A study to measure the body fat percentage among women residing in selected urban area at Chennai

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Abstract: Background: Obesity is a complex disease involving an excessive amount of fat. It is the excessive fat accumulation that presents a risk to health. Obesity is a chronic health problem that has become a worldwide epidemic.Body fat percentage is the total mass of the fat divided by total body mass. In India, more than 135 million individuals are affected with obesity. **Aim:** A Study to Measure the Body Fat Percentage Among Women Residing in Selected Urban Area, Chennai. **Materials and Methods:** A descriptive survey research design with 50 Women were selected by convenient samplingat selected urban area of Chennai. Demographic data and anthropometric measurements (Height, Weight, Waist circumference, Hip circumference and neck circumference) were collected and body fat percentage was calculated by using U.S. Navy method of body fat calculator. The collected data were organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics. **Results:** The study revealed that the majority of the samples, 26(52%) were in the age group of 31 - 40years and 27(54%) Women belonged to middle income status. 38(76%) Women were non-vegetarian and majority of the samples, 24(48%) were moderate worker.The study results showed that only one woman had ideal body fat percentage (2%) and 5 women had moderate body fat percentage (10%) and most of the women (44) had severe body fat percentage (88%). The calculated chi square value showed that there was significant association between the level of body fat percentage with the selected demographic variables of the Women such as age, income, dietary pattern and type of activity at Pd"0.05 level. **Keywords: Body fat percentage, Women.**

Introduction:

"Good things come to those who wait, but bad things come to those who weight"

Obesity is a complex disease involving an excessive amount of fat. It is the excessive fat accumulation that presents a risk to health. Obesity is a chronic health problem that has become a worldwide epidemic. Obesity is directly linked to a number of different illnesses including type 2 diabetes, hypertension, high cholesterol, obstructive sleep apnea, arthritis and heart diseases. Obesity results from a combination of inherited factors, combined with environmental, personal diet and exercise.

Body fat percentage is the total mass of the fat divided by total body mass. Body fat is the amount in the body, compared to everything else. Body fat is calculated from electrical resistance varies fat (adipose) tissue, and muscles or skeletal tissues. Essential body fat is necessary to maintain life and reproductive functions. 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.

Need for study: Some recent WHO, global estimates 2016, more than 1.9 billion of adults and older people were over weight of these over 650 million adults were obese. In India, more than 135 million individuals are affected with obesity. In 2015, the prevalence rate of obesity and central obesity varies from 11.8% to 31.3% and 16.91% to 36.3%.

Statement of problem: A Study to Measure the Body Fat Percentage Among Women Residing in Selected Urban Area, Chennai.

Objectives:

a. To assess the socio-demographic variables of women.

b. To measure the body fat percentage of women.

c. To associate the level of body fat percentage of women with their selected demographic variables.

Operational definition:

Measurement: Measurement is the assignment of number to body fat using BMI (body mass index) of a woman.

Body fat percentage: It is a measurement of body composition, telling how much of the weight of your body is fat.

Women: Women refers to the female individuals whose age of above 30 years of age.

Research hypotheses:

1. There is a significant difference in the body fat percentage among women.

2. There is a significant association between the level of body fat percentage of women with their selected demographic variables.

Materials and methods:

Research Approach: The approach chosen for this study was the quantitative approach.

Research Design: Descriptive survey research design was adopted for this study.

Setting of Study: The study was conducted at selected urban area of Chennai.

Sample: Women aged >30 years who fulfil the inclusion criteria were considered as sample.

Sample Size: Sample size - 50 Women.

Sample Technique: Non-probability - Convenient sampling.

Criteria for sample selection: The samples were selected based on the following inclusion and exclusion criteria.

Inclusion Criteria:

1. Women without any chronic diseases.
2. Women who know English and Tamil.
3. The women who are willing to participate.

Exclusion Criteria:

1. Pregnant and lactating mothers.
2. Women who had undergone surgeries recently.

Development and description of the tool: The instruments used in this research study consists of two section,

Section-A: Questionnaire related to demographic data.

Section-B: Measuring of height, weight, Waist circumference, hip circumference and neck circumference, based on these measurements, body fat percentage was calculated using U.S. Navy method (1984) of body fat calculator and were categorized by using WHO classification of body fat percentage.

Classification of body fat Percentage (WHO)

Description	Percentage
Ideal	21-24%
Moderate	25-31%
Severe	32 and above

Data collection procedure: The data collection procedure was carried out after obtained permission from the concerned authorities. At first good rapport was established with the samples and the purpose of the study was explained to them. to get the co-operation from them.

The demographic data such as age of women, income level, dietary pattern and the type of activity were collected. Height, Weight, Waistl circumference, hip circumference and neck circumference were measured for all the participants.

Results and Discussion: The study revealed that the majority of the samples, 26(52%) were in the age group of 31-40years and 27(54%) Women belonged to middle income status. 38(76%) Women were non-vegetarian and majority of the samples, 24(48%) were moderate worker.

Table-2: Distribution of samples according to body fat percentage N=50

Description	Fre	Per
Ideal	1	2%
Moderate	5	10%
Severe	44	88%

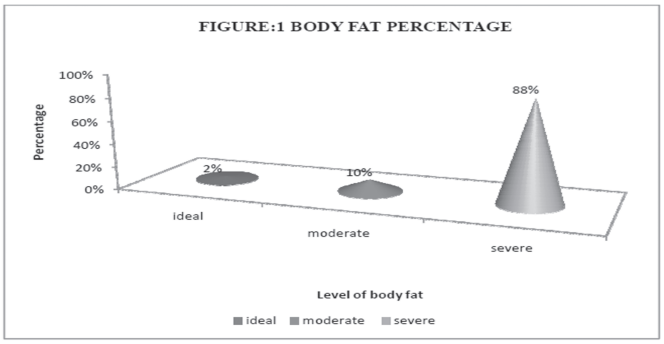

Fig No-1: The findings revealed that only one woman had ideal body fat percentage (2%) and 5 women had moderate body fat percentage (10%) and most of the women (44) had severe body fat percentage (88%).

The calculated chi square value showed that there was significant association between the level of body fat percentage with the selected demographic variables of the Women such as age, income, dietary pattern and type of activityat Pd"0.05 level.

Conclusion: The study highlighted that the age, dietary pattern and the type of activity have effects on body fat percentage among women. Thus, changing the life style factors will help in maintaining the body fat and reducing the risk of obesity and overweight in women.

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