

Knowledge, Attitude and Practices towards Obesity among Women in the Urban field Practice Area of a Tertiary Medical College in Western Maharashtra

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ABSTRACT

INTRODUCTION: Obesity is defined as abnormal growth of adipose tissue due to enlargement of fat cell size or fat cell number. According to WHO, more than 1 billion people, globally, are living with obesity (2022). In females, Obesity is associated with increased risk of infertility, PCOD, pregnancy-related complications, along with many NCDs.

Percentage of women (15-49 years) who were obese or overweight, increased from 20% to 24% from NFHS 4 to NFHS 5. Levels of knowledge, attitudes and practices of people, specifically women are important factors in reducing or limiting burden of obesity in India. Hence, this study was done to assess knowledge, attitudes and practices of women towards Obesity in field practice area of UHTC.

AIM & OBJECTIVES: To assess knowledge, attitude, & practices towards obesity among women attending UHTC OPD of a medical college in Western Maharashtra.

MATERIALS AND METHODS: A cross sectional, questionnaire-based study was conducted among 98 women attending UHTC using a pre-tested, semi-structured questionnaire. Using convenience sampling, all women above 18 years attending UHTC OPD were included.

Data was compiled using Microsoft office Excel and results were calculated by using appropriate statistical methods.

RESULTS: Out of 98 females, 49 females were aged above 40 years. 56.21% had completed schooling. 45.91% had household income between 25,000-50,000. 40.81% had normal BMI; 37.75% were overweight and 15.30% were obese. 5 women had Hypertension; 2 had Diabetes Mellitus and 2 had thyroid disorders. 67.34% had good knowledge, but only 16.32% had good attitude and 26.53% had good practices regarding obesity. Only 10.21% women had good score for risk factor assessment.

CONCLUSION: There is a need for development of various intervention strategies at community level to reduce burden of obesity and other associated risk factors.

Keywords: Obesity, Overweight, Women, BMI

INTRODUCTION

Obesity is defined as an abnormal growth of adipose tissue due to an enlargement of fat cell size (hypertrophic obesity) or an increase in fat cell number (hyperplastic obesity) (1)

It is the most prevalent form of malnutrition in not only developed but also developing countries.

According to WHO, more than 13% (11% men and 15% women) of the world's

population were obese i.e. more than 1.9 billion adults above the age of 18 years were obese and 39% were overweight. (2)

Overweight and obesity have become the fifth leading cause of deaths worldwide. This trend is going to increase further by the year 2040.

Obesity is a risk factor in the natural history of many Other Non- communicable diseases like Cardiovascular diseases, Diabetes Mellitus, Hypertension, Cancer, Sleep Apnoea etc and their consequences. So, it is often referred to as the King of diseases. (3) In females, Obesity is associated with increased risk of infertility, polycystic ovarian syndrome, and pregnancy-related complications including miscarriage, stillbirth, caesarean section, and birth defects. (4,5)

Moreover, maternal obesity during pregnancy has a long-lasting impact on the offspring such as increased risk of hyperglycaemia, hyperlipidaemia, and obesity [5]. Therefore, identification of the presence of overweight and obesity among women of reproductive age is essential for timely prediction of complications, and such that interventions can be tailored simultaneously.

The prevalence of overweight and obesity is reported to be higher among women as compared to men across the globe, in both developed and developing countries (6)

The National Family Health Survey (NFHS) reported that percentage of women in the age group 15-49 years who were obese or overweight (BMI>25) increased from 20% to 24% from NFHS – 4 to NFHS – 5. In rural areas, under nutrition is more predominant, but in urban areas, percentage of obesity and overweight is higher, which can be attributed to less physical activity levels in urban areas. The prevalence of obesity is greater for urban women and it is largely preventable through changes in lifestyle. (7)

Awareness amongst the Public about lifestyle modifications, dietary changes, physical activity, coping with stress, and pharmaceutical care interventions to control obesity will play a vital role in fighting

chronic disorders. Also, the levels of knowledge, attitudes and practices of the people specifically women are important factors in reducing or limiting the burden of obesity in the Indian community. (8)

Hence through this study we will try to shed light on the knowledge, attitude and practices of women towards Obesity in the field practice area of the Urban Health Training Centre of a medical college in Western Maharashtra

Aims And Objectives:

1. To assess the knowledge, attitude, and practice related to obesity among the women attending the UHTC OPD in the community.
2. To find the prevalence of Obesity among the women attending the UHTC OPD in the community.

MATERIALS AND METHODS

The study was carried out in field practice area of Urban Health Training Centre, of a tertiary Medical College, in Western Maharashtra.

Study design: Research Design: This study was a cross-sectional study to investigate the Knowledge, attitude and practices regarding obesity in women attending the UHTC.

Data Collection: After obtaining ethical clearance and informed consent from the participants, the questionnaire was filled by the Investigators through direct interview. The subject was given sufficient time to answer the questionnaire.

Sample size determination:

Various studies (9-11) gave the prevalence of awareness towards obesity around 50% so, considering 95% confidence interval ($\alpha=0.05$) and allowable error = 20% of the prevalence, sample size was calculated as follows

Formula for sample size:

$$\text{Formula for sample size- } (n) = \frac{(Z)^2 \times (SD)^2}{(I)^2}$$

Where, n = sample size,

Z = level of significance,

SD = Standard of deviation = $\sqrt{p \times q}$ (as it is a qualitative data)

p = positive prevalence

q = non-prevalence

l = allowable error

$$= \frac{(1.96)^2 \times p \times q}{(l)^2}$$

$$= \frac{(1.96)^2 \times 50 \times 50}{(10)^2}$$

= 95.35 was sample size. It was rounded up to 100. So sample size for the study was taken as 100.

Sampling type: Convenience sampling- All women above the age of 18 years who attended the UHTC OPD and were willing to participate were included in the study.

STATISTICAL ANALYSIS

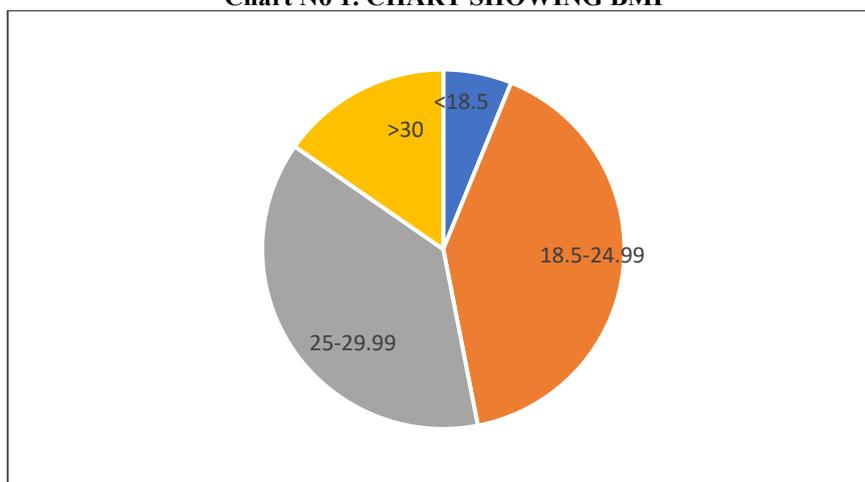
Data Analysis: All the data was tabulated in Microsoft Excel and results were calculated using Microsoft Excel. Descriptive statistics (frequency, percentages) were used for summarizing demographic data. Association between variables like BMI and education of

females was calculated by using Chi-square test. A p-value < 0.05 was considered statistically significant.

RESULTS

A total of 98 females were included in the study. Out of 98 females, 49 females were aged above 40 years. 56.21% women had completed schooling but only 6% were graduates. More than 70% females were housewives. Only 28 (28.57%) were working women. 45.91% had household income between 25,000-50,000. According to WHO, BMI- is measured using the formula – Weight in kg/ (height in meter) ² So, according to WHO standards, BMI below 18.5 denotes undernutrition. BMI between- 18.5 and 24.99 is considered to be normal. BMI above 29.99 is overweight and above 30 is considered to be obese. In our study, 40.81% females had normal BMI; 37.75% were overweight and 15.30% were obese.

Chart No 1. CHART SHOWING BMI



WAIST HIP RATIO: According to WHO, a ratio of 0.80 indicates abdominal obesity. This is associated with increased risk of various lifestyle disorders like Hypertension, Type II Diabetes Mellitus and Coronary heart disease. 34 patients did not allow their waist hip circumference to be taken. Out of the remaining 64, 44 had a WHR of more than 0.80 (>0.80). So, 68.75% had a waist hip ratio of more than 0.80. 5 women had Hypertension; 2 had Diabetes Mellitus and 2 had thyroid disorders.

Table 1- Table showing levels of Knowledge, Attitude and Practice.

LEVEL	
KNOWLEDGE	
GOOD	66 (67.34%)
AVERAGE	23(23.46%)
POOR	8 (8.16%)
ATTITUDE	
GOOD	19 (19.38%)
AVERAGE	66 (67.34%)
POOR	13 (13.26%)
PRACTICES	
GOOD	26 (26.53%)
AVERAGE	56(57.14%)
POOR	16 (16.32%)

The above table shows that 66 (67.34%) had good knowledge about obesity; 23 (23.46%) had average score and 8(8.16%) had poor score. Regarding attitude about obesity, 19 (19.38%) had good score, 66 (67.34%) had average score and 13(13.26%) had poor score. As far as practices regarding obesity are concerned,26.53% had good score, 56(57.14% had average score, and 16 (16.32%) had poor score.

For risk factor assessment, the participants were asked about consumption of fried foods, beverages and sweetmeats. They were also asked about exercise. Total score of the

risk factors is 13, Score greater than 8 was considered as poor score; score between 5-8 was considered as average and less than 5 was considered as good score.

As far as risk factor assessment scores are concerned, 10(10.21%) women had good score, 55(56.12%) had average score and 33 (33.67%) had poor score.

Table 2-Risk Assessment Score

Good	10 (10.21%)
Average	55(56.12%)
poor	33(33.67%)

Table 3-Relationship between BMI of females and age and BMI of females with education.

AGE	BMI below 18.5	BMI 18.5-24.99	BMi 25-29.99	BMI above 30	P VALUE
Below 40 years	5	25	15	5	P=0.131
Above 40 years	1	18	20	9	
EDUCATION					
Illiterate and primary	2	7	6	5	P= 0.376
Secondary and above	4	35	28	9	

When Chi square test was applied, to the above table, it showed that there is no significant relation between BMI and age of females and also BMI and education of females.

TABLE -4 Relation between income and BMI of women.

	Low	Normal	Overweight and Obese	ROW TOTAL
<25000	1	12	8	21
25000-50000	5	14	29	48
>50000	2	10	17	29
TOTAL	8	36	54	98

The chi-square statistic is 5.2361. The p-value is 0.263921. The result is not significant at $p < .05$.

Hence, on applying Chi square test to the above table, it shows that income has no

relation with BMI of the women.

The Chi square analysis revealed that there is no significant relation between BMI and age, income and education of females.

Table-5- Table showing association between BMI and Knowledge, Attitude and Practice scores.

Table 5	BMI				CHI square
	<18.5	18.5-24.9	25-29.99	>30	
Good knowledge score ≥ 5	4	23	27	12	P = .979
Avg knowledge score 3-4	1	12	8	2	
Poor knowledge score <3	1	5	2	1	
Good attitude score 7-8	2	9	7	1	P = .823
Average attitude score 4-6	3	25	25	12	
Poor attitude score <4	1	6	5	2	
Good practices score >18	1	4 ⁱ	7	3	P = .907
Average practices score 14-18	4	30 ⁱⁱ	23	9	
Poor practices score <14	1	6	7	3	

On analysis by Chi Square test, it was observed that there is no relation between BMI and knowledge, attitude practices and risk assessment scores. (Table 5)

Hence the results show that in spite of good knowledge about factors causing obesity, the females had poor attitude and practices towards obesity.

DISCUSSION

Obesity is a now a global public health issue, with obesity rates having tripled in the last four decades worldwide and continuously increasing in pandemic proportions. (13)

In our study, 98 females participated out of which half were above the age of 40 years, 6 % were graduates and only 28 % were working women, and 45 % had an income between 25,000-50000.

In our study only 6% women were graduates as compared to 12.3% in the study by Guruprasad V et al (12) and 13.8% women in the study by K. Rana et al. (13)

According to NFHS-5, 57% of women are having normal BMI and 24% are overweight or obese. In this study, 40,81% had normal BMI, 37.75% were overweight and 15.30 % were obese which is in contrast with the figures in NFHS -5 and also more than the figures for urban women according to a study by J Gowda et al;(11) in which 23% of women were overweight and obese. In their study, 1/6th of the women were overweight and 6% obese which is less than our study in which 1/3rd women are overweight and 15.3 % obese.

In the NFHS- 5 survey, abdominal obesity was measured using waist circumference as a measure. So accordingly, 57 % had a high waist hip ratio that put them at a high risk for metabolic complications. In our study, 68.7% women were found to have abdominal obesity which is higher than the N FHS-5 figure.

In our study, 66 (67.34%) had good knowledge about obesity; which is similar to the study by Meiling Fan et al (14) in which 80% of the participants had good knowledge about Obesity; but more than the study by Guruprasad V et al (12) in which only 45 %

had good knowledge about obesity.

Income had no relation with the BMI of the women which was in contrast to the study by B. Mehboob et al (15) in which higher the socio-economic status, higher the BMI.

In our study, that there is no significant relation between BMI and age of females and also BMI and education of females which is in contrast to the study by K. Rana et al in Nepal in which prevalence of both overweight–obesity (50.1%) and obesity (59.6%) were higher among women aged 35–49 also the lowest prevalence of overweight–obesity (15.8%) and obesity (16.0%) was observed among those with higher education .

In this study, 66 (67.34%) had good knowledge about obesity which is similar to the findings in the study by Srinivas B et al (10) and also similar to the study by Guruprasad V et al (12) in which 55 % of the women had good knowledge and 51% had negative attitude which is in contrast to our study in which only 13.26% had poor attitude. Also, in our study only 16.32 % had poor practices which is again in contrast with the study by Guruprasad V et al (12) in which 76% had poor practices related to obesity.

In our study there is no relation between BMI and knowledge, attitude, practices and risk assessment scores which is in contrast to the study by Srinivas B et al (10) in which age of more than 40 years, absence of risk factors, and absence of social habits are significantly associated with good knowledge and positive attitude.

CONCLUSION

This study concludes that despite having good knowledge about factors causing obesity, the attitudes and practices of the participants related to its prevention and management remain poor. Therefore, there is a need for development of various intervention strategies at the community level to create awareness and educate the general population about physical activity, diet and change in lifestyles in preventing obesity and its related complications.

Declaration by Authors

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