



A Study on Relation Between Weight Perceptions and Overweight Among Adolescent Girls

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ABSTRACT

Introduction: False preoccupation about the body has become a major concern since it has led to several unhealthy dietary practices. It has been reported that adolescent girls feeling overweight were more likely to engage in unhealthy weight control practices than those who reported feeling that they were of normal weight or underweight

Methodology: A cross sectional study was conducted among 100 adolescent girls. A pretested semi structured questionnaire was used as a study tool. Anthropometric measurements like weight and height were recorded using standard techniques. Data was entered in Microsoft excel and was analysed using SPSS

Results: The prevalence of overweight/obesity was 22%. More than 80% of subjects had false perception about their body weight. There was a distinct difference between actual and perceived weight.

Conclusion: Body weight perception and dissatisfaction are correlates for weight control practices. Overweight adolescents should be better informed and empowered to follow recommended weight loss strategies.

KEYWORDS : Body image, Body weight, Obesity

Introduction:

The problem of obesity is confined not only to adults but also to children and adolescents. There is no uniform approach in defining Obesity in childhood and adolescents and so there is no true prevalence estimate. Nevertheless, whatever method is used to classify obesity, studies of this disease during childhood and adolescence have generally reported a high prevalence rates that are increasing in both developed and developing countries.

Females, at a very young age, are concerned about body weight and place high importance on appearance, which is dramatically influenced by the media. A study by Mooney et al; in Ireland found that adolescent females are very conscious of their body image¹.

Globally, non-communicable diseases are increasingly recognized as a major cause of morbidity and mortality. The countries of the South-East Asia region are facing a double burden, with a heavy load of infectious diseases and an increasing burden due to non-communicable diseases². The increasing burden of non-communicable diseases, particularly in developing countries including India, threatens to overwhelm already stretched health services. Several diseases come under the umbrella of non-communicable diseases and more common cause is obesity. The problem of obesity is confined not only to adults but also to children and adolescents. Various studies also indicate that the prevalence of overweight and obesity among children of all ages is increasing in developing countries in the past few decades^{3,4}.

Obesity is both an individual clinical condition and is increasingly viewed as a public health problem. The false perception about obesity may lead adolescents to adopt unhealthy practices. Studies have shown that underweight adolescents perceived themselves as obese and indulge in unhealthy weight control practices.

The persistent emphasis of our society on thinness and its characterization of obesity as unacceptable may predispose adolescents, especially young girls, towards distorted body image perception and induce dietary behavior that may prove deleterious to their health.

Weight perception is one of the motivating factors for weight control

behaviors and is a better predictor than actual weight for adolescents to diet or exercise. Weight behaviors are multifaceted and complex, and their etiology is multi-factorial. Some behaviors are causative for overweight or obesity, some develop as a response, and some are associations. Thus, it is important to understand what mediates weight control behaviors in adolescents.

Methodology:

A cross sectional study was carried out among 100 adolescent girls during January 2014 to April 2014. This study included 8th, 9th and 10th standard students of high school as study subjects. The required number of 100 sample size was selected using probability proportionate random sampling technique.

Informed written consent was obtained from all the students who participated in the study. Confidentiality of the data collected was observed.

A pre tested structured questionnaire was distributed among the participants and they were asked to fill the questionnaire. Anthropometric measures were taken. Weight was measured to the nearest 1kg with subjects within their attire with emptied pockets and without foot wears. A calibrated weighing machine with weighing capacity of 130 kg was used. Height was measured without foot wears to the nearest 1mm by means of a non stretchable polyvinyl chloride tape which was attached to the wall. The subject was asked to keep the heels, buttocks, shoulders and occiput in close contact with the wall adjacent to the measuring tape.

Body mass Index was used as an index of adiposity which is a simple and widely used.

Measurement of Obesity and overweight is based on the standard Center for Chronic Disease prevention charts for children; CDC defines as Overweight if the BMI is higher than the 85th percentile and Obese if the BMI is higher than 95th percentile.

Results:

There were 100 adolescent girls in the age group of 14-16 years. More than 50% of girls belong to age group 16 (Table.1)

Table .No.1: Age wise distribution of study subjects

Age	N	%
14yrs	4	4
15yrs	38	38
16yrs	58	58
Total	100	100

The prevalence of overweight and obesity was 18% and 4% respectively. Even though it is an affluent group, 46% of girls were underweight (Table.2)

Table No.2: Distribution of subjects based on Body mass index

Category	N	%
Under weight	46	46
Normal weight	32	32
Over weight	18	18
Obesity	04	04
Total	100	100

About body weight perception, 88% of girls knew their body weight whereas 12% of girls did not know their body weight (Table.3). Among girls knowing their body weight, 45% of girls were under estimated their weight and 31.8% of girls over estimated their weight (Table.4). It was found statistically significant.

Among girls who over estimated their weight, 25% were actually underweight and 52% girls were actually obese among girls who underestimated their weight (Table.4)

Table No. 3: Distribution of subjects based on – whether they know their body weight

Know their Body weight	Over Weight/ Obesity	Normal Weight	Under weight	Total
Yes	19 (21.6%)	25 (28%)	44 (50%)	88 (100 %)
No	03 (25 %)	07 (58.3%)	02 (16.7 %)	12 (100 %)
Total	22	32	46	100 (100 %)

Table no.4: Distribution of subjects based on their body weight perception

Weight perception	Over Weight/ Obesity	Normal Weight	Under weight	Total
Correct	4 (21.0%)	05 (20.0%)	11 (25.0%)	20 (22.7 %)
Under estimation	10 (52.6%)	08 (32.0%)	22 (50.0 %)	40 (45.4%)
Over estimation	05 (26.3 %)	12 (48.0 %)	11 (25.0%)	28 (31.8%)
Total	19 (100%)	25 (100%)	44 (100%)	88 (100 %)

Chi square – 104.6 df – 4 p – 0.00

About 32% and 23% of girls perceived themselves as heavier and lighter for their age and height respectively (Table.5). But among those who perceived themselves as heavier, 35.7% were actually underweight for their age and height. The results were found statistically significant (Table.5).

Table No.5: Distribution of study subjects based on their body image perception

Body image perception	Over Weight/ Obesity	Normal Weight	Under weight	Total
Under weight	07 (36.8 %)	03 (12.0 %)	10 (22.7 %)	20 (22.7 %)
Normal weight	05 (26.4 %)	10 (40.0%)	24 (54.6%)	40 (45.4%)
Over weight	07 (36.8 %)	12 (48.0%)	10 (22.7%)	28 (31.8%)
Total	19 (100%)	25 (100%)	44 (100%)	88 (100 %)

Chi square – 133.4 df- 3 p – 0.00

30.6% of the girls had desire to lose weight and 45.6% of girls among who had desire to lose weight were adopting Dieting method for losing weight (Table.6)

Table No. 6: Distribution of study subjects based on the practices adopted to lose weight

Practices	Overweight/ obesity	Normal weight	Under weight	Total
Dieting	8 (38.0 %)	8 (38.0 %)	5 (23.8 %)	21 (45.6 %)
Exercise	8 (42.1 %)	8 (42.1 %)	3 (15.7 %)	19 (41.3 %)
Dieting & Exercise	3 (60 %)	2 (40 %)	0 (0 %)	05 (10.8 %)
Medication	0	0	0	00 (00 %)
Vomiting	1 (100%)	0	0	01 (2.1 %)
Total	20	18	8	46 (100 %)

30% of girls had desire to gain weight and 36% of girls had desire to lose weight. 41% of normal weight and 20% of underweight girls had desire to become little lighter .

Discussion:

Concerning weight perception, more than 80% of subjects knew their body weight and among girls knew their body weight, 46% of girls over estimated their weight and 32% of girls under estimated their weight. Davies and Furnham⁵ concluded in a study of British adolescent females that, while less than 4% of the samples were actually over weight, over 40 % considered themselves to be overweight. Maloney⁶ also reported in his study that 75% of the girls he surveyed perceived themselves to be overweight.

Our study also showed that 30.6% of girls desired to lose weight but among these only 40% of the girls adopt exercise as their practice and 45% of girls were dieting.

Studies conducted by Ash and McClelland⁷ have reported that a vast majority of subjects under their study listed a desirable weight loss. Sztainer and Hannan⁸ have also reported that half of the girls under their study were trying to lose weight.

It is suggested that self perception of body weight more, so than objective weight status, was predictive of weight loss behavior and also negative psychological outcomes associated with poor body weight image. As a result self perception of weight may be an important point of focus for the design and implementation of clinical and public health initiatives targeted at this adolescent population.

Conclusion:

More than 70% of the girls were having false perceptions of their weights, among which most of the underweight girls have overestimated their weight and most of the obese girls have underestimated their weight.

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