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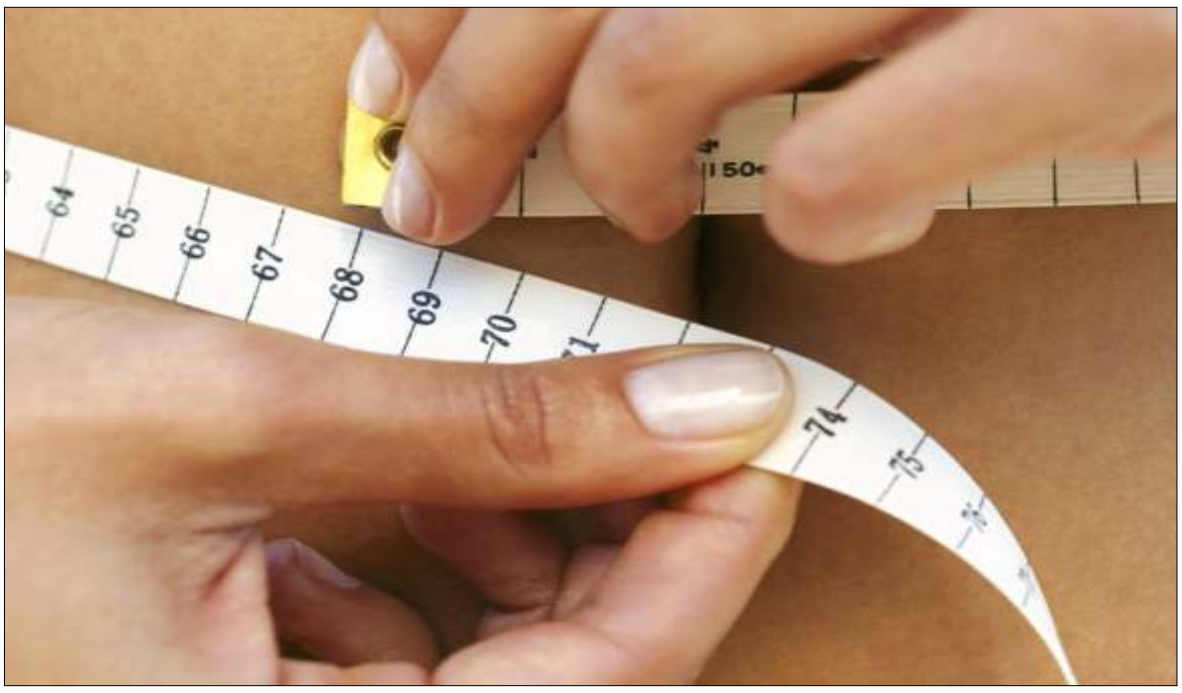
A STUDY OF WAIST HIP RATIO ON PUNJABI GIRLS RANGING IN AGE FROM 10-12 YEARS



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ABSTRACT:

The aim of the present study was to investigate the waist hip ratio of Punjabi girls ranging in age from 10-12 years. Subjects were taken from govt. senior secondary school Nadampur, District -Sangrur (Punjab). Different anthropometric measurements like height, weight, waist and hip circumference were taken on each subject with standardized techniques to measure waist and hip ratio. Results showed that girls of present study possess 136.3 cm height and they had 37.47 kg body weight. However, Waist hip ratio was also observed higher side (0.93) in girls of present study as compared to the value given by WHO.

KEY WORDS : Waist Hip Ratio, senior secondary school,

INTRODUCTION:

The prevalence of obesity is rising in developed and developing countries, and it is cited as an important risk factor for early mortality (WHO, 2000). Obesity has a strong relationship with cardiovascular diseases like hypertension (Singh 2011, de Koning et al. 2007), coronary heart disease and diabetes. A number of clinical measurements for obesity were used to determine susceptibility to cardiovascular diseases (Gelber et al., 2008). These include anthropometric indices such as body mass index (BMI), waist-hip ratio (WHR) and waist circumference (WC) (Ross et al., 2008).

The Waist-Hip ratio gives an indication of how much fat is stored in the abdomen. This can be used as a very good measure of one's relative health (Qiao & Nyamdorj 2010). Men and women, of course, have different targets for Waist-Hip ratio. For women an ideal figure is 0.72 or less. Women have greatly increased chance of getting coronary disease and related health problems if their Waist-Hip ratio exceeds 0.72. For men an ideal figure is 0.89 or less. Men have greatly increased chance of getting coronary disease and related health problems if their Waist-Hip ratio exceeds 0.89. Srikanthan et al., (2009) confirm, and cite several other investigations that show waist-to-hip ratio being the superior clinical measurement for predicting all cause and cardiovascular disease mortality.

ATERIAL & METHODS

The study was conducted on sixty girls. Subjects were taken from village Nadampur, District Sangrur. The anthropometric measurements were taken on right side of body by using standard techniques. Various anthropometric measurements like height, weight and circumferences from waist & hip region were taken on each subject with standardized techniques. Height and weight were taken to calculate Body mass index (BMI), waist and hip circumferences for central obesity waist hip ratio (WHR). The data obtained from the anthropometric measurements, data was compiled and statistically analyzed with the help of SPSS software of computers. The statistical test viz., mean, standard deviation was applied on the data.

RESULTS

Table 1: Mean value of height (Cm), weight (Kg) & BMI (kg/m2) of Punjabi Girls ranging in age from 10-12years

Girls	N	Mean	SD
Height (cm)	60	136.3	0.05
Weight (Kg)	60	37.47	4.30
BMI kg/m^2	60	20.41	2.48

Table 1 depicts that the girls of the present endeavor were showing a mean body weight of 37.47 kg and mean body height of 136.3 cm respectively. It represents that these girls were falling within the recommended weight zone given by Indian Council of Medical Research (ICMR).

Body Mass Index (BMI) is calculated from a person's weight and height. BMI is a reliable indicator of body fatness for people. On an average girl of the present study was found to possess a mean value of 20.41 kg/m^2.

Table 2: Mean value of waist (inch), hip (inch) & Waist hip ratio of Punjabi Girls ranging in age from 10-12years

Girls	N	Mean	SD
Waist (inch)	60	26.59	1.73
Hip (inch)	60	28.88	1.83
Waist Hip Ratio	60	0.93	0.02

Table 2 depicts that the subjects of the study were possessing pear shaped body as these subjects were showing a higher mean value for hip circumference (28.88) than the mean value for waist circumferences (26.59).The waist hip ratio calculated by the formula (Waist Hip Ratio = Waist Circumferences/Hip Circumferences) indicated that these girls possessed a very high mean value of waist hip ratio (0.93), which may lead to higher disease risk factors. The high value for various anthropometric indices like BMI and Waist to Hip Ratio during this stage of life can result in poor consequences that can further be forced by physical stress, emotional problems and overeating habits. As various studies (Camern et al 2003 & Vidula, 2015) explain the relationship between excess weight and diseases.

Labstein et al 2004 & reported that childhood overweight and obesity is a complex health problem associated with chronic conditions like hypertension type 2 diabetes and cardio vascular diseases. Fredman et al (2005) explain that being overweight or obese also increases the risk of both acute health problems and chronic diseases. Present subjects were physically inactive that may be one of the reasons of higher waist hip ratio.

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