# **Original Research Article**

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# To assess the knowledge, attitude and practices of people regarding overweight and obesity: a cross-sectional study

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# **ABSTRACT**

**Background:** Prevention and management of obesity is largely depends on motivation and education of people about obesity, in turn this can be greatly facilitated by adequate baseline data on the knowledge, attitude and practise (KAP) of people. The aim of this study was to assess the KAP on obesity among obese people of an urban slum of Mumbai. Methods: A cross-sectional study was conducted in randomly selected sample from Shivaji Nagar urban slum area of Mumbai. Structured questionnaire were used to test their knowledge, attitude and practises regarding obesity.

Results: 350 adults of age more than 18 years were analysed. 56% were male and 81.1% were of Muslim community. Prevalence of obesity and overweight was found to be 8.6% and 32.3% respectively as per body mass index (BMI). 42.0% subject's thought that they are slim, 43.4% thought that they are fit and only 14.6% subjects considered hat they have weight more than normal. Only 46.9% said that they are frequently teased about their weight or physical appearance and only 28.6% said that teasing affected them mentally. 70.9% subjects know that there are health consequences of being obese and only 7.7% have made any effort to reduce weight. 88.3% subjects think diet control and 79.3% think exercise and 11.7% consider medication as a treatment modality for obesity.

**Conclusions:** There appears to be lack of knowledge about obesity and its effects on health, as well as the methods for reducing weight. An IEC program can be developed in this context.

Keywords: KAP, BMI, Obesity

#### INTRODUCTION

Obesity is becoming a major public health problem all over the world due to its link with diabetes, hypertension and other disorders related to metabolic syndrome. Developing countries are also increasingly vulnerable to the worldwide epidemic of obesity, which affects all segments of the population and appear to be at greater risk of the diseases associated with overweight and obesity.1

India is gaining weight. Traditionally known for malnutrition, Indians now report more and more

frequently with overweight, obesity, and consequences. Indians exhibit unique features of obesity: Excess body fat, abdominal adiposity, increased subcutaneous and intra-abdominal fat, and deposition of fat in ectopic sites (such as liver, muscle, and others). Data regarding the nutritional status of adults, as determined by body mass index (BMI), indicate that 50% of Indian adults suffer from different types of chronic energy deficiency, in that they have a BMI.<sup>2</sup>

As per NFHS 4 (2015-2016), Women who are overweight or obese (BMI\ge 25.0 kg/m<sup>2</sup>) are 20.7% as compared to 12.6% in NFHS 3 (2005-2006) likewise

Men who are overweight or obese (BMI≥25.0 kg/m²) are 18.6% as compared to 14.3% in NFHS 3 (2005-2006).³ the present study assessed the knowledge, attitude and practices of the people of urban slum regarding obesity.

#### **Objective**

The objective of the study was to assess the knowledge, attitude and practises of people regarding overweight and obesity.

#### **METHODS**

#### Study area

The present study was carried out in Shivaji Nagar (Govandi) urban slum area of Mumbai city.

# Study population

The study population was selected from all adults above 18 years of age; the population consists of people who have migrated from different parts of India.

# Study design and study period

It was an epidemiological community-based cross-sectional study conducted during the period from August 2014 to July 2015.

# Sample size calculation

Sample size calculation is already been described in another study. A Sample size was calculated by considering the prevalence of obesity and overweight in adult population. According to NFHS-3 data (2007) the prevalence of obesity and overweight in adult population in India was 34%,  $^{[138]}$  and the sample size has been calculated by formula  $n=4pq/l^2$ . Where

n= sample size, p=prevalence of obesity (34%)

q= 100-p (66%), l= admissible error (15% of p)

So,  $n = 4 \times 34 \times 66/5.1 \times 5.1 = 345$ 

So the sample size will be 350.

In the given urban slum there were 50 plots, each plot contains 180 houses. The plots were chosen by selecting every alternate plot i.e. 25 plots. So for the sample size of 350, 14 houses per plot were included in the study (350/25) and thus every 13<sup>th</sup> house with a random start was selected for enrolling the subjects. In case there was no eligible subject available in the selected house, the next consecutive house was surveyed for eligible subject. However, the next house was surveyed as per the prescheduled number. When there were more than one adult in the house, the youngest one was selected.

#### Study method

Systematic Sampling with a random start

#### Inclusion criteria

Inclusion criteria were adults living in the study area; those residing in the study-area for more than 1 year; adults consenting to be a part of the study.

#### Exclusion criteria

An exclusion criterion was adults not present at the selected household at the time of visit for at least three visits.

# Plan of analysis

Data collected and analysed by using appropriate statistical method. Chi square test was used to test association.

# **RESULTS**

Table 1: Self-image among the subjects.

Colf image		No	0/
Self-image		No.	%
How do you rate yourself according to your weight?	Slim	147	42
	Fit	152	43.4
	Overweight	51	14.6
	Total	350	100
Are you frequently	Yes	164	46.9
teased about your weight/physical appearance?	No	186	53.1
	Total	350	100
If was done to a sing	Yes	47	28.6
If yes, does teasing affect you mentally?	No	117	71.4
	Total	164	100
Do you think there are	Yes	248	70.90
Do you tilling there are	105	210	70.70
health consequences	No	102	29.10
*			
health consequences	No	102	29.10
health consequences of being obese?	No Total	102 350	29.10 100

As can be seen from Table 1, 147 (42.0%) subjects thinks that they are slim, 152 (43.4%) thinks that they are fit and only 51 (14.6%) subjects think that they have weight more than normal. Only 164 (46.9%) said that they are frequently teased about their weight or physical appearance.

Out of these 164 only 47 (28.6%) said that teasing affected them mentally.

248 (70.9%) subjects know that there are health consequences of being obese and only 97 (27.7%) have made any effort to reduce weight.

Table 2 shows, 309 (88.3%) subjects think diet control and 278 (79.3%) think exercise and 41 (11.7%) consider medication as a treatment modality for obesity.

Table 3, shows out of 51 people who thinks they are overweight, 45 (88.2%) have their BMI 25 and above and out of 299 people who thinks they are slim and fit, 98

(32.77%) have their BMI 25 and above. The association is found to be significant.

As seen from the Table 4, 22 (73.3%) obese subjects, 79 (69.9%) overweight subjects and 147 (71%) non overweight subjects mentioned that there are health consequences of being obese. The association was not significant.

Table 2: Treatment modalities for obesity they know.

Treatment modality they know	No. of subjects	Percentage (%)
Diet control	309	88.30
Exercise	278	79.40
Medication	41	11.70

Table 3: Association between how do subjects rate themselves and BMI.

How do you rate	BMI			Total	P value and
yourself	≥30 (obese)	25-29.9 (overweight)	18.5-24.9 (Not overweight)	Total	association
Slim	12	38	97	147	
Fit	10	38	104	152	<0.001;
Overweight	8	37	6	51	Significant
Total	30	113	207	350	

Table 4: Association between views on presence/absence of health consequences of being.

View about health	BMI				P value and
consequences	≥30 (obese)	25-29.9 (overweight)	18.5-24.9 (Not overweight)	Total	association
Yes	22	79	147	248	0.932;Not
No	8	34	60	102	Significant
Total	30	113	207	350	

# **DISCUSSION**

As per Table 3, association between how subjects rate themself and BMI. As per one study, Perceived body weight remained significantly associated with actual BMI. Generally, participants' perceptions about their weight corresponded with actual BMI status.<sup>5</sup> but in present study, out of 51 people who thought they were overweight, 45 (88.2%) had their BMI 25 and out of 299 subjects who perceive that they are slim and fit, 98 (32.8%) of them still had their BMI 25 and above. This association was found to be significant. This is of serious concern as subjects who do not think that they are overweight but they are actually overweight according to their BMI, may not take necessary action to prevent or control obesity and its consequences.

As per Table 4, showed association between views on presence/absence of health consequences of being obese and BMI. It is possible that health risk knowledge motivates people to start the weight loss process, but, does not predict success with weight loss and knowledge of health consequences of obesity and being obese was significant.<sup>6</sup> In present study it was seen that, 22 (73.3%) obese subjects, 79 (69.9%) overweight subjects and 147

(71%) non overweight subjects mentioned that there are health consequences of being obese but of 42 subjects who had their BMI 25 and above don't think that there are any health consequences of being obese. This association was not significant. This may be due to lack of awareness in the community, lack of IEC about obesity and its consequences and this may cause people to take less effort to prevent or control obesity as they do not know about its consequences.

# Limitations

There were some limitations encountered as its being a cross-sectional study; the results we got here cannot be applied to the entire general population. The age / sex composition of different population is different like-wise education status and socio-economic status is also different for different slum population so these results cannot be applied to all other slum population.

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Ethical approval: The study was approved by the Institutional Ethics Committee of T.N. Medical College,

Mumbai

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