Assessment of Body Fat Percentage of Male & Female Teacher Trainees in Tripura

Kishan Shome

Assistant Professor, Bhavan's Tripura Teacher Training College, Anandanagar, Tripura, India

Abstract

To know the body fat percentage of Male & Female Teacher Trainees in Tripura, the present study was carried out on 240 male & female Teacher Trainee belonging to Tripura and falling in the age range of 18 to 35 years. Stature, Height, Weight and BMI were taken to the standard procedure. Participants Height and Weight was measured without shoes and with light clothing to the nearest 0.1 kg, using a digital weighing machine. Their stature was measured to the nearest 0.1 cm using a standard stadiometer. BMI were measured by weight (kg)/height (cm.) X height (cm). Body fat percentage was calculated by using the BMI charts. Data on anthropometry revealed that out of total 240 Teacher Trainees in Tripura screened (N=120) Male Trainees and (N=120) female Trainees, mean height and weight in all the age group was considerably increasing due to the amount of body fat changes with their age. BMI of 18 to 35 years Teacher Trainees in Tripura was maximum fallen in healthy weight category due to shows BMI chart within 18.5 to 24.9 ranges. The purpose of the study is to find out the current Body fat percentage of Male & Female Teacher Trainees in Tripura and also examine the difference in Body fat percentage between Male and Female Teacher Trainees.

KEYWORDS: Body fat percentage, BMI, Male & Female Teacher Trainee.

Introduction

The body fat percentage (BFP) of a human or other living being is the total mass of fat divided by total body mass, multiplied by 100; body fat includes imperative body fat and storage body fat. Essential body fat is necessary to sustain life and reproductive functions. The percentage of essential body fat for women is greater than that for men, due to the demands of childbearing and other hormonal functions. Storage body fat consists of fat accumulation in adipose tissue, part of which protects internal organs in the chest and abdomen. A number of methods are available for determining body fat percentage, such as measurement with calipers or through the use of bioelectrical impedance analysis.

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. The widely used body mass index (BMI) provides a measure that allows the comparison of the adiposity of individuals of different heights and weights. While BMI largely increases as adiposity increases, due to differences in body composition, other indicators of body fat give more accurate results; for example, individuals with greater muscle mass or larger bones will have higher BMIs. As such, BMI is a useful indicator of overall fitness for a large group of people, but a poor tool for determining the health of an individual.

BMI is an estimate of body fat and a good measure of patients risk for diseases that can occur with overweight and obesity. For adults, a healthy weight is defined as the appropriate body weight in relation to height. This ratio of weight to height is known as the body mass index (BMI). People who are healthy weight (BMI of 18.5–24.9) have a normal range they belonging accurate body weight for their height and overweight (BMI of 25–29.9) have too much body weight for their height. People who are obese (BMI of 30 or above) almost always have a large amount of body fat in relation to their height. The higher range of BMI, it results the risk for heart disease, high blood pressure, type 2 diabetes, gallstones, osteoarthritis, sleep apnea, and certain cancers (e.g., colon, breast, endometrial, and gallbladder).

Special attention should be paid to Male and Female Teacher Trainees considering their potential influence on the family and their contribution to the nation's workers in near future. Due to their unique role in near future for the society, it is important to investigate the body fat percentage among the Teacher Trainees. To the best of our knowledge the study about the body fat percentage and the distribution of BMI categories of Male and Female Teacher Trainees in Tripura are properly documented.

Anthropometry is the measurement of body height, weight and proportions. It is an essential component of clinical examination of infants, children, adults and pregnant women. To know the current body fat percentage of Male and Female Teacher Trainee in Tripura, the present study was carried out on 220 male & female Teacher Trainees belonging to Tripura and falling in the age range of 18 to 35 years. For the study researcher has applied body fat percentage assessment by Anthropometric methods that is Body mass index. The criteria used to interpret the meaning of the BMI number for children and teens are different from those used for adults. For children, teens and adults BMI age and sex specific percentiles are used for two reasons these are the amount of body fat changes with age and the amount of body fat differs between male and female. The purpose of the study is to find out the current body fat percentage of Male and Female Teacher Trainees in Tripura.

Objective of the study

i. To find out the current body fat percentage of male and female Teacher Trainees in West Tripura District.
ii. To examine the difference in body fat percentage between male and female Teacher Trainees.

Methodology

Selection of the Subjects

For the purpose of the study two hundred forty (N=240) male & female Teacher Trainees were selected from Bhavan's Tripura Teacher Training College in Tripura and their aged range in between 18-35 years.

Selection of the Variables

Keeping in mind the feasibility criteria, availability of equipments and the purpose of the investigation the following variables were selected.

Assessment of Body fat percentage:

a) Body fat percentage was measured by Anthropometric methods of male and female teacher trainees.
i. Height (cm.)
ii. Weight (kg.)

b) The study was further delimited to the following indices to assess the body fat percentage of Male and Female Teacher Trainees in Tripura.

i. BMI (Body mass index).

Selection of Tools

Weighing machine, calculator, stadiometer and BMI chart were used for the study.

Collection of Data

The data of the study was collected by using following method:-

i. Body fat percentage was determined by BMI (Body mass index).

Procedure
The BMI calculation requires getting the accurate height and weight measurements. Participants body weight was measured without shoes and with light clothing to the nearest 0.1 kg, using a digital weighing machine. Their stature or height was measured to the nearest 0.1 cm using a stadiometer.

Statistical Technique
For the purpose of the study to confirm the current body fat percentage of male and female teacher trainees in Tripura, descriptive statistics and BMI (Body mass index) was employed.

Results and Discussion
Table: I Mean values of current nutritional status of male and female teacher trainees

		Male Teacher Trainee	**Female Teacher Trainee**
	Total no. of Students	**120**	**120**
Height (cm.)	Mean	167.28	155.17
	SD	5.39	6.21
Weight (kg.)	Mean	62.35	57.41
	SD	9.42	10.17
BMI	Range	**22.8**	**23.9**

Table-I shows the mean and SD of Height from 18 to 35 years aged Male Teacher Trainee was 167.28±5.39 & 18 to 42 years aged Female Teacher Trainee was 155.17±6.21

The mean and SD of Weight from 18 to 35 years aged Male Teacher Trainee was 62.35±9.42, & 18 to 35 years aged Female Teacher Trainee was 57.41±10.17
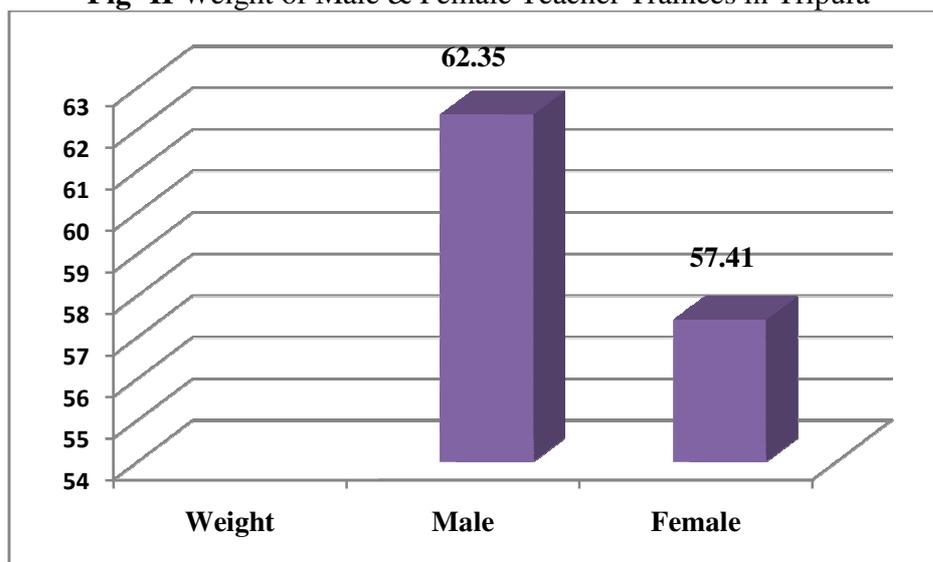
Fig- I Height of Male & Female Teacher Trainees in Tripura
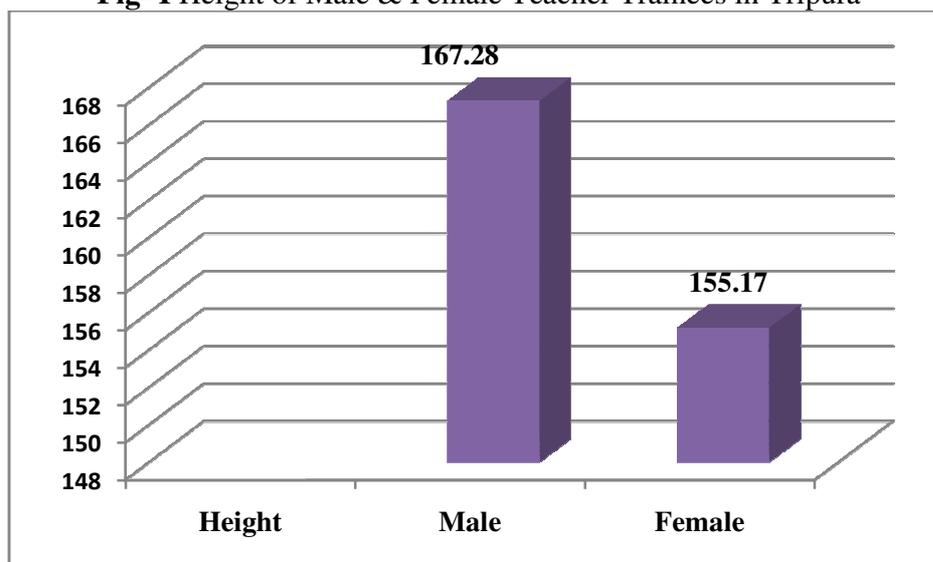
Source: Primary Survey, 2021-22

Fig-I Shows the mean value of height on Male and Female Teacher Trainees of Tripura. The figure shows that the frequency of height was increasing due to their age and nutritional food habit etc.
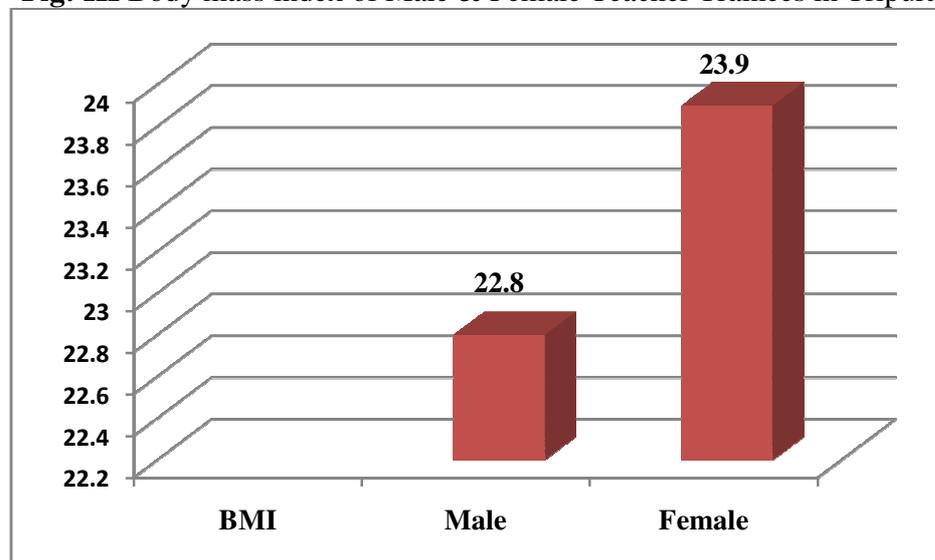
Fig- II Weight of Male & Female Teacher Trainees in Tripura

Source: Primary Survey, 2021-2022

Fig-II Shows the mean value of weight on Male and Female Teacher Trainees of Tripura. The figure was increasing frequently due to their age, life style, physical exercise and nutritional food habit etc.

Fig: III Body mass index of Male & Female Teacher Trainees in Tripura

Fig-III Shows the body mass index of Male & Female Teacher Trainees in Tripura. The figure was increasing frequently due to the amount of body fat changes with their age, height, weight and nutrition etc. The level of BMI shows that all the Male & Female Teacher Trainees in Tripura were laid down in healthy BMI range due to shows within 18.5 to 24.9 ranges.

Conclusion

Base on the study we can conclude that the:

- Height that was increasing with their age and male trainees are going to be taller than the female trainees.
- The weight also growing due to the amount of body fat changes with their age and from that side, the weight females is coming out quickly.
- BMI of Male & Female Teacher Trainees of Tripura was placed in healthy weight category due to the range lay down within 18.5 to 24.9**.**
- **References**

- Maynard, L. M. (2001). Childhood Body Composition in Relation to Body Mass Index. *Pediatrics 107*, 344–350.
- Somawar, B. N. (2015). Assessment of nutritional status amongst bihor tribe childrens residing in Dharamjaigarh block of Raigarh district. *International Journal of Research in Medical Sciences*.
- P., K. (1997). Health status of primitive kamar tribe children of Gariaband block. *A thesis for MD (Paediatrics). Pt. RSS University, Raipur*.
- Chatterjee, S. a. (1994). Physical growth patterns for girls (9-17 years) from rural West Bengal. *Ind. J. Med. Res*, 8(94): 8-12.
- Clark, H. H. (1976). *Applications of Measurement to Health and Physical Educatiuon.* Englewood Cliff, New Jersey: Prentice Hall Inc.,.

- Callaway, R. W. (1983). The Albama Motor Fitness and Health Related Fitness Norms Ages 6-14. *Dissertation Abstract International, Vol. XXXXVI,*.
- Chung, P. (1993). Self Esteem and Health Related Physical Fitness of Male College Students in Hong Kong. *DPE, Vol. XXXVI*.
- Joshi, M. S. (1996). A study of pre-adolescent growth, physique and physical performance of punjabi girls. *Doctoral. thesis (Unpublished),Punjabi University, Patiala*.
- Verma, S. (1983). Nutritional profiles of Ludhiana schoolchildren. *Doctoral Thesis (Unpublished),Punjab Agriculture University, Ludhiana.*
- PYB, R. (1995). Nutritional status of pre-school children: Sugali community in Cuddapah district. *Health care service management. Hyderabad: Delta Publishing House*, 59-68.
- Q, Z. (2012). Percent body fat is a better predictor of cardiovascular risk factors than body mass index. *Braz J Med BiolRes* , 591-600.
- SA, J. (1993). Techniques for the measurement of body composition: a practical guide. *Int J Obes Relat Metab Disord*, 17: 611-21.
- SR, D. (2000). Utility of different measures of body fat distribution in children and adolescents. *Am J Epidemiol*, 1179-84.