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A STUDY ON THE PREVALENCE, KNOWLEDGE, ATTITUDE & PRACTICES ABOUT RISK FACTORS OF OBESITY AMONG UNDERGRADUATE MEDICAL STUDENTS

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ABSTRACT

Background: Obesity is leading health problem across the world. Medical students were the target group for this study as they are the future physicians and if they are overweight or obese they would carry a wrong impression on the general population. Hence the present study was undertaken to know the prevalence of obesity among medical students and to assess the knowledge, attitude, practices towards risk factors of obesity in 279 under graduate medical students. **Results**: It was found that 64.87% (n=181) of the participants had normal BMI, 25.44% (n=71) are above normal BMI and 9.67% (n=27) were underweight. The prevalence of overweight was 20% & obesity was 6% in the present study. In the present study, knowledge is found to be more in people living in urban areas than in rural areas. A positive attitude towards the risk factors of obesity is found to be more in the urban than in rural study population. Practices to overcome obesity are not satisfactory in both rural & urban areas. The overall prevalence of central obesity was found to be 51% in urban study population and 44% in rural study population. **Conclusions:** Prevalence of overweight and obesity was 20% and 6%. It can be concluded that obesity and overweight are quite prevalent in the medical students. BMI is a simple and effective way to screen them so that timely measures could be taken to prevent their progression and complications. Persons with BMI >24.99 kg/m2 should be motivated for regular physical activity. The study reinforces the need to encourage healthy lifestyle, healthy food habits and a physically active daily routine among medical students.

KEYWORDS: *Attitude, BMI, Exercise, Knowledge, Obesity, W/H Ratio.*

INTRODUCTION

The incidence of obesity is increasing dramatically worldwide. Overall 23% of the world population is overweight & 9.8% obese. By 2030 the number of overweight & obese adults is projected to be 2.16 & 1.12 billion. Scientific studies and data have shown that the health risks of excessive body fat are associated with a relatively small increase in body weight, not just with marked obesity. According to the World Health Organization (WHO) statistics report 2012, globally one in six adults is obese and nearly 2.8 million individuals die due to overweight or obesity.[1] Significantly more than 30 million overweight children are living in developing countries and 10 million in developed countries.[2] Obesity is usually defined in terms of Body Mass Index (BMI), which is a measure of weight adjusted for height. Although numerous techniques are available for evaluating body fat, the variables for BMI are easy to measure. BMI has been shown to correlate closely with body fat content in adults and children. Waist circumference and waist-to-hip ratio are common adjuvant measures used to classify distribution of body fat in people who are overweight, as obesity-related complications are most closely correlated with abdominal fat distribution.[3-6] Demographic, economic, social, and nutritional transitions that occurred in the past decades shifted public health paradigms worldwide in the form of growing prevalence of overweight and obesity in virtually all age groups.[7] Due to increased risk of morbidity and mortality obesity is recognized as a disease in its own right and its awareness is necessary. Hence the present study was undertaken to know the prevalence of obesity among medical students and to assess the knowledge, attitude, practices towards risk factors for obesity in under graduate medical students.

METHODOLOGY

A cross sectional descriptive study was conducted among undergraduate medical students of Guntur district, Andhra Pradesh in the month of October, November 2020. One medical college was selected randomly by simple random technique out of the 3 medical colleges present in Guntur district.

Method of data collection: Data was collected by preparing pretested semi structured questionnaire in Google forms. A pilot study was done among 25 students to test the validity of questionnaire and to make any deletions or additions. The questionnaire was shared in Google forms in different semesters of undergraduate medical students in their WhatsApp groups by giving choice to participate willingly. The questionnaire consists of social demographic characters, knowledge, attitude and practices related to risk factors for obesity.

The data was analyzed in EPINFO version 3.0 software. Scores were given depending upon the answers given to the questions regarding Knowledge, attitude and practices towards obesity. Regarding knowledge towards risk factors of obesity those who scored less than or equal to 5 points were graded as not satisfactory, who scored more than 5 and less than or equal to 8 were graded as satisfactory and who scored greater than 8 were termed as good. Regarding attitude towards risk factors of obesity those who scored less than or equal to 5 points were graded as not satisfactory, who scored more than 5 and less than or equal to 8 were graded as satisfactory and who scored greater than 8 were termed as good. Regarding practices towards risk factors of obesity those who scored less than 5 were graded as not satisfactory, who scored 5-8 were graded as satisfactory and those who scored greater than 8 were graded as good The data was represented in the form of charts and tables. Chi square test was applied to test significance of the results.

RESULTS

The study was carried out on 279 study participants. 37.27% (n= 104) of the study participants were male & 62.72% (n= 175) were female. It was found that 64.87% (n=181) of the participants had normal BMI range & 25.44% (n=71) fell above the normal range of BMI & remaining 9.67% (n=27) were underweight. The prevalence of overweight was 20% & obesity was 6% according to WHO classification.

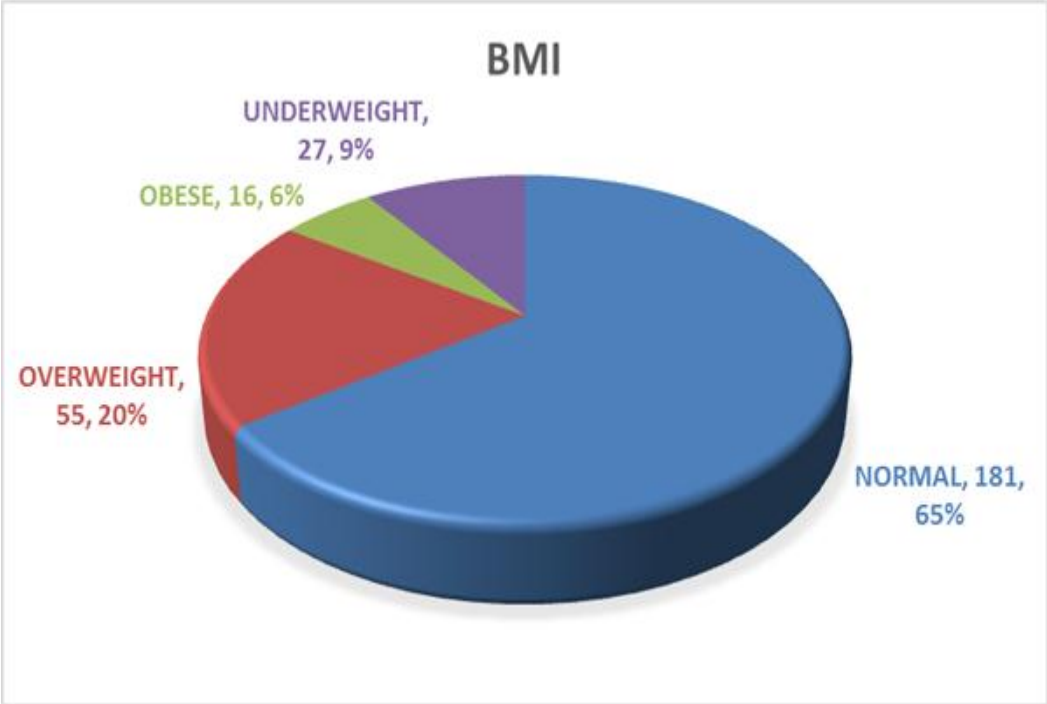

Figure: 1 Distribution of body mass index (BMI)

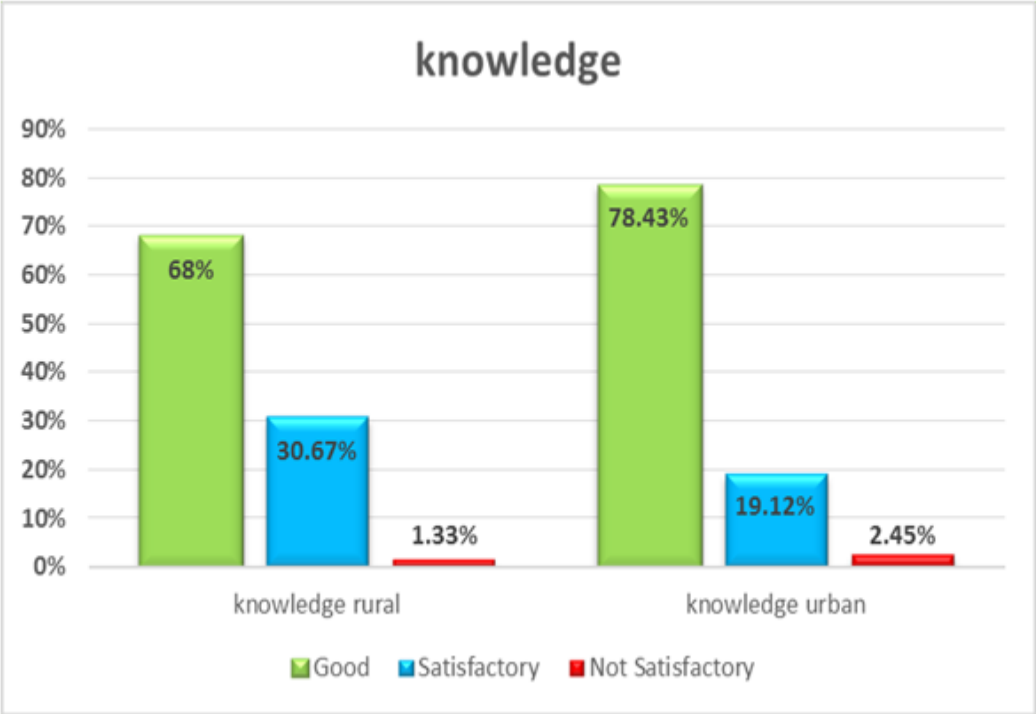

Figure 2: Knowledge about obesity.

In the present study, knowledge is found to be more in the people living in urban areas than in rural areas.

Table 1: Knowledge of risk factors of obesity among study participants residing in rural & urban areas.

Knowledge	Urban	Rural	Chi-square	P-value
Good	160	51	4.399	0.1109
Satisfactory	39	23		
Not satisfactory	5	1		

In the present study, the knowledge is found to be more in the urban study population when compared to the rural which is not statistically significant.

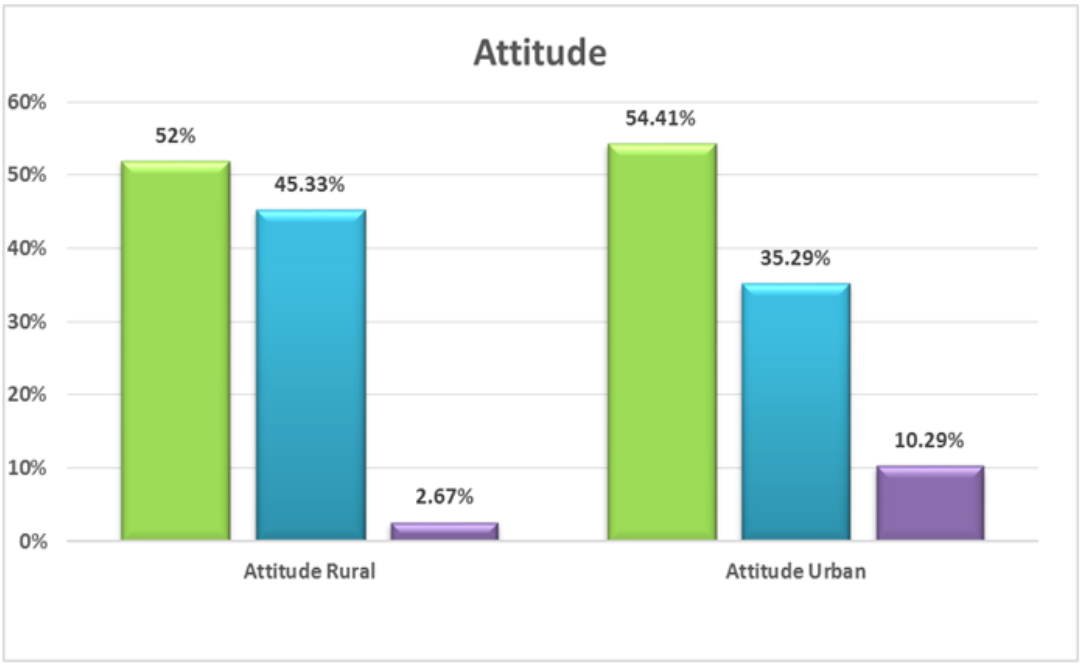

Figure 3: Attitude towards obesity & associated risk factors among urban & rural study participants.

In the present study, a positive attitude towards the risk factors of obesity is found to be more in the urban than in the rural study population.

Table 2: Attitude towards risk factors of obesity among study participants residing in rural & urban areas.

Attitude	Urban	Rural	Chi-square	P-value
Good	111	39	7.133	0.02826
Satisfactory	72	34		
Not satisfactory	21	2		

In the present study, the attitude towards the risk factors of obesity is found to be more in the urban study population when compared to the rural study population which is statistically significant.

In the present study, practices to overcome obesity are mostly not satisfactory both in the rural& urban areas. (Figure 4)

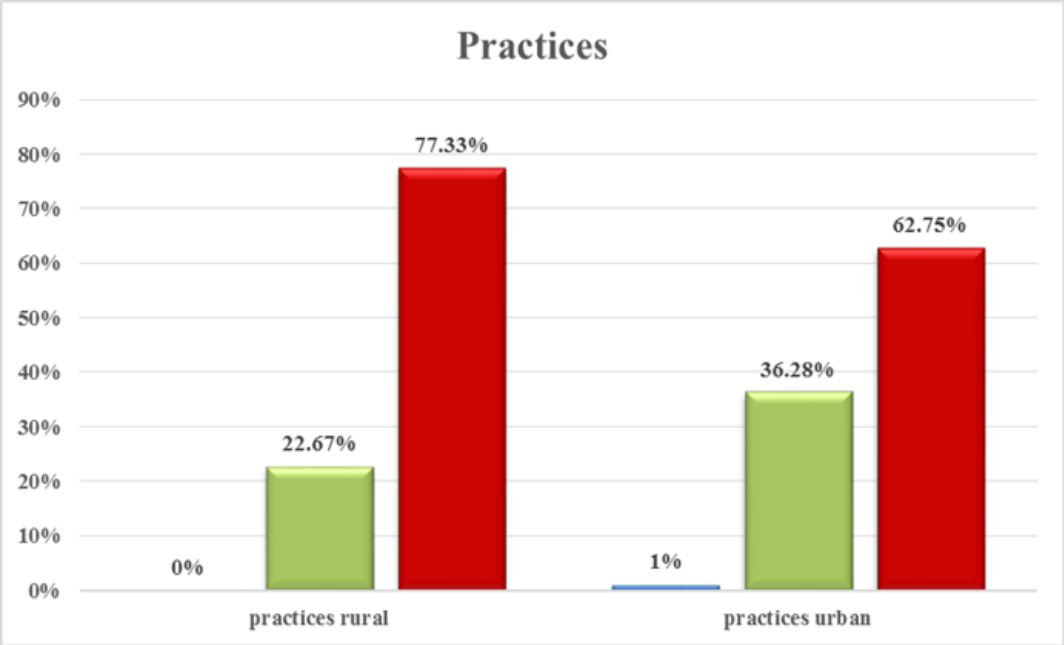

Figure 4: Practices concerning obesity control among study participants.

Table 3: BMI of study participants.

	Rural	%	Urban	%	Male	%	Female	%
Obese	3	4	13	6.37	9	8.65	7	4
Overweight	10	13.33	45	22.06	23	22.12	32	18.29
Normal	50	66.67	131	64.22	61	58.65	120	68.57
Underweight	12	16	15	7.35	11	10.58	16	9.14

In the present study the prevalence of obesity was found to be around 5% and is more among males when compared to females and is not statistically significant. Study participants belonging to the Normal range of BMI are more in rural areas than in urban areas. Under weights are more in rural areas than in urban areas. Study participants belonging to the above normal range of BMI are more in urban than in rural areas. Normal range of BMI is more in females than in males.

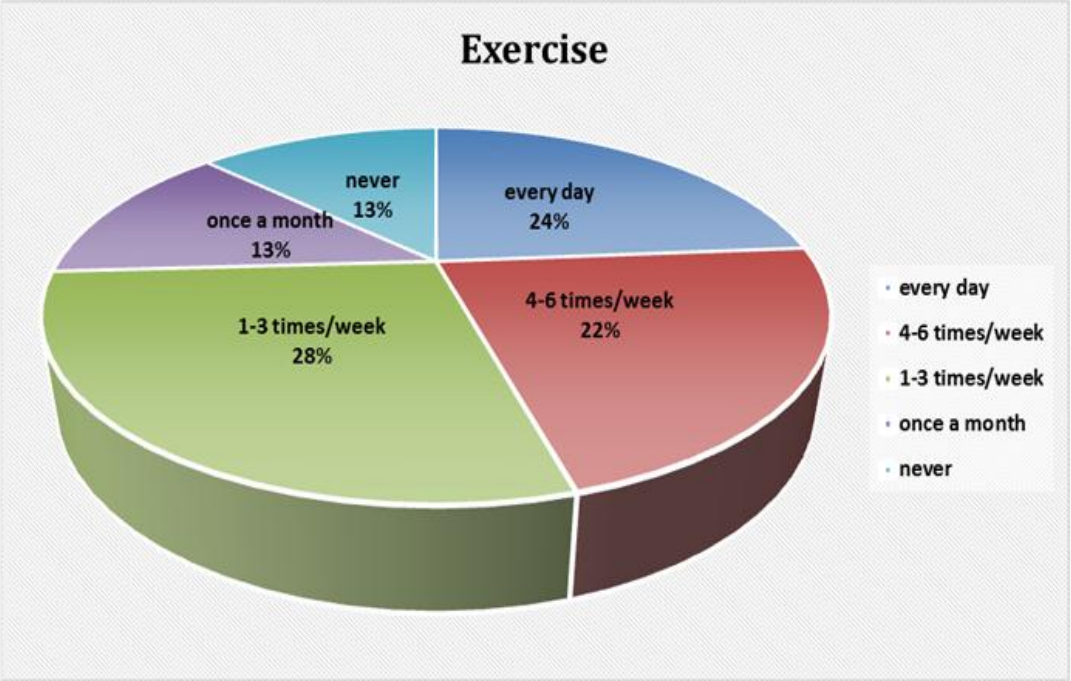

Figure 5: Physical activity among study participants.

In the present study only 24% of the study population are doing exercise regularly.

Table No. 4: Exercise frequency among study population.

	Rural	%	Urban	%
Everyday	12	16	54	26.47
4-6 Times/Week	22	29.33	39	19.12
1-3 Times/Week	18	24	61	29.90
Once A Month	7	9.33	29	14.22
Never	16	21.33	20	9.80

In the present study it was observed that the percentage of study participants who are doing regular exercise was found to be high in urban than in rural population but it was not found to be statistically significant. The percentage of participants who are not doing any exercise was found to be more in rural when compared to urban and is not statistically significant.

Table 4: WHR (Waist-Hip ratio) among Male & Female.

	Male WHR>1	Male WHR<1	Female WHR>0.85	Female WHR<0.85	total
Urban	28(41%)	40(59%)	65(56%)	51(44%)	93(51%)
rural	7(30%)	20(70%)	24(55%)	20(45%)	27(44%)

When the waist-hip ratio of the participants was studied, the overall prevalence of central obesity was found to be 51% in urban study population and 44% in rural population and it was also found that in both male & female participants central obesity was high in urban than in rural areas.

DISCUSSION

Medical students are more prone to obesity due to their lifestyle with less physical activity and disordered eating habits and thereby prone to obesity-related health hazards. Medical students was the target group of particular interest for this study as they are future physicians and if they are overweight or obese they would carry a wrong impression on the general population.[8] In our study the prevalence of overweight was 20% & obesity was 6% according to WHO classification. The prevalence of obesity was fond to be more (5%) in the present study when compared to the following studies. A Study done by Anupama M et al shows that prevalence of over-weight was 14.5% and obesity 1.5%,[9] A study was done in Gwalior by Tiwari et al showed the prevalence of overweight was 9.93% and the prevalence of obesity 1.53%.[10] In another study by Deotale et al in Grant medical college, Mumbai the Prevalence of overweight and obesity was 14.33% and 3.34% respectively.[11] Fernandez conducted a study in a

medical college in Pune where the proportion of overweight/obesity was 13.2%.[12]

In a study by Anupama M et al, it was found that 70% of them were able to exercise which would prevent overweight.[9] In our study, it was found that 74% of them were able to exercise where as in the present study the practice of regular exercise was found to be very poor (24%).

CONCLUSION

Prevalence of overweight and obesity according to WHO classification was 20% and 6%. It can be concluded that obesity and overweight are quite prevalent in medical students. BMI is a simple and effective way to screen them so that timely measures could be taken to prevent their progression and complications. Persons with BMI >24.99 kg/m2 should be motivated for regular physical activity. The study reinforces the need to encourage a healthy lifestyle, healthy food habits and a physically active daily routine among medical students.

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