

## Assessment of Nutrition Status of Pregnant and Lactating Mother



**Dr. Chanda Kumari**  
M.A., Ph.D. (Home Science)  
B.R.A. Bihar University,  
Muzaffarpur, Bihar, India

### ABSTRACT

Anthropometric measurement:

“Nutrition anthropology has been defined as the “measurement of the variation of the physical dimensions and the gross composition of the human body at different age levels and degrees of nutrition (Jelliffe,1966).

Physical dimensions of the human body are much influenced by:

- (i) Biological factors
- (ii) Genetic background
- (iii) Environmental factors (season, climate, socioeconomic, nutrition, exposure to infection/infestation), and
- (iv) Psychological factors.

Anthropometric measurements like weight and height were recorded for both groups of respondent and are presented in this chapter.

### INTRODUCTION

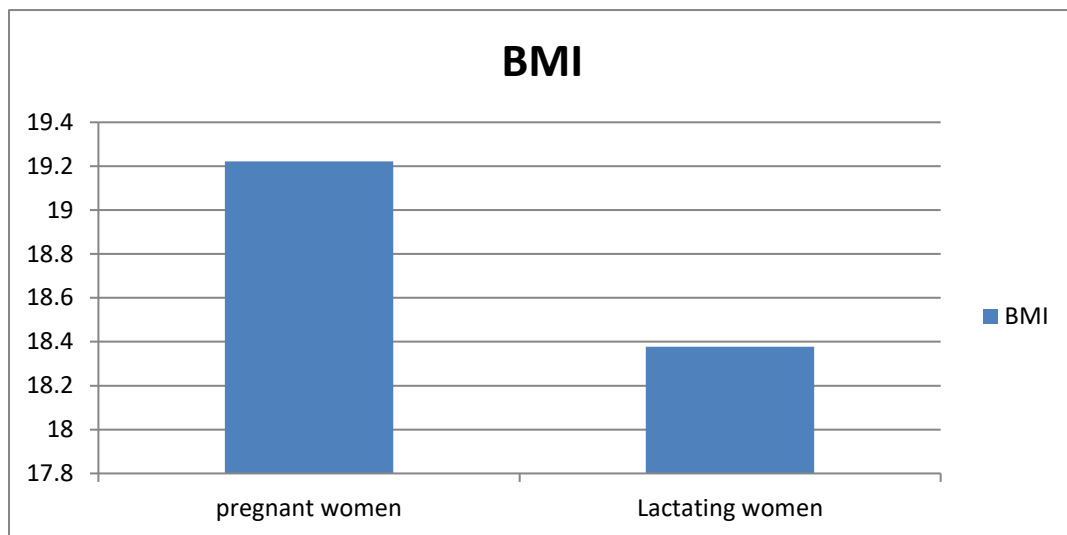
To examine the correlation between height and weight, simple correlation coefficients were calculated and presented in Table 5.13 it was found that the weight of both age group individuals was positive and significantly correlated with height.

Body mass index (B.M.I) is as a good index to assess the current forms of malnutrition in a community.

The distribution of members of 2 years age group.

**Table -1.** Mean anthropometric measurement of pregnant and lactating women

Age group	Sex	no	Weight(kgs)	Height (cms)	BMI
Pregnant women		120	43.25±7.06	149.92±4.21	19.222
Lactating women		60	41.35±4.50	149.85±6.79	18.377



**Fig.1** BMI Pregnant and lactating mother

It was observed that severe malnutrition or chronic energy deficiency grade II was lower among pregnant mother comparatively to lactating mother.

The extence of malnutrition as mild or chronic energy deficiency grade I was also more among lactating mother (31.7%) followed by pregnant mother .

**Table 2.** Body mass index of pregnant and lactating mother

Pregnant women			Lactating mother		
No.	Per cent		No.	Per	
80			9		
10			30		
10			30		
20			11		

Taking this BMI into consideration, the pregnant women having more chronic energy deficiency was lactating mother. The reason was that most of them were heard worker and did not care that they to them were hard worker and did not care that they had to feed their babies also so they should have better of more amount of food.

**Table 2.** Calculated correlation coefficient (weight and height)

	df	r
pregnant women	10	0.3464
lactating mother	39	0.5161

Level of significance

5% show as\*

1% shown as\*

### **Clinical examination:**

Clinical examination has always been an important practical method for assessing the nutritional status of a pregnant women and lactating mother . essentially , the method is based on examination for changes believed to be related to inadequate nutrition that can be seen or felt in superficial epithelial tissues, especially the skin ,eyes, hair and buccal mucosa, or in organs near the surface of the body such as parotid and thyroid glands.

Table 2. shows the result of clinical assessment and the different signs of deficiency among of respondents.

### **Protein energy malnutrition:**

Through most of them are malnourished, very few cases of PEM were observed in the present study.

### **Vitamin A deficiency:**

The common signs of vitamin a deficiency were night blindness bitot's spot and keratomalacia. Night blindness was observed among. Observation indicated that very few of them were suffering from vitamin a deficiency. This may be because of the fact that carotene rich foods like mangoes, jackfruit ,palmfruit and papaya are in abundance in this area . the rich source of vitamin a are perishable which are available at low price or sometimes free of cost during peak season .the consumption of vitamin a in the body which protected them from severe deficiency.

### **Vitamin B complex deficiency:**

The prevalence of only angular stomatitis was observed in the research area. The deficiency was less prevalent in pregnant women lactating mother. The prevalence of B Complex deficiency in these groups might be because of less consumption of milk, egg and other such food B.

### **Anaemia:**

The different signs of anaemia in the project area were pale tongue, pale conjunctiva, koilonychia and weakness which were common among both categories of sample population. Comparatively higher prevalence of anemia was observed among pregnant women (66.7%) and lactating mother (65.8%).

The prevalence of anameia in respondents was mainly due to their iron deficient diet. The diet survey clearly indicated the lack of green leafy vegetables and other iron rich foods in the diet of respondents in project area. The clinical signs of the study further revealed that anaemia was found to be more among pregnant women than lactating mother.

#### **Biochemical Examination:**

Biochemical assessment of nutritional status is a more objective and precise approach than dietary/clinical assessment methods. Haemoglobin level is reliable index of overall sate of nutrition. But interpretation of biochemical assessment data is often difficult and needs to be done carefully. In the present study, heaemoglobin estimation was undertaken only for both groups.

Haemoglobin concentrations in healthy persons very widely. There are sharp cut off points below which anaemia can be stated to be present. However, standards below which anaemia is likely to be present have been sent out by WHO and are presented in Table 3.

**Table 3.** Haemoglobin concentration below which anaemia is likely to be present at sea level

	Age	Hb. g/dl
Children	6 months to 6 years	11
	6 year to 14 years	12
Adults	Men	13
	Women	12
	Pregnant Women	11

**Source: World Health Organisation Tech. Report Series No. 503, 1972, Geneva.**

It was observed that almost all of them were anameia. The severity of anemia was more more among lactating mothers followed by pregnant women, The low haemoglobin level in almost both group might be due to inadequate consumption of green leafy vegetables which might have accounted for lower intake in iron.

#### **Diet Survey:**

Dietary analysis is an integral part in most of nutritional surveys. The main objective of any dietary assessment is to discover what the person under investigation is in the habit of eating over the long range and in the short run (Diva Sanjur, 1982). Dietary data on individual are usually collected either to obtain information concerning average nutrient intake, food intake or to know food habits or to obtain estimates of nutrient intake of a particular individual to correlate with clinical or biochemical measurement obtained on that individual. In the present investigation, a 24-hours method was carried out to determine the food and nutrient intake of respondents. In the project area on the basis of information obtained from representative sample that is 25%

sample under study. The food and nutrient intake was obtained for 20% pregnant woman and 31% lactating mothers.

As far as food intake of pregnant women is concerned, it may be observed that the intakes of cereals, other vegetables, and roots and tubers were more than their respective RDAs where as intakes of the food materials like pulses, green leafy vegetables, oils and fat, fleshy foods, milk and milk products and sugar and jaggery were comparatively lower than respective RDAs. The percentage of RDA met was highest for oils and fats (56.25%) followed by pulses (31.82%), fleshy foods (16.66%), milk and milk products (15.56%), green leafy vegetables (13.33%) and sugar and jaggery (7.5%).

#### **References:**

- [1]. Arora, A. and Verma, S. 1995. Energy and Protein intake of elderly people of Ludhiana City. J. Res. Pau, 32 (3) : 328.
- [2]. Ibid.
- [3]. Behrman and Deoldkiar 1990. The intra household demand for nutrient in rural areas. J. Him. Res. 25(5) : 829.
- [4]. Chandrashekhar, U., Kowsalya, S. and Sinha. H. 1997. Nutritional Status of selected Oraon Tribes of Bihar. Ind. J. Nutr. Dietet. 34: 264.
- [5]. Ibid.
- [6]. Hassan, N. Huda N. and Ahmad. K. 1985. Seasonal patterns of food intake in rural Bangladesh : its impact on nutritional status. Ecol. Of Fd. And Nutr. 17 (2) : 175.