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Anthropometric measurement of the selected Adult women working in cashew nut industry (Nagercoil)

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Abstract

The adult women are worked in various section of heavy workers. To determine the anthropometric profile of urban adult black Malawians. These women's are not nutritionally healthy. They have no any idea about nutritious rich foods, and correct dietary pattern. So the women's need nutritionally knowledge and awareness are about the dietary pattern.

Background: Cashew nut adult women has become one of the ten leading causes of nutritional deficiency. It has been reported that the diet of rural women in most Indian countries differs considerably from that of their rural counterparts, with the rural diet composed of more refined carbohydrates and fatty food. Anthropometric factors of weight, height, and body mass index (BMI) have been associated with adult women age group.

Materials and Methods: A cashew nut company based Case control study was conducted at Nagercoil in kanyakumari district. The anthropometrical measurement such as height, weight, body mass index (BMI), waist circumferences, hip circumferences, waist hip ratio and broka's index were recorded with the standard equipments and methodology.

Results: It was observed that the adult women had a statistically higher mean weight, body mass index, and waist and hip circumferences. It indicated that the result for 62% under the underweight category. It was observed that the risk of cashew nut adult women increased with decreasing levels of BMI.

Keywords: Anthropometric measurement, Adult women working, cashew nut industry

1. Introduction

A young adult is generally a person in the age range of 20 to 39 (or 40), although definitions and opinions, such as Erik Erikson's stages of human development, vary. The young adult stage in human development precedes middle adulthood. A person in the middle adulthood stage ages from 40 (or 41) to 64. In old age, a person is 65 years old or older.

As discussed in, the age, sex, activity and body weight of the individual largely determine the nutrient requirements. Since individual variations are high, the ICMR has suggested the recommended allowances based on reference Indian man and woman. Reference Indian man has been defined as "an adult women between 20 – 39 years of age, weighing 60 kg. He is free from diseases and physically fit for active work. On each working day he is employed for eight hours in occupation that usually involves moderate activity. While not at work he spends eight hours in bed, four to six hours in sitting and moving about and two hours in walking, active recreation or house hold duties". For such a reference man the ICMR has taken an average height of 163 cm.

Many studies have investigated the relationship between anthropometric characteristics, particularly height, weight and body mass index (BMI) throughout a woman's life. Most suggest that taller women are at decrease risk of nutritional status. Weight and BMI, as markers of fat deposition, are associated with a decrease in nutrient intake.

"Woman" may also refer to a person's gender identity. Women with typical genetic development are usually capable of giving birth from puberty until menopause. In the context of gender identity, transgender people who are biologically determined to be male and identify as women cannot give birth. Some intersex people who identify as women cannot give birth because of either sterility or inheriting one or more Y chromosomes. In extremely rare cases, people who have Swyer syndrome can give birth with medical assistance.

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Throughout history women have assumed or been assigned various social roles.

The question of whether underweight distribution contributes further to the risk of nutritionally deficiency is of considerable interest. Though a large number of women are affected with nutritional deficiency, there is paucity of data on the association of anthropometry with nutritional problem in the Kanyakumari population Hence, we conducted a cashew nut case-control study to identify the association of underweight in adult women. The present study aimed to assess the anthropometrical profile of the respondents affected with nutritional profile.

2. Materials and Methods
The present study was a company based matched case control study conducted in the year 2016. Hundred and one fifty Cashew nut adult women (all consecutive cases) from the nagercoil cashew nut company in Kanyakumari.

Interview schedule intended to collect the Anthropometrical data on the respondents such as Height, Weight, BMI, Waist circumference, Hip circumference, Waist To Hip Ratio, Broka's Index were assessed by standard methods. BMI was calculated by using the formula given by Srilakshmi (1993).

2.1 Height: Height is measured of nutritional status of community hence the height was measured using a stadiometer which was wall mounted. A stadiometer is a piece of medical equipment used for measuring. At it in usually constructed out of rules and sliding horizontal head piece which is adjusted to rest on the top of the head. Stadiometer are used in routine medical examinations and also clinical tests and experiments. The stadiometer that rolls up out of the way in its own compact cast, just like a steel tape measure it can be pulled down and read through the tap window instantly. The stadiometer has measuring ranges.

2.2 Body weight: Any accurate portable weighing machine was used for the study to take the weight of the Brest cancer patients. The subject was asked to stand straight on the balance and the weight was recorded in kg with an accuracy of 0.1kg.The weight of subjects was taken once during the study period

2.3 Body Mass Index: The condition of the patient was assessed by specifying the different degrees of the underweight expressed as the body mass index (BMI). The weight and height measures can be used to calculate the respondents BMI= Weight in (kg)/ Height in (m2). This ratio is commonly used in evaluating obesity and underweight status in relation to risk factors. The procedure followed by srilakshmi (2002) was used by using the data on weight and height of the selected respondents and the. Body mass index was calculated using the standard formula. Accordingly, the nutritional status was defined as follows: i) BMI 20–24.9 (normal); ii) BMI 25–29.9 (overweight); and iii) BMI ≥ 30 (obesity). The waist circumferences It is most practical tool it was evaluated respondent abdominal fat before and during weight loss treatment. waist hip ratio It was predominant distribution of fat in an obese person upper part or lower part of the body it was calculated using the formula. The normal ratio Waist/hip = 0.7.Broka'sindexThe formula of Broka's index, Height (cm)-100 = Ideal weight (kg)

3. Results
Totally 150 participants affected with nutritionally problems were studied. The cases and controls were selected from Cashew nut company Kanyakumari, Nagercoil. The participants were interviewed with the help of a structured questionnaire and the information regarding age, religion, education, residence, diet, reproductive factors, family planning and habits were obtained. All the study participants were between 20 to 39 years of age group. The distribution of adult women and controls according to their mean anthropometric measurements is depicted in Table 1. It was observed that the respondents had a statistically higher mean weight as compared to the controls. The respondents and controls had no significant difference with respect to their mean height. The mean BMI and waist hip ratio were also found to be significantly higher in respondents as compared to the controls. It was observed that 62%of the adult women were underweight according to their BMI. It was observed that the risk of adult women increased within creasing levels of BMI and waist hip ratio.

Table 1: Mean anthropometric assessments of cashew nut adult women control group

Measurements	Mean value(n= 150)
Weight (kg)	160 cm
Height(cm)	59 kg
BMI(kg/m2)	30.0
Waist hip circumferences	0.9

Table 2: Body Mass Index of the respondents

Body Mass Index	Percentage(n=150)
Underweight	62
Normal	18
Overweight	11
Obesity	9
Total	100

The table results denoted that the higher percentage (62) of the respondents were underweight. The table concluded that the underweight was common among the cashew nut adult women.
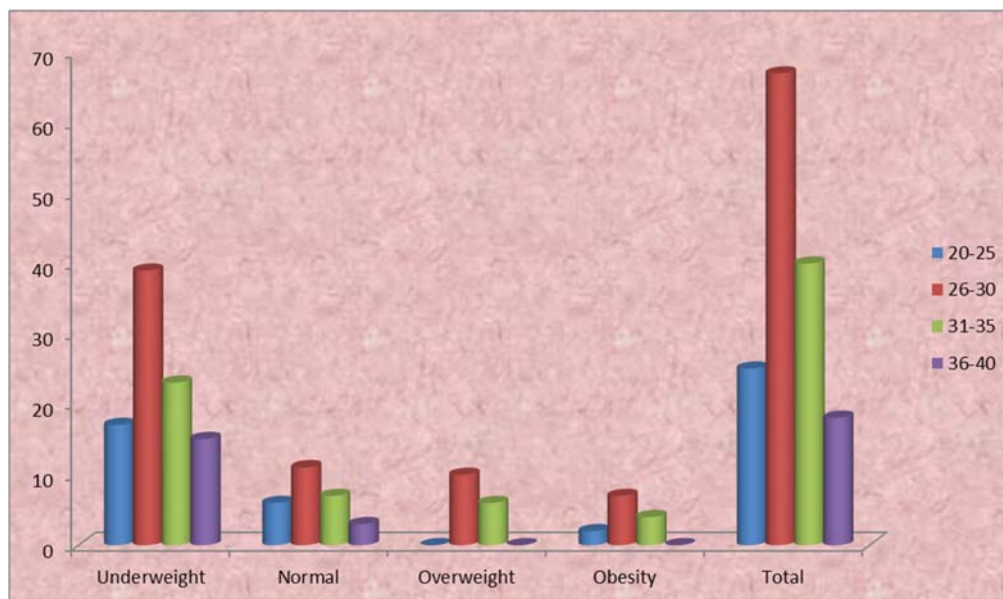
3.1 Statistical analysis
The statistical tools used to test the hypothesis namely there is no association between the age onset of adult women and Body mass Index. The test was carried out by using Chi-square technique. The results of the analysis indicated that there is a significant association between the age onset and body mass index at 1% level of significance.

3.2 Association between Age Onset of Adult Women and Body Mass Index (BMI)

Table 3

Body mass index / Age group	20-25	26-30	31-35	36-40	Total	x^2
Underweight	17	39	23	15	94	
Normal	6	11	7	3	27	11.26**
Overweight	0	10	6	0	16	(Significant at 1% level)
Obesity	2	7	4	0	13	
Total	25	67	40	18	150	

4. Conclusion

The study found that the association between the Body Mass Index and the age onset of adult women. The mean weight, Body Mass Index values were lowest in the study population. The increased weight might be affect in nutritional health problems.

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