow. The mean age of the subjects was 23 years. Fat percentage of the subjects was assessed through Skinfold measurement. Four sites i.e., biceps, triceps, supra-iliac and sub-scapular were measured with the help of skinfold caliper. For the assessment of fat percentage table made by Durenin and Rehman was used. For the analyzing data, t test was used.

#### Result

It showed that there was a significant difference between B.P.Ed and M.P.Ed students.

#### Conclusions

It is concluded that M.P.Ed students have more amount of fat percentage in comparison of B.P.Ed students.

**Keywords:** – B.P.Ed, M.P.Ed students and Fat Percentage.

### Introduction

The body fat percentage of a human or other living being is the total mass of fat divided by total body mass; body fat includes essential body fat and storage body fat. Essential body fat is necessary to maintain life. The percentage of essential fat is 3–5% in men, and 10–14% in women. Storage body fat consists of fat accumulation in adipose tissue, part of which protects internal organs in the chest and abdomen. The minimum recommended total body fat percentage exceeds the essential fat percentage value reported above. A number of methods are available for determining body fat percentage, such as measurement with caliper or through the use of impedance method. The body fat percentage is a measure of fitness level, since it is the only body measurement which directly calculates a person's relative body composition without regard to height or weight.

Essential fat is the level below which physical and physiological health would be negatively affected. Controversy exists as to whether a particular body fat percentage is better for one's health; athletic performance may also be affected. The leanest athletes typically compete at levels of about 6–13% for men or 14–20% for women. Bodybuilders may compete at ranges even lower than these levels.

The skinfold estimation methods are based on a skinfold test, also known as a *pinch test*, whereby a pinch of skin is precisely measured by calipers at several standardized points on the body to determine the subcutaneous fat layer thickness. These measurements are converted to an estimated body fat percentage by an equation. Some formulas require as few as three measurements, others as many as seven. The accuracy of these estimates is more dependent on a person's unique body fat distribution than on the number of sites measured. As well, it is of utmost importance to test in a precise location with a fixed pressure. Although it may not give an accurate reading of real body fat percentage, it is a reliable measure of body composition change over a period of time, provided the test is carried out by the same person with the same technique.

Skinfold-based body fat estimation is sensitive to the type of caliper used, and technique. This method also only measures one type of fat: subcutaneous adipose tissue (fat under the skin). Two individuals might have nearly identical measurements at all of the skin fold sites, yet differ greatly in their body fat levels due to differences in other body fat deposits such as visceral adipose tissue: fat in the abdominal cavity.

### Methods

#### Selection of Subjects

For the purpose of the study, 40 male (20 B.P.Ed and 20 M.P.Ed students) studying in L.C.C., Lucknow were selected as subject for the study. The mean age of the subjects was 23 years. All of them were taking part in daily routine physical activity program as per the B.P.Ed and M.P.Ed course.

#### Procedure for Administration of Test

For the administration test the subjects B.P.Ed and M.P.Ed students were assembled on LCC ground. They were acquainted with the specific purpose of the study. The tester had done test trails on different subjects to ensure the tester reliability. The caliper was applied to measure the fat% of the subjects. Subjects were asked to remove the clothes of upper body. The measurement for fat was taken from four sites i.e. Triceps, Biceps, Supra iliac, Subscapular. The

investigator followed standardized testing procedure for measurement. The side on triceps and biceps was marked at mid acromialeradiale and measurement was taken and at the suprailiac region the measurements were taken in the line of naval at side of body. The subscapular fat measurement was taken at proper site. Care was taken that subject maintained an ideal anatomical position at the time of measurement.

### Statistical Technique

Descriptive statistics and independent 't-test' as a statistical technique for the data analysis were used.

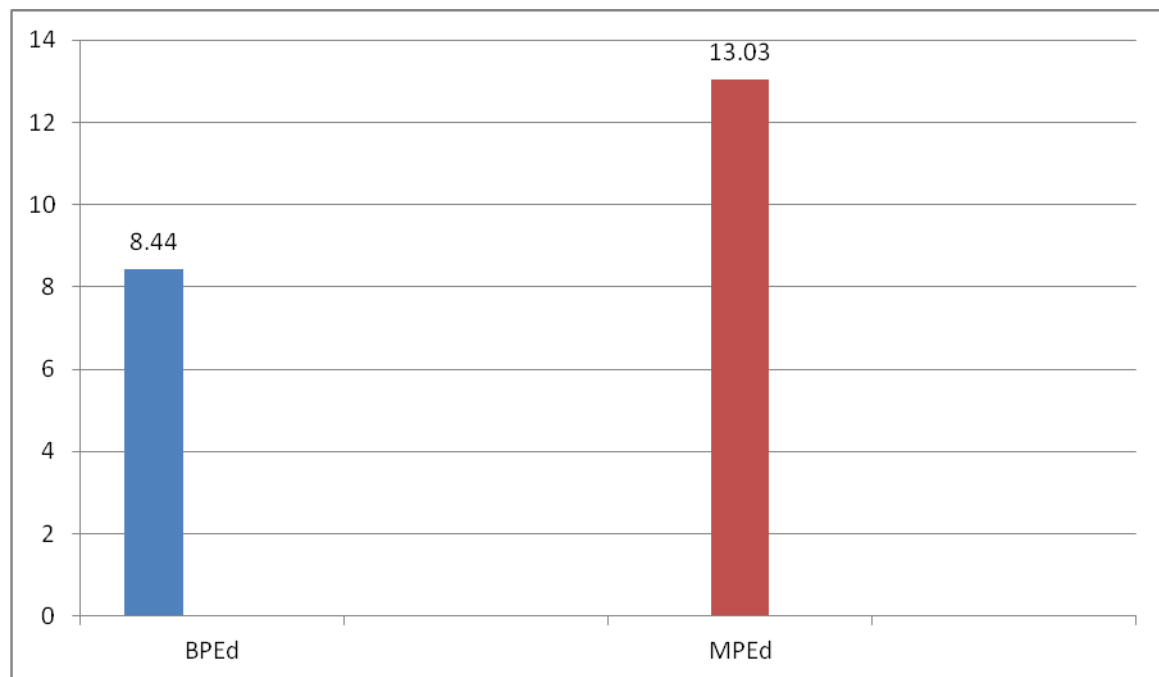
### Result

Table - 1 Descriptive statistics

Groups	N	Mean	S. D.	DM	t value
BPEd	20	8.44	2.54	5.09	3.83*
MPEd	20	13.53	2.82		

**\* Significant at .05 level**  
**t .05(38) = 2.0244**

From table-1, it is evident that there is significant difference between B.P.Ed. and M.P.Ed. students on fat percentage, test means in the fat percentage where the calculated t ratio was 3.83, which was greater than tabulated t value 2.0244 at .05 level.



The mean value of fat percentage for B.P.Ed and M.P.Ed students

### Discussion

The purpose of the present study was to compare the fat percentage of B.P.Ed and M.P.Ed students. The result of the study indicated that there is a significant difference in the mean values of two groups in fat percentage; this significant difference may be attributed to the nature of training course programme generally followed by the B.P.Ed and M.P.Ed students. While the energy expenditure by B.P.Ed student is more than the M.P.Ed students. During B.P.Ed. course the amount of physical work that is endurance work done by them is quite more than the M.P.Ed. students.

### Conclusions

The purpose of the present study was to compare the result of the study indicated that there is a significant difference in the mean values of two group in fat percentage this significant difference may be attributed to the nature of training course programme generally followed by the B.P.Ed and M.P.Ed students. It is also concluded that M.P.Ed students have more amount of fat percentage in comparison of B.P.Ed students.

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