

Knowledge, Attitude and Practice Regarding Obesity and Its Impact on Health in College-Going Students

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Abstract

Background: Obesity is associated with several health conditions, and college years can be a period when diet, physical activity, sleep and other lifestyle habits become less consistent. Understanding students' knowledge, attitudes and practices can help identify areas for health promotion.

Objective: To assess knowledge, attitude and practice regarding obesity and its impact on health among college-going students.

Methods: A cross-sectional, questionnaire-based study was conducted among 200 college-going students aged 18–25 years in Pune using convenience sampling. A self-developed KAP questionnaire and the International Physical Activity Questionnaire–Short Form (IPAQ-SF) were used. Descriptive statistics and Spearman's rank correlations were reported from the project's verified analysis.

Results: Mean age was 22.36 ± 2.15 years and mean calculated BMI was 22.99 ± 4.02 kg/m². Normal BMI was observed in 52.0%, overweight in 30.0%, underweight in 14.5% and obesity in 3.5%. Recognition of cardiovascular and metabolic risks was high, while only 51.5% selected the correct BMI formula. Attitudes were generally favourable, but only 40.0% consistently followed a balanced diet and 48.5% regularly monitored body weight. In the reported physical-activity classification, 43.2% met the stated criterion and 57.0% did not. Knowledge correlated with attitude ($\rho = 0.425$, adjusted $p < .001$), and favourable practice scores correlated with physical activity ($\rho = 0.306$, adjusted $p < .001$).

Conclusion: Students generally understood important health risks and supported obesity prevention, but reported practices were less consistent. College health initiatives should pair education with practical support for sustainable lifestyle changes.

Keywords: Obesity, Knowledge, Attitude, Practice, College Students, Physical Activity

1. Introduction

Obesity is a public-health concern because excess body fat is associated with conditions such as cardiovascular disease, type 2 diabetes, hypertension and other health complications. The World Health Organization describes obesity as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI), calculated as weight in kilograms divided by height in metres squared, is commonly used as a screening measure in adults.

College students may experience changes in daily routines, food choices, sleep patterns and physical activity. These factors can influence weight-related health, making young adulthood a useful time for prevention and health education. Previous research among university and college populations has examined obesity-related knowledge, attitudes, dietary habits and physical activity, and has highlighted that awareness does not always lead to consistent preventive behaviour.

A knowledge, attitude and practice (KAP) assessment can help identify what students know about obesity, how they view prevention, and which health-related habits they report. The present study therefore assessed KAP regarding obesity and its impact on health among college-going students in Pune.

2. Aim and Objective

Aim: To study knowledge, attitude and practices regarding obesity and its impact on health among college-going students.

Objective: To assess college-going students' knowledge, attitude and practice regarding the impact of obesity on health using a questionnaire.

3. Materials and Methods

Study design and setting: A cross-sectional, survey-based study was conducted in Pune, Maharashtra. The project report states a sampling duration of six months.

Participants and sampling: The final analysis included 200 college-going students aged 18–25 years recruited through convenience sampling. Participation was voluntary and based on informed consent. The project's stated exclusion criteria were known endocrine disorders (such as thyroid disease, diabetes or PCOS) and pregnancy.

Tools: Data were collected using a self-developed questionnaire covering demographic details and knowledge, attitude and practice related to obesity, together with the International Physical Activity Questionnaire–Short Form (IPAQ-SF). The KAP questionnaire included items about BMI, health consequences of obesity, lifestyle attitudes and preventive practices.

Statistical analysis: The project report states that IBM SPSS Statistics for Windows, version 26.0, was used. Continuous variables were summarized using mean, standard deviation, median, interquartile range and range, while categorical variables were summarized using frequencies and percentages. Spearman's rank correlation was used for exploratory associations among knowledge, attitude, corrected practice score and physical activity. Holm adjustment was applied across six correlation tests. Statistical significance was set at $p < .05$.

4. Results

A total of 200 students were included in the analysis. The sample was predominantly female (63.0%). The mean calculated BMI was 22.99 kg/m^2 . The main results are summarized below.

Table 1. Participant Characteristics

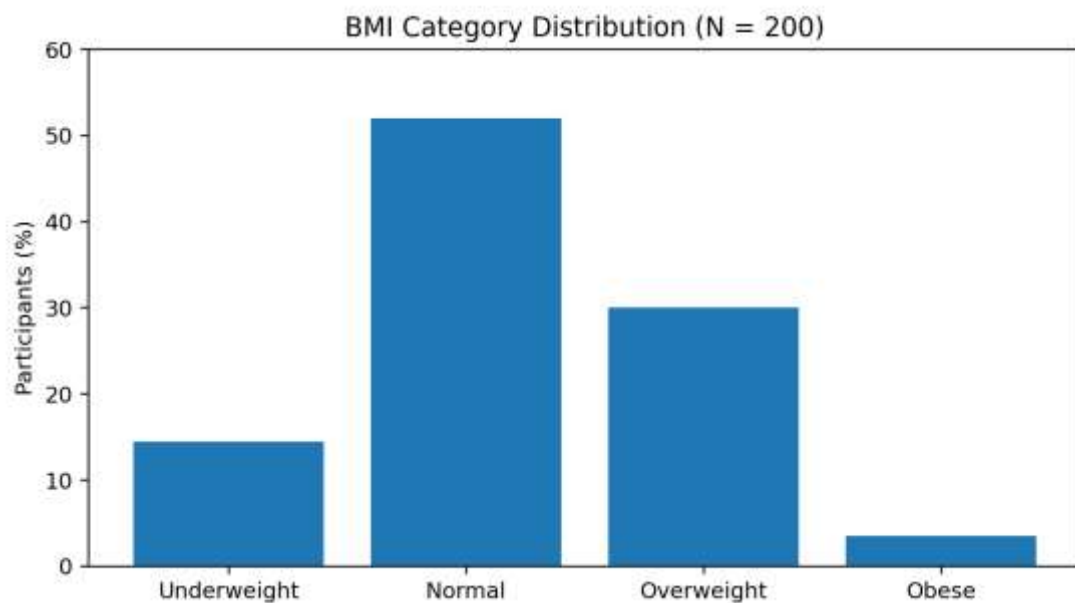
Characteristic	Result
Sample size	200
Age, mean $\pm$ SD	22.36 ± 2.15 years
Height, mean $\pm$ SD	162.86 ± 10.93 cm

Weight, mean $\pm$ SD	61.17 $\pm$ 13.14 kg
Calculated BMI, mean $\pm$ SD	22.99 $\pm$ 4.02 kg/m ²
Female	126 (63.0%)
Male	74 (37.0%)
Family history of obesity: Yes	32 (16.0%)

Table 2. BMI Category Distribution

BMI category	n	%
Underweight	29	14.5
Normal BMI	104	52.0
Overweight	60	30.0
Obesity	7	3.5

Figure 1. BMI Category Distribution Among Participants



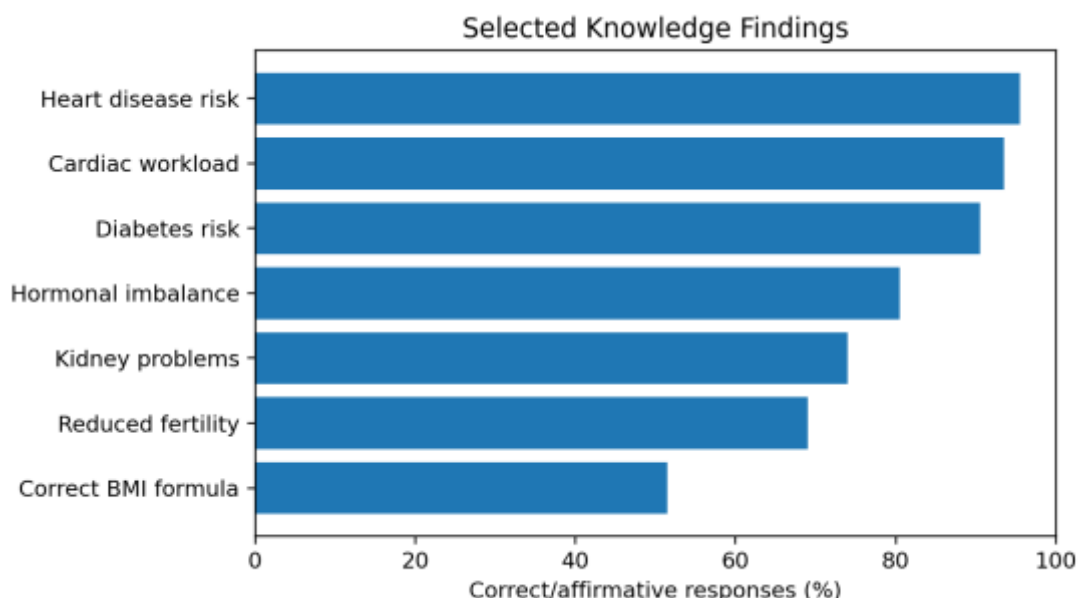
Knowledge findings: Most participants recognized the association of obesity with heart disease, increased cardiac workload and diabetes. However, fewer than two-thirds selected the correct BMI formula, and awareness of kidney-related problems and fertility effects was lower than awareness of common cardiometabolic risks.

Table 3. Selected Knowledge Findings

Knowledge item	n (%)
Recognized increased heart disease risk	191 (95.5%)
Recognized increased cardiac workload	187 (93.5%)
Recognized increased diabetes risk	181 (90.5%)
Recognized hormonal imbalance	161 (80.5%)
Recognized kidney-related problems	148 (74.0%)

Recognized possible reduced fertility	138 (69.0%)
Selected correct BMI formula	103 (51.5%)
Identified healthy BMI range	135 (67.5%)

Figure 2. Selected Knowledge Findings



Attitude findings: Attitudes were generally favourable. Most participants were willing to change diet or lifestyle, considered lifestyle modification important and supported obesity education for college students.

Table 4. Selected Attitude Findings

Attitude item	n (%)
Willing to change diet or lifestyle	182 (91.0%)
Considered lifestyle modification important	191 (95.5%)
Supported obesity education for college students	186 (93.0%)
Considered obesity a serious health problem in youth	168 (84.0%)
Considered stress management important	165 (82.5%)

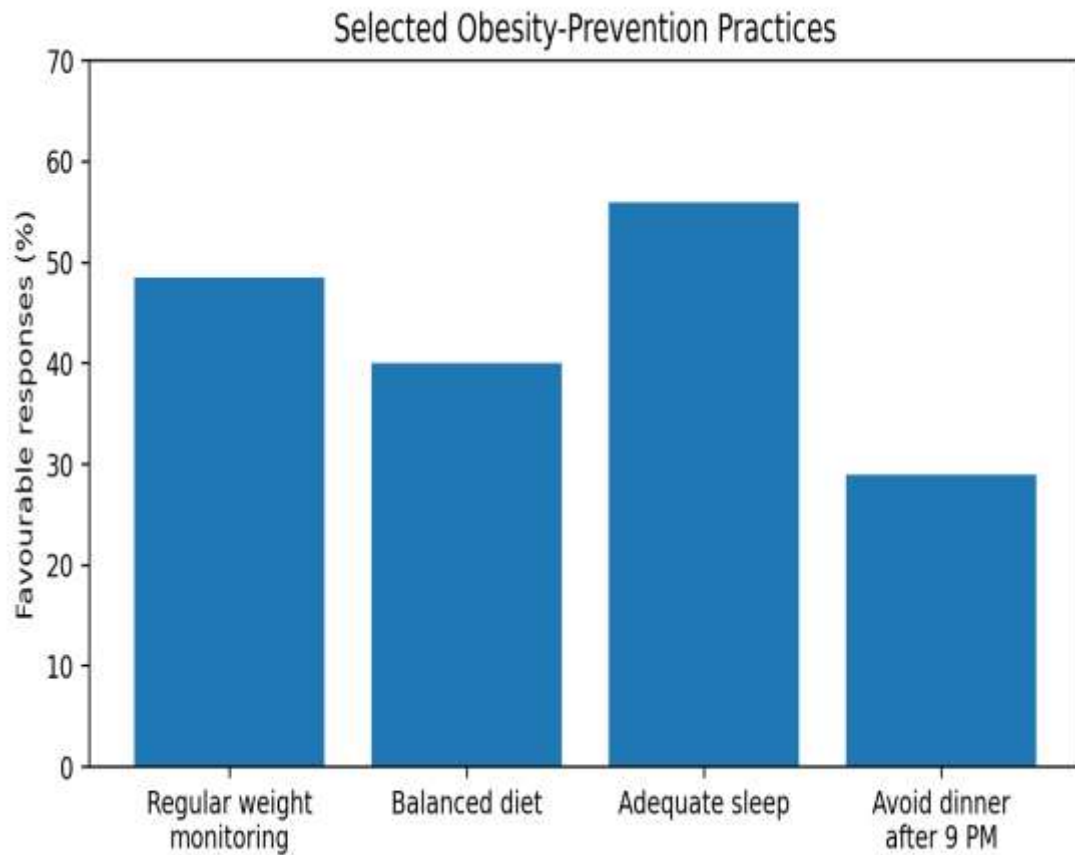
Practice findings: Reported practices were less consistent than attitudes. Adequate sleep was the most frequently reported favourable practice among the listed items. Avoiding dinner after 9 PM was less common.

Table 5. Selected Obesity-Prevention Practices

Practice	Favourable response n (%)
Regularly monitors body weight	97 (48.5%)
Consistently follows a balanced diet	80 (40.0%)

Gets adequate sleep	112 (56.0%)
Does not usually eat dinner after 9 PM	58 (29.0%)

Figure 3. Selected Obesity-Prevention Practices

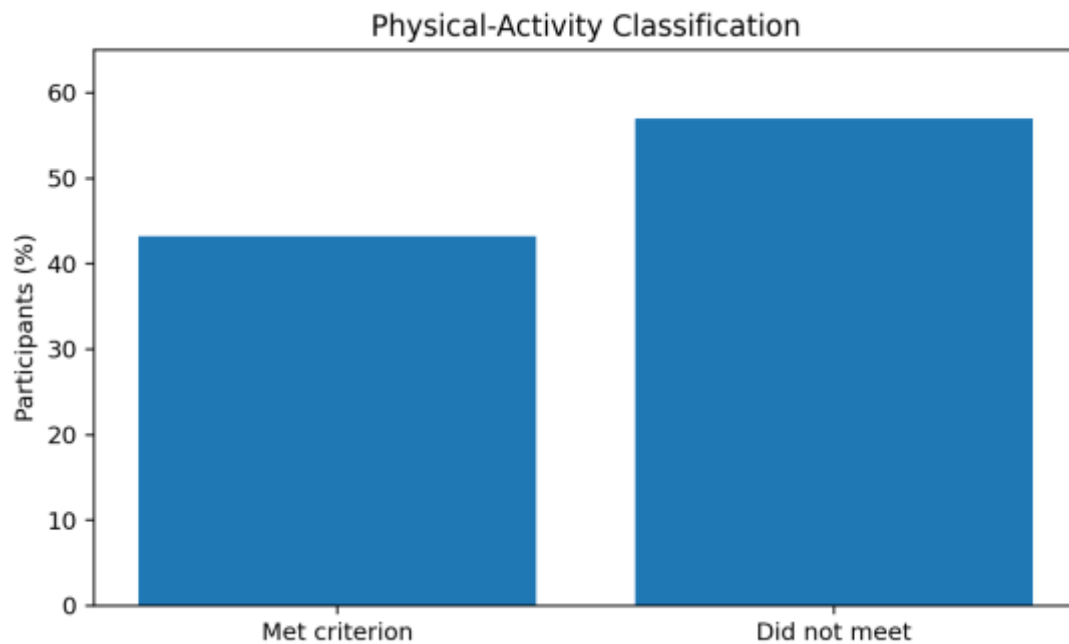


Physical activity: Walking was reported more frequently than vigorous or moderate activity. The project's classification indicated that 86 participants (43.2%) met the stated physical-activity criterion and 114 (57.0%) did not. Duration variables had substantial missing data, so this result should be interpreted cautiously.

Table 6. Physical-Activity Classification and Activity Frequency

Measure	Result
Met stated physical-activity criterion	86 (43.2%)
Did not meet stated criterion	114 (57.0%)
Walking days/week, mean $\pm$ SD	5.15 $\pm$ 2.26
Vigorous activity days/week, mean $\pm$ SD	1.72 $\pm$ 2.37
Moderate activity days/week, mean $\pm$ SD	1.42 $\pm$ 2.13

Figure 4. Physical-Activity Classification



Associations: Knowledge was positively associated with attitude (Spearman's $\rho = 0.425$, Holm-adjusted $p < .001$) and weakly associated with corrected practice score ($\rho = 0.182$, adjusted $p = .040$). The attitude–practice association did not remain statistically significant after adjustment ($\rho = 0.163$, adjusted $p = .062$). Corrected practice score was positively associated with physical activity ($\rho = 0.306$, adjusted $p < .001$); knowledge and attitude were not significantly associated with physical activity.

Table 7. Associations Among KAP Domains and Physical Activity

Variables	Spearman's ρ	Holm-adjusted p	Interpretation
Knowledge–attitude	0.425	< .001	Significant positive association
Knowledge–practice	0.182	0.040	Weak significant positive association
Attitude–practice	0.163	0.062	Not significant after adjustment
Knowledge–physical activity	0.067	0.696	Not significant
Attitude–physical activity	0.008	0.910	Not significant
Practice–physical activity	0.306	< .001	Significant positive association

5. Discussion

This study assessed knowledge, attitudes and practices related to obesity among 200 college-going students. The results show a consistent pattern: students were generally aware of major health risks and

expressed favourable attitudes toward prevention, while everyday preventive practices were less consistent.

Knowledge was strongest for widely recognized cardiometabolic consequences. More than 90% identified the association of obesity with heart disease, increased cardiac workload and diabetes. In contrast, only 51.5% selected the correct BMI formula. This difference suggests that familiarity with the term BMI may not always mean that students can calculate or interpret it accurately. The findings support practical health education that includes demonstrations of BMI calculation and discussion of its limitations as a screening measure.

Favourable attitudes were common: 91.0% were willing to change diet or lifestyle, 95.5% considered lifestyle modification important and 93.0% supported obesity education in colleges. Similar interest in obesity prevention has been described in KAP studies among university students, including Xue et al. (2021). However, positive attitudes alone may not overcome barriers such as academic workload, limited time, stress, food availability and established routines.

The practice results highlight this gap. Less than half of participants reported regular weight monitoring, and 40.0% consistently followed a balanced diet. Although 56.0% reported adequate sleep, 53.5% reported eating dinner after 9 PM. These findings are broadly in line with previous studies reporting that knowledge and positive attitudes do not always translate into regular exercise or other preventive behaviours among students (Jagadeesan et al., 2017; Shahid et al., 2020). College programmes may therefore be more effective when they combine information with realistic, practical steps for changing daily habits.

Physical-activity classification indicated that 57.0% did not meet the criterion used in the project. Walking was reported more often than moderate or vigorous activity. Because several IPAQ-SF duration variables contained missing data, the activity findings should be interpreted cautiously. Nevertheless, they suggest that accessible opportunities for regular movement and structured physical-activity counselling could be useful components of college health promotion.

The correlation analysis found a moderate positive association between knowledge and attitude, and a weaker positive association between knowledge and corrected practice. The attitude–practice association was not statistically significant after adjustment for multiple comparisons. Corrected practice scores were positively associated with physical activity. These are associations and cannot establish cause and effect because the study used a cross-sectional design. Overall, the findings support a multi-component approach to obesity prevention that combines accurate health information with support for diet, activity, sleep and stress management.

6. Limitations

Convenience sampling may limit how well the findings represent all college-going students. The sample included more females than males. KAP and physical-activity responses were self-reported and may be affected by recall or social-desirability bias. The KAP tool was self-developed, and the report does not provide detailed psychometric results such as reliability coefficients. BMI is a screening measure and does not directly assess body-fat distribution. Finally, missing values in several IPAQ-SF duration fields limit interpretation of physical-activity estimates.

7. Future Scope

Future studies could recruit students from multiple colleges using a more representative sampling strate-

gy. Researchers may evaluate a structured obesity-prevention programme that includes nutrition education, physical-activity counselling, sleep hygiene and stress management, with follow-up to assess whether changes in knowledge and attitudes lead to sustained behavioural change. Adding waist circumference or waist-to-hip ratio may provide useful information beyond BMI. Future research could also examine environmental and psychosocial factors such as screen time, academic workload and access to recreational facilities.

8. Conclusion

Among the 200 college-going students, knowledge of major health consequences of obesity and attitudes toward prevention were favourable. Gaps remained in accurate BMI knowledge, while preventive practices such as balanced eating and regular weight monitoring were less consistent. More than half of participants did not meet the physical-activity criterion reported in the project. Knowledge was associated with attitude, and favourable practice scores were associated with physical activity. College-based prevention efforts should therefore go beyond awareness alone and help students build practical, sustainable health habits.

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