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## TO EXPLORE OBESITY-RELATED KNOWLEDGE, ATTITUDES, AND HEALTH-SEEKING PRACTICES AMONG THE GENERAL PUBLIC IN URBAN VARANASI, INDIA

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### ABSTRACT

The present study was conducted to test knowledge attitude and health seeking practices about obesity among adults in urban Varanasi. A cross sectional study was conducted at Sunderpur, which is urban field practice area of department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi. Pretested and predesigned questionnaire was used. Probability proportion to size sampling was adopted. Ultimate study subjects were found 290 adults calculated on the basis of previous prevalence of KAP. The respondents were only from two religions that were 95.9% Hindu and 4.1% Muslim. It was found that maximum 59.3% respondents were OBC category and 47.6 % were from upper socioeconomic group. 108 (78.3%) respondents from upper SES and 99 (65.1%) from lower SES were said that obesity is a disease. Majority of respondents 85 (29.3) said that obesity is affected by luxurious life style. Maximum 166 (57.2%) people said that vulnerable group for obesity is 20-50 years. 245(84.5%) people said other diseases spread because of obesity. Maximum respondents 109 (37.6%) were said that working while sitting for a longer time is a major factor affecting obesity others were responses found were labourers 43(14.8%), who beware hard work 69(23.8%) and rich people 69 (23.8%). The study shows that luxurious life and the working while sitting for longer time are the major cause of obesity. Only one third respondents 109 (37.6%) had knowledge about obesity and accepted that proper diet, Physical work and lowering weight to normal level are the control measures of obesity. A better understanding of the causes of obesity can help overcome barriers to the primary prevention of obesity for youth and adults in communities, medical care and workplaces.

**Key words:** Caste, Religion, Socio-Economic Status, Education Status, KAP etc.

### INTRODUCTION

Currently, many developing countries, including India face a double burden of under nutrition and obesity mainly due to a series of changes in diet, physical activity, health and nutrition, collectively known as the “nutrition transition”. Obesity is a major risk factor for a number of diseases including coronary heart disease, hypertension, non insulin-dependent diabetes mellitus, pulmonary dysfunction, osteoarthritis and certain types of cancer.

Obesity has been defined for adults as a weight of 20 per cent or more in excess of the acceptable range for sex and height. Body mass index (BMI), i.e. the ratio of weight (kg) to height (m<sup>2</sup>) is considered to be the most useful measure of obesity. An individual with BMI of 25-29.9kg/m<sup>2</sup> is categorized as overweight or pre obese and one having BMI of 30 kg/m<sup>2</sup> or more as obese.

Recently awareness about health hazards of obesity has increased and a large number of obese are

observed to be looking for suitable weight loss treatment. As per WHO's *The World health statistics 2012* report, one in six adults obese. Dr Margaret Chan, Director-General of WHO says “this report is further evidence of the dramatic increase in the conditions that trigger heart disease and other chronic illnesses, particularly in low and middle-income countries. “In every region of the world, obesity doubled between 1980 and 2008,” says Dr Ties Boerma, Director of the Department of Health Statistics and Information Systems at WHO. “Today, half a billion people (12% of the world's population) are considered obese.”

India is gaining weight. Traditionally known for malnutrition, Indians now report more and more frequently with overweight, obesity, and their 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 < 18.5 kg/m<sup>2</sup>. In the same survey, it was observed that the BMI values were similar in men and women; however, there were more overweight/obese (BMI ≥ 25 kg/m<sup>2</sup>) women (6.6%) than men (3.5%). In certain regions, obesity and consequent diseases are posing an enormous public health problem. Considering all these points present study has been carried out with the following objectives-1) To assess the existing knowledge regarding obesity in General Public. 2) To assess the attitude regarding obesity in general public. 3) To correlate the knowledge and attitude among general public. 4) To associate the knowledge and attitude among general public with selected demographic factors.

## METHODOLOGY

Study was conducted at Sunderpur, which is urban field practice area of department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi. Probability Proportional to Size Sampling (PPS) technique was adopted. Ultimate study subjects were selected by simple random number table. Sample size was calculated on the basis of prevalence reported by NFHS3 2005-6 prevalence of KAP. Sample size was found to be 290.

Data was collected by trained interviewer using predesigned structured and standardized close ended interview scheduled. Before initiating the interview, good rapport was established with the respondents by explaining the aims and objectives of the study. Personal information like name, age sex, religion, caste, education, income etc. were recorded. The data were analyzed by using SPSS-16 version.

## RESULTS AND DISCUSSION

**Table-1 Demographic profile of respondents**

Characteristics	Frequency	Percentage (%)
<b>Age</b>		
20-29	17	5.9
30-39	54	18.6
40-49	51	17.6
Above 50	168	57.9
<b>Sex</b>		
Male	263	90.7
Female	27	9.3
<b>Caste</b>		
SC	70	24.1
ST	9	3.1
OBC	172	59.3
Others	39	13.4

<b>Religion</b>		
Hindu	278	95.9
Muslim	12	4.1
<b>Education</b>		
Primary or below	64	22.1
Secondary & above	226	77.9
<b>Occupation</b>		
Service	77	26.6
Business	97	33.4
Labourers	89	30.7
Others	27	9.3
<b>Total family members</b>		
5 or below	137	47.2
> 5 members	153	52.8
<b>Socioeconomic status</b>		
Upper	138	47.6
Middle	108	37.2
Lower	84	15.2
<b>Housing</b>		
Kaccha	12	4.1
Pacca	251	86.6
Semi pacca	27	9.3
<b>Total</b>	<b>290</b>	<b>100.0</b>

The demographic profile of the studied population are depicted in table 1- majority of the respondents 57.9% were in the age group of above 50 years. 90.7% respondents were male. 59.3% respondents were from OBC category. SC, ST and others were 24.1%, 3.1%, and 13.4% respectively. Only Hindu and Muslim religion were found in this study and Maximum respondents were Hindu 95.9%. Majority of the respondents 77.9% were educated up to secondary grade and above and else were educated below primary. Majority of respondents were businessman 33.4% followed by labourer 30.7%, service 26.6% and others 9.7% Maximum respondents were from large families 52.8% who were having more than five members in the family. Maximum respondents were from the upper socioeconomic status 47.6%. Majority were living in pacca houses 86.6%.

Table 2- shows the knowledge and practices about obesity according to educational status of the respondents- Education plays a vital role for understanding knowledge about obesity only 42 (19.09%) respondents know about obesity who were educated at primary grade. 171 (82.61) said obesity is a disease. When we asked for control measures of obesity the proportion was high in educated respondents. Maximum respondents were answered for luxurious life (85) when asked about why majority is affected by obesity in that 77.65% were educated at secondary grade. 26 respondents do not know

that obesity is a cause of other diseases in that 57.69% were educated to the secondary grade. The responses were approximately same when we asked that addiction is a contributory factor for obesity.

**Table-2 Knowledge & Practices about Obesity According To Educational Status of Respondents**

Knowledge	Educational Status of Respondents			P value
	Primary	Secondary	Total	
<b>How Obesity spread</b>				
Yes	42(19.09)	178(80.91)	220(100.00)	0.03
No	22(31.43)	48(68.57)	70(100.00)	
<b>Is obesity a disease</b>				
Yes	36(17.39)	171(82.61)	207(100.00)	0.003
No	21(35.59)	38(64.14)	59(100.00)	
<b>Is diet affects obesity</b>				
Yes	43(18.61)	188(81.39)	231(100.00)	0.118
No	11(29.73)	26(70.27)	37(100.00)	
<b>Is there need of encouragement to control obesity</b>				
Yes	48(20.43)	187(79.57)	235(100.00)	0.953
No	7(20.00)	28(80.00)	35(100.00)	
<b>What are Control measures of obesity</b>				
Proper diet	12(26.09)	34(73.91)	46(100.00)	0.287
Physical work	15(26.79)	41(73.21)	56(100.00)	
Lowering weight	10(16.95)	49(83.05)	59(100.00)	
Above all	18(16.51)	91(83.49)	109(100.00)	
<b>Why majority is affected by obesity</b>				
Irregular diet	5(16.67)	25(83.33)	30(100.00)	0.277
Excess eating/oily foods	19(26.39)	53(73.61)	72(100.00)	
Luxurious life style	19(22.35)	66(77.65)	85(100.00)	
All above	12(14.46)	71(85.54)	83(100.00)	
<b>What are the diseases that spread due to obesity</b>				
Yes	44(18.03)	200(81.97)	244(100.00)	0.00
No	11(42.31)	15(57.69)	26(100.00)	
<b>Vulnerable age group for obesity</b>				
Below 20 years	14(22.58)	48(77.42)	62(100.00)	0.853
20 to 50 years	32(19.28)	134(80.72)	166(100.00)	
Above 50 years	9(20.93)	34(79.07)	43(100.00)	
<b>Is addiction a promoting factors of obesity</b>				
yes	26(18.98)	111(81.02)	137(100.00)	0.522
No	29(22.14)	102(77.86)	131(100.00)	

**Table no. 3 Knowledge & Practices about Obesity According To Socioeconomic Status of Respondents**

Variables	Upper Class	Middle/Lower Class	Total	P value
<b>Is obesity a disease</b>				
Yes	108 (78.3)	99(65.1)	207 (71.4)	0.013
No	30 (21.7)	53 (34.9)	83(28.6)	

<b>Presently who were affected with Obesity</b>				
Laborer	22 (15.9)	21 (13.8)	43 (14.8)	0.099
Sitting worker	42 (30.4)	67 (44.1)	109 (37.6)	
Who beware hard work	39 (28.3)	30 (19.7)	69 (23.8)	
Rich people of society	35 (25.4)	34 (22.4)	69 (23.8)	
<b>Is diet affects Obesity</b>				
Yes	112 (81.2)	119(78.3)	231(79.7)	0.544
No	26(18.8)	33(21.7)	59(20.3)	
<b>Is there need of encouragements to prevent obesity</b>				
Yes	116(84.1)	119(78.3)	235(81.0)	0.211
No	22(15.9)	33(21.7)	55(19)	
<b>Control measures of Obesity</b>				
Proper diet	30(21.7)	36(23.7)	66(22.8)	0.370
Physical work	18(13.0)	38(25)	56(19.3)	
Lowering weight	34(24.6)	25(16.4)	59(20.3)	
Above all	56(40.6)	53(34.9)	109(37.6)	
<b>Why majority is affected by obesity</b>				
Irregular diet	26(18.8)	24(15.8)	50(17.2)	0.023
Excess eating/oily foods	23(16.7)	49(32.2)	72(24.8)	
Luxurious life style	46(33.3)	39(25.7)	85(29.3)	
All above	43(31.2)	40(26.3)	83(28.6)	
<b>Spread of disease due to obesity</b>				
Yes	120(87.0)	125(82.2)	245(84.5)	0.268
No	18(13.0)	27(17.8)	45(15.5)	
<b>Vulnerable age group</b>				
Below 20 years	43(31.2)	38(25.0)	81(27.9)	0.044
20 to 50 years	69(50.0)	97(63.8)	166(57.2)	
Above 50 years	26(18.8)	17(11.2)	43(14.8)	
<b>Addiction is a promoting factors of obesity</b>				
yes	77(55.8)	82(53.9)	159(54.8)	0.752
No	61(44.2)	70(46.1)	131(45.2)	

Table3- knowledge and practices and its comparison with socioeconomic status was explained in table 3 in that 78.3% people said yes obesity is a disease and 21.7% said it is not a disease. It was found that people from high SES considered obesity as a disease rather than middle and lower SES people. When respondents were asked who were affected more by obesity maximum(30.4%) from upper SES said that sitting workers were more prone and other answers in decreasing order were who beware hard work (28.3%), rich people of the society (25.4%), labourers (15.9%). The responses of the middle and lower SES were slightly different like sitting worker (44.1%), rich people of the society (22.4%), who beware hard work (19.7%) and labourer (13.8%). Middle and lower SES people think that sitting worker and rich people of the society were more affected by obesity. 18.8% respondents from upper SES said that obesity is not affected by diet and more than that 21.7% from middle and lower SES said diet has no role in causing obesity.

Over all 81% respondents said that there is a need of proper encouragement, 15.9% from upper SES and 21.7% from middle to lower SES said that there is no need of encouragement to prevent obesity. It means upper SES people were more conscious to tackle with obesity. When we asked about control measures over all 22.8% said proper diet, 20.3% said lowering weight to normal level, 19.3% said physical work and 37.6% said all the three proper diet, physical work and lowering weight to normal level are the control measures. We can say only 37.6% respondents know about all the three control measures. From upper SES maximum (33.3%) respondents said luxurious life style is a cause of obesity and maximum (32.2%) respondents from middle to lower SES said excess eating and oily foods are the major cause of obesity. 13% from upper SES said that obesity is not a cause for other diseases it means middle and lower SES people were more ignorant about the obesity associated problems. 55.8% from upper SES and 53.9% from middle to lower SES said that addiction is a promoting factor for obesity but if

we look at over all percentage 45.2% said that no addiction is not a promoting factor in causing obesity. Nazni *et.al.*, 2010 suggested the same findings among the sports persons.

## CONCLUSION

Given the rapid rise of obesity in India, it is important to know the "weight of the nation." Due to the long-term consequences, the cost burden of obesity on the health care system is enormous. A better understanding of the numbers and causes can help overcome barriers to the primary prevention of obesity for youth and adults in communities, medical care and workplaces. The Indian metabolic community has woken up to the need to achieve a healthy weight, in order to ensure health of the country. Innovative, yet simple and low-cost suggestions, such as yoga, meditation, and folk dance, can be used to maintain optimal weight of our country men and women.

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