

## Original Research Article

# A study on the knowledge, attitude and practices (KAP) regarding obesity among engineering college students

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### ABSTRACT

**Background:** Obesity is one of the most prevalent form of malnutrition in both developed and developing countries and affecting both children as well as adults. Obesity is the fifth leading cause of death worldwide. It is also an important risk factor in the natural history of certain chronic non-communicable diseases. Strategies for preventing obesity offer a cost-effective approach in preventing chronic non-communicable diseases. Awareness level is the basic necessity to effect a change in behavior. The objectives of the study were to determine the knowledge, attitude and practices (KAP) regarding obesity among students of an engineering college.

**Methods:** The study was a descriptive cross sectional type carried out among students of an engineering college in Chennai, Tamil Nadu. The study was carried out on 240 students of the engineering college after obtaining proper informed consent. The KAP parameters were assessed using pretested structured questionnaire and physical examination for anthropometry to measure BMI was done.

**Results:** 58.3% of the study group were males. It was found that 61% of the participants had normal BMI range and 20% fell above the range of normal BMI (i.e.  $\geq 25$ ) and the remaining were underweight (19%). Among the overweight and obese individuals 54.16% were males and 45.83% were females. 54.16% of the students had knowledge that they were entering into obesity and the rest felt they were normal. 73% had the belief that exercise would help in overcoming obesity. It was found that 70% of them were able to exercise but did not have a regular routine. More alarmingly 89.5% of the students did not take any steps to overcome obesity.

**Conclusions:** The study provides the information that the participant had good knowledge and attitude regarding obesity but failed in practicing necessary measures to control and prevent it. Health education, frequent monitoring and conducting interventional programs among students would be vital.

**Keywords:** Awareness, Body mass index, KAP, Obesity, Overweight

### INTRODUCTION

One of the most common problems related to lifestyle today is being overweight. Overweight or obesity is a key risk factor in the development of many chronic diseases such as cardiac and respiratory diseases, Type 2 diabetes, systemic hypertension as well as early death. Scientific studies and data have shown that the health risks of

excessive body fat are associated with relatively small increase in body weight, not just with marked obesity.

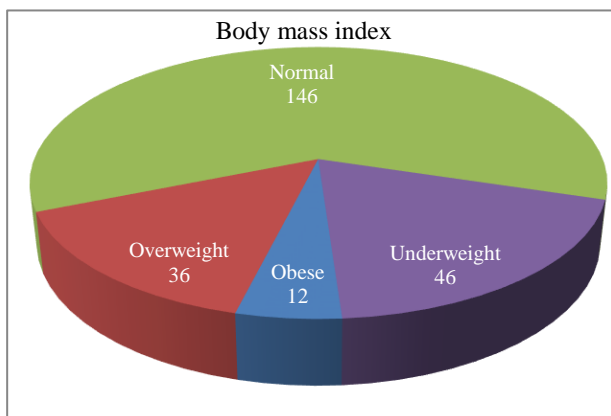
According to World Health Organization (WHO) statistics report 2012, globally one in six adults is obese and nearly 2.8 million individuals die due to overweight or obesity.<sup>1</sup> Significantly more than 30 million overweight children are living in developing countries

and 10 million in developed countries.<sup>2</sup> Obesity is usually defined in terms of the 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.<sup>3-6</sup> 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.<sup>7</sup> Due to increased risk of morbidity and mortality obesity is recognized as a disease in its own right and its awareness is necessary.

**METHODS**

After obtaining clearance from the Scientific Review Board and Institutional Ethics Committee and after obtaining permission from the Dean of the engineering College, the study was carried forward. The students were explained about the proposed study and were invited to take part in the study after providing informed written consent. The study was carried out on 240 students. Eligible participants were examined by the investigators and height (in meters) and weight (in kilograms) was measured using standard techniques and recorded. BMI was calculated and recorded. The students were given a pretested structured questionnaire and asked to fill up the questions. The responses were collected and analyzed using appropriate statistical tools for parametric and non-parametric data with the help of SPSS for Windows version 22 software.

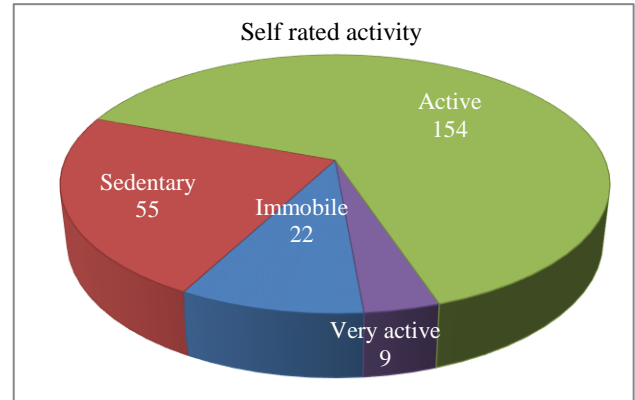
**RESULTS**



**Figure 1: Distribution of body mass index (BMI) among the students.**

The study was carried out on 240 students of an engineering college. 58.34% (n = 140) of the participants

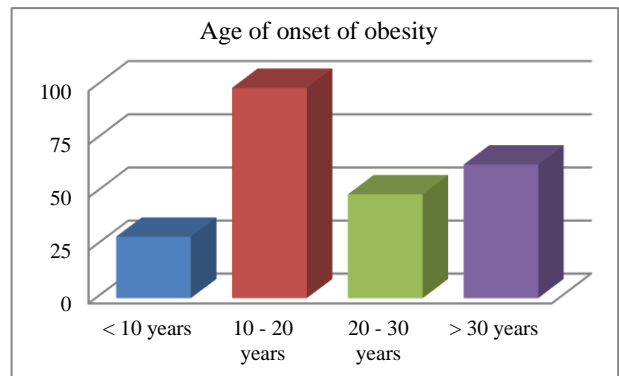
were male and 41.66% (n = 100) of the participants were female. It was found that 61% (n=146) of the participants had normal BMI range and 20% (n = 48) fell above the range of normal BMI (i.e.  $\geq 25$ ) and the remaining 19% (n = 46) were underweight (Figure 1). 64% (n = 154) described their lifestyle as active which coincides nearly well with the BMI calculation (Figure 2). Among individuals with BMI  $\geq 25$ , 54.16% (n = 26) were males and 45.83% (n = 22) were females.



**Figure 2: Distribution of Self rated activity.**

**Knowledge**

When asked about the age of development of obesity, 41% said obesity developed during 10-20 years of age. (Figure 3) Only 54.16% (n = 130) had knowledge that they were entering into obesity and the rest felt they were normal.



**Figure 3: Knowledge about obesity.**

**Attitude**

When asked whether exercise would help overcome obesity or not, it was found that 27 % had the belief that exercise would not help in overcoming obesity (Figure 4).

**Practice**

When asked about the practices, it was also significant that 89.5% did not take any steps to overcome obesity.

(Figure 5) It was also found that about 157 students had average of three meals per day (Figure 6).

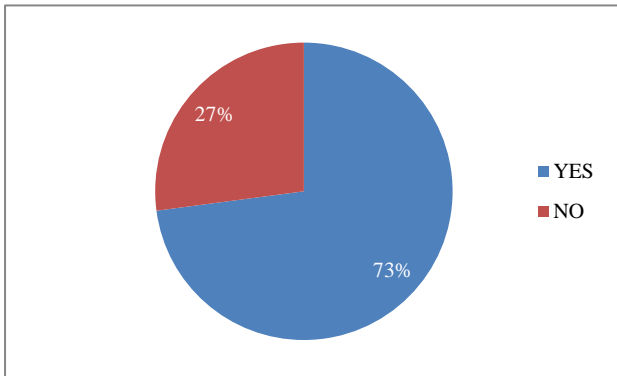


Figure 4: Attitude towards obesity.

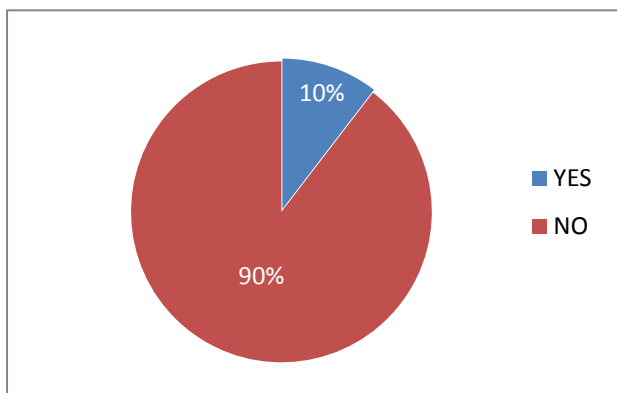


Figure 5: Steps taken to overcome obesity.

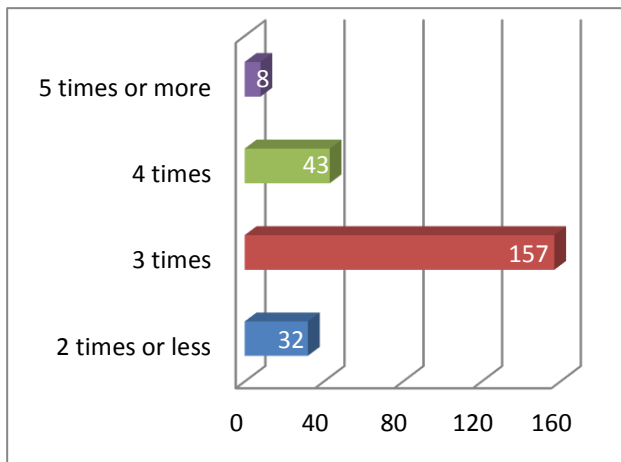


Figure 6: Average number of meals per day.

## DISCUSSION

According to Trushna Shah et al, among medical students, a high proportion of students had low levels of physical activity and 68.08% of obese and overweight students were not involved in any physical activity while the remaining who were walking for 30 minutes daily.<sup>7</sup> In

our study 89.5% did not take any steps to overcome obesity.

Kim and Kim in 2005 investigated the Body Mass Index among 266 Korean girls.<sup>8</sup> Students with normal BMIs were undertaking regular physical activities with 48.7% of them jogging, brisk walking and gymnasium, while 38.5% were walking for 30 minutes daily. In our study it was found that 70% of them were able to exercise which would prevent overweight.

According to Jaydip Sen et al, the prevalence of overweight and obesity was documented to be 22.00% and 19.5% respectively, the prevalence of obesity was distinctively higher among females as compared to males.<sup>9</sup> But in our study the prevalence of overweight and obesity was 54.16% were males and 45.83% were females.

In a study conducted by Yerpude and Jogdand, an overwhelming majority (85.80%) of the subjects attributed diet for obesity. In this study, the most common reason cited by the study subjects for prevention of obesity was adequate physical activity (70%).<sup>10</sup> Similar results was seen in a study conducted by Shrivastava et al, the findings were 77.5%.<sup>11</sup>

## CONCLUSION

The study provides the information that the participant had good knowledge and attitude regarding obesity but failed in practicing necessary measures to control & prevent it. About 89.5% of overweight and obese students had no time for active exercise. This data is very important as inspite of having knowledge about prevention and steps to overcome obesity they don't practice it. Health education, frequent monitoring and conducting interventional programs among students would be appropriate.

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