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Research Paper :

Correlation between anthropometric measurements and nutrient intake of different weight status of women

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ABSTRACT

The present study was undertaken to find out the correlation between anthropometric measurements and nutrient intake of different weight status women. To fulfill these objectives, 350 women (15-49 yrs) were selected from Banaras Hindu University, Varanasi. In anthropometry measurements, different assessment methods were used *i.e.* Body mass index, Skinfold thickness, Waist circumference and Waist hip ratio and nutrient intake was taken by 24 hour diet recall method. The study showed that there was non-significant association between anthropometric measurements and nutrient intake except fat but correlation of waist and hip circumference was observed with all nutrient intake (except fibre).

Key words : Anthropometric measurement, Nutrient intake, BMI (Body Mass Index)

A proper body weight is most conducive to good health. The problem of excess body weight is confronting more and more people in the prosperous communities. Because of this, obesity can be seen as the first wave of a defined cluster of non-communicable diseases called "New world Syndrome" creating an enormous socioeconomic and public health burden in poorer countries (WHO, 2000 a and b). Obesity among women is a growing problem in India, with the percentage of ever-married women age 15-49 who are overweight or obese increasing from 11 per cent in NFHS-2 to 15 per cent in NFHS-3 (Solanki *et al*., 2008). In Northern India obesity was more prevalent in urban populations (male = 5.5%, female = 12.6%). According to Third National Family Health Survey (2006) only in Uttar Pradesh 12% females and 9.9% males were found overweight or obese and their rank in the list of Indian state were 18 and 17, respectively.

Measures commonly used for assessing obesity are Body Mass Index (BMI) Skinfold thickness (SFT), Waist circumference (WC) and Waist Hip Ratio (WHR). BMI is a scale used for determining the weight status of an individual and the associated risks. It does not provide any clue for the distribution of fat in the various parts of the body. The simpler methods to estimate body fat is, to measure the thickness of the layer of fat just under the skin in several parts of the body (Afride *et al*., 2004). According to Yusuf *et al*., 2005; International Diabetes Institute, 2000; Mellin-Olsen and Wandel, 2005, Waist circumference and waist-hip-ratio are better measures of body fat for South Asians because this group tend to have a more centralised distribution of body fat without developing generalised obesity. Problems of overweight and obesity are caused by chronic imbalance between energy intake and actual energy needs of the study. In many developing countries with increasing urbanization, mechanization of jobs and transportation, availability of processed and fast foods and dependence on television for leisure, people are fast adopting less physically active lifestyles and consuming more "energy-dense, nutrient-poor" diets (WHO 2003; Bell and Popkin, 2002; Popkin, 1998, 2002, 2001; Popkin *et al.*, 2001; Drewnowski and Popkin, 1997). As a result, overweight and obesity and associated chronic health problems, such as diabetes, hypertension, cardiovascular disease, cancer and muscular skeletal disorders, are increasing rapidly, particularly among the middle class urban populations (WHO, 2003; Popkin, 1998; Tanaka and Nakanishi, 1996; Saw and Rajan, 1997).

Reduced physical activity and excess energy intake are strongly linked to weight gain (Lombard and Teede, 2009). Therefore, this study was undertaken to find out the correlation between anthropometric measurements and nutrient intake of different weight status women.

METHODOLOGY

The study was carried out in Banaras Hindu University (BHU), Varanasi on 350 women (15-49 years). The residents of BHU campus are the employee of various categories and they belong to different socio-economic groups. Residential area is divided into 12 colonies in BHU. In each colony number of quarters are not same. To select the samples from each colony stratified