

Knowledge, Attitude and Practices towards Weight Management among Obese Girl Students

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Abstract

Obesity have become major public health concerns among young adults due to unhealthy dietary habits, physical inactivity, and lifestyle changes. Knowledge, attitude, and practice (KAP) towards weight management play a crucial role in preventing obesity and promoting healthy living among undergraduate students.

Aim: The study aimed to assess the knowledge, attitude, and practice towards weight management among overweight girl students.

Methodology: A cross-sectional study was conducted among obese undergraduate girl students using purposive sampling. Data were collected using a validated and structured questionnaire consisting of socio-demographic details, anthropometric measurements, and questions assessing knowledge, attitude, and practices related to weight management. The collected data were statistically analysed to determine the level of KAP among the participants.

Results: A total of 300 college students participated in the study. Regarding the stream of study, (46%) belonged to the Commerce and Management stream, (40.3%) were from Science, and (13.7%) were from Arts and Humanities. With respect to monthly family income, the largest proportion (36.7%) reported a family income of more than ₹9,413, followed by an income between ₹4,707 and ₹9,413 (30.3%). In terms of food habits, (55.3%) of the respondents consumed home-cooked meals, whereas (21.3%) relied on mess or cafeteria food, (13.3%) consumed a mixed diet, and (10%) prepared their own meals. The mean age of the respondents was 21.0 ± 1.75 years. The mean Body Mass Index (BMI) was 27.82 ± 2.10 kg/m², the mean waist circumference was 60.61 ± 29.89 cm, while the mean hip circumference was 70.22 ± 33.65 cm. The findings showed no statistically significant association between BMI and knowledge, attitude, or practice. These results indicate that BMI was not significantly correlated with participants' knowledge, attitudes, or practices regarding weight management.

Conclusion: The study concludes that the respondents generally have good knowledge and a positive attitude towards weight management; however, this knowledge is not consistently translated into healthy practices. Nutrition education, behaviour change communication, regular physical activity, and lifestyle modification programmes are essential to improve weight management practices and reduce the risk of obesity-related complications among undergraduate students.

Keywords: Knowledge, Attitude, Practice, Weight Management, Obesity, Healthy Lifestyle.

INTRODUCTION

Weight management is the cornerstone of healthy life. It is not merely about losing weight but about achieving a healthy body weight through adopting healthy dietary practices, engaging in regular physical activity, and maintaining a positive lifestyle. Proper weight management is essential for overall physical, mental, and social well-being. (Teixeira et al., 2015).

Obesity is stated by the World Health Organization (WHO) as a chronic, relapsing disease arising from complex interactions between genetics, neurobiology, eating behaviours, access to healthy diet, market forces, and the broader environment. In the last decades, obesity has expanded globally as countries have experienced greater food security, socioeconomic development, and shifts in diet, physical activity, and societal and individual behavior driven by globalization and industrialized food systems. These forces have created increasingly obesogenic environments, contributing to what is now a global public health crisis with more than 1 billion people living with obesity and prevalence rising in nearly every country. (WHO 2024)

The prevalence of obesity among adolescents ranged from 5% to more than 30%, depending on the study setting and population characteristics (Panda et al., 2025). Obesity is associated with several health complications such as cardiovascular diseases, type 2 diabetes, hypertension, and psychological disorders (Albarghouthy et al., 2026). One of the primary reasons for the importance of weight management is its strong association with the prevention of non-communicable diseases (Anderson et. al. 2003).

MATERIALS AND METHODS:

The study was conducted in the year 2026 where 300 females aged between 18-25 years obese were chosen randomly from the Maharani Cluster University, Bangalore. The study was planned and prepared at Smt. VHD. Central Institute of Home Science. The research encompasses all individuals who were obese category under the age group of 18-25 years residing in Bangalore. The questionnaire was conducted and developed by taking reference from existing tools. The questionnaire was validated by the subject experts and statistician, a semi-structured questionnaire that balanced standard questions and open-ended replies was used to guarantee thorough and trustworthy data gathering. The questionnaire was divided into different sections like socio demographic profile, anthropometric status and knowledge, attitude and practices (KAP) assessment respectively. Data was collected using a validated questionnaire following an ethical consent where all respondents are informed about the study's purpose. The data was collected through appropriate methods, and collected data was compiled and statistically analysed using percentage, One-Way ANOVA test, and Independent samples t-test using IBM SPSS. Statistics 29.0 Software.

RESULTS AND DISCUSSION:

Table 1: Socio Demographic Profile of the Respondents (N = 300)

Socio demographic parameters		Number	Percentage (%)
Marital status	Single	284	94.7
	Married	13	4.3
Year of study	1 st year	86	28.7
	2 nd year	132	44.0
	3 rd year	81	27.0

Stream of study	Art & Humanities	41	13.7
	Science	121	40.3
	Commerce management	138	46.0
Monthly family income	< ₹1412	10	3.3
	₹1412 – ₹2823	26	8.7
	₹2823 – ₹4706	64	21.3
	>₹4707 – ₹9413	90	30.3
	>₹9413	110	36.7
Current living arrangements	Self-cooking	30	10.0
	Mess / cafeterias food	64	21.3
	Home cooked	166	55.3
	Mixed	40	13.3

The majority of the respondents (94.7%) were single, while (4.3%) were married. With regard to the year of study, (44.0%) were studying in the second year, followed by (28.7%) in the first year and (27.0%) in the third year. In terms of stream of study, (46.0%) belonged to other streams, (40.3%) were from Science and Commerce Management, and (13.7%) were from Arts and Humanities. Regarding monthly family income, the highest percentage of respondents (36.7%) belonged to families with a monthly income above ₹9,413, followed by (30.3%) in the ₹4,707–₹9,413 income group, while only (3.3%) belonged to the income group below ₹1,412. Concerning current living arrangements, more than half of the respondents (55.3%) consumed home-cooked food, followed by (21.3%) who depended on mess or cafeteria food, (13.3%) who had mixed food sources, and (10%) who prepared food by self-cooking.

The findings are consistent with the study conducted by Xue et al. (2021), which reported that the majority of participants were unmarried university students representing different years and academic streams. Similarly, Bhujbal and Baby (2022) observed that most respondents were undergraduate students from diverse educational backgrounds. The predominance of students consuming home-cooked food in the present study may reflect the influence of family support and living arrangements on dietary practices and weight management behaviours among undergraduate female students.

Table 2: Mean Anthropometric Measurements of the Respondents (N = 300)

Anthropometric measurements	Mean ± SD
Age	21 ± 1.75
Height (cm)	158.74 ± 6.63
Weight (kg)	70.11 ± 8.41
BMI	27.82 ± 2.10
Waist circumference (cm)	60.61 ± 29.89
Hip circumference (cm)	70.22 ± 33.65

The present study assessed the anthropometric characteristics of 300 respondents. The mean age of the participants was 21 years, with a mean height of 158.74 cm and a mean weight of 70.11 kg. The mean

Body Mass Index (BMI) was 27.82 kg/m², indicating that, on average, the participants were in the overweight category. The mean waist circumference and hip circumference were 60.61 cm and 70.22 cm, respectively.

These findings are consistent with Bhujbal et al. (2022), who conducted a study among overweight and obese adolescents and reported that participants with higher BMI required greater attention to weight reduction and healthy lifestyle practices. Similarly, Moorthy et al. (2022) found that obesity were common among adults, particularly those aged over 40 years and those with associated risk factors, emphasizing the importance of early weight management. Furthermore, Ranil Jayawardena et al. (2017) reported an increasing prevalence of obesity among young adults in South Asia, largely due to unhealthy dietary habits and reduced physical activity.

Waist-Hip Ratio:

Normal	≤0.85
Obesity	≥0.86

(WHO, 2017)

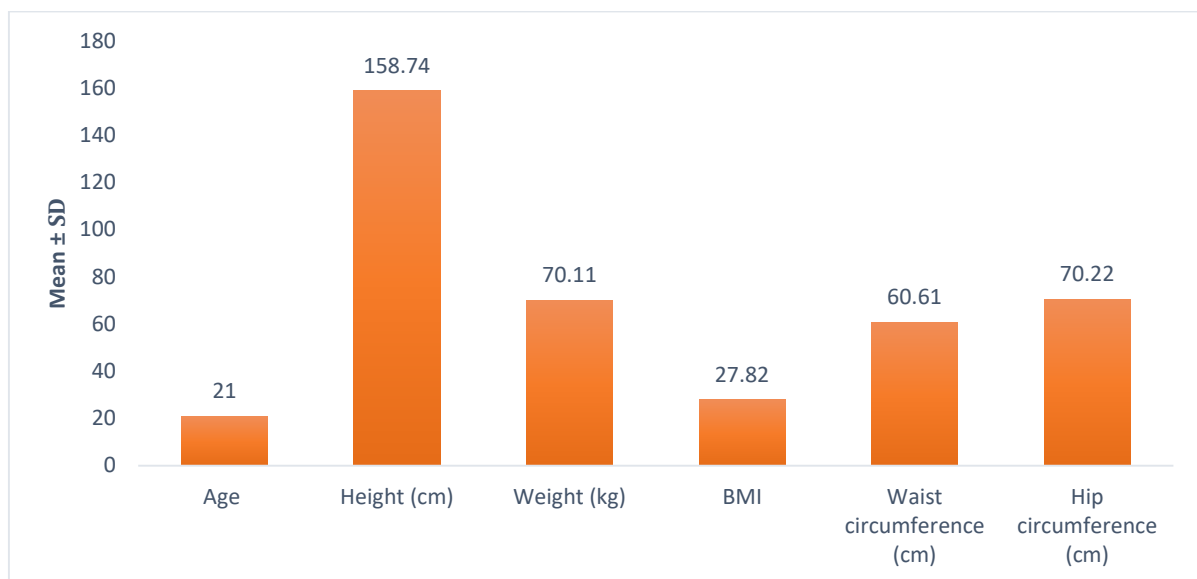


Fig. 1: Mean anthropometric measurement of the respondents

Table 3: Classification of Respondents based on BMI (N=300)

Obesity classification	Number	Percentage (%)
Overweight	247	82.3
Obesity grade 1	53	17.7
Obesity grade 2	0	0
Obesity grade 3	0	0

The present study revealed that (82.3%) of the respondents were classified as overweight, while (17.7%) were categorized as Obesity Grade I. None of the respondents belonged to Obesity Grade II or Grade III. These findings indicate that the majority of overweight female undergraduate students were in the early stages of excess body weight, with a smaller proportion progressing to Grade I obesity. This may be

attributed to unhealthy dietary habits, reduced physical activity, sedentary lifestyles, and academic stress, which are common among university students.

The findings of the present study are consistent with the study conducted by Parajuli et al. (2019), who reported that (23.6%) of undergraduate students were overweight and (5.2%) were obese. Similarly, Szemik et al. (2024), observed a gradual increase in overweight and obesity among medical students during a two-year follow-up. Their study demonstrated that the proportion of overweight students increased from (11-12%), while obesity increased from (2.1% to 3.6%), suggesting that unhealthy lifestyle behaviours during university life contribute to progressive weight gain.

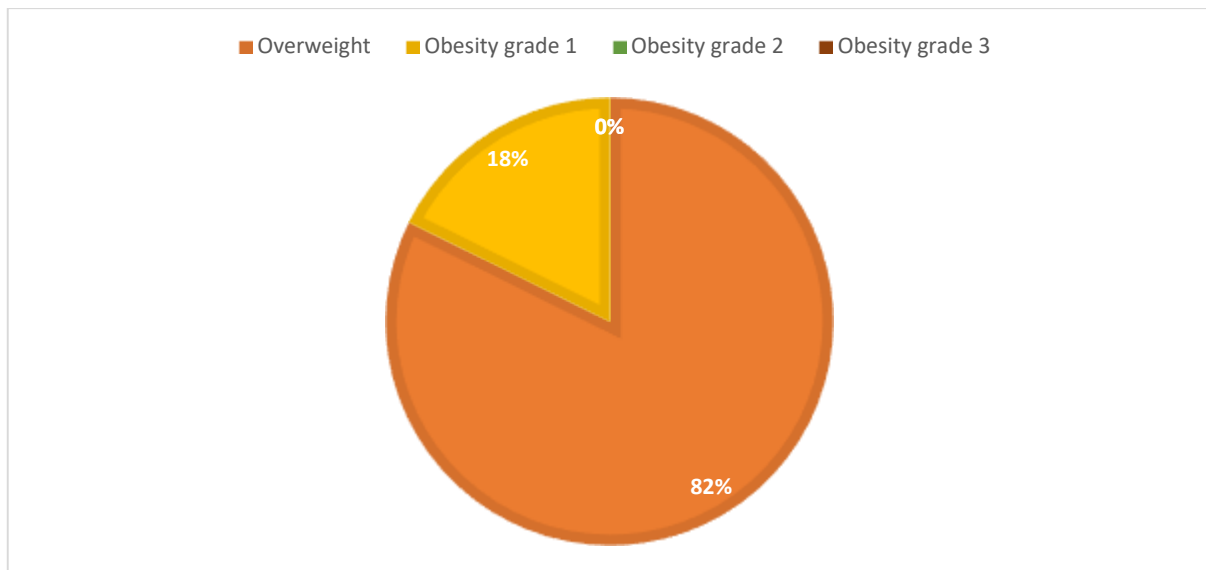


Fig. 2: Classification of respondents based on BMI

Table 4: Knowledge on Obesity (N = 300)

	Number	Percentage (%)
Have you heard about obesity?		
Yes	197	65.7
No	69	23.0
I don't know	34	11.3
Obesity is considered a disease.		
Yes	131	43.7
No	81	27.0
I don't know	88	29.3
Obesity can lead to non-communicable diseases such as diabetes and heart disease.		
Yes	172	57.3
No	47	15.7
I don't know	81	27.0
Body Mass Index (BMI) is used to classify underweight, normal weight, overweight, and obesity.		
Yes	107	35.7
No	47	15.7

I don't know	146	48.7
Are you familiar with the BMI levels recommended by WHO?		
Very familiar	84	28.0
Somewhat familiar	58	19.3
Not familiar	158	52.7
Do you know your ideal body weight?		
Yes	109	36.3
No	186	62.0

The findings revealed that (65.7%) of the respondents had heard about obesity. However, only (43.7%) correctly identified obesity as a disease, while (57.3%) were aware that obesity can lead to non-communicable diseases such as diabetes and heart disease. Knowledge regarding Body Mass Index (BMI) was comparatively poor, with only (35.7%) knowing that BMI is used to classify weight status. More than half of the respondents (52.7%) were not familiar with the BMI levels recommended by the World Health Organization (WHO), and (62.0%) did not know their ideal body weight. These findings indicate that although basic awareness of obesity exists among college students, knowledge regarding obesity assessment and weight management remains inadequate.

The findings are consistent with the study conducted by Xue et al. (2021), who reported that while (64.9%) of university students recognized obesity as a disease, many lacked comprehensive knowledge regarding obesity and exhibited unhealthy lifestyle practices. Similarly, Bhujbal et al. (2022) observed that (57%) of overweight and obese adolescents had good knowledge regarding weight reduction, but emphasized that knowledge alone was insufficient to improve healthy practices.

Table 5: Attitude Towards Nutrition for Weight Management (N = 300)

	Number	Percentage (%)
Confidence in reducing sugary foods		
Extremely confident	19	6.3
Very confident	67	22.3
Moderately confident	90	30
Slightly confident	62	20.7
Not at all confident	62	20.7
Confidence in avoiding fried foods		
Extremely confident	19	6.3
Very confident	55	18.3
Moderately confident	100	33.3
Slightly confident	59	19.7
Not at all confident	67	22.3
Preference for healthy food choices		
Extremely confident	39	13
Very confident	68	22.7
Moderately confident	82	27.3
Slightly confident	55	18.3

Not at all confident	56	18.7
Knowledge of meal frequency for weight loss		
Definitely	58	19.3
Probably	153	51
Probably not	41	13.7
Definitely not	18	6
Don't know	30	10
Understanding of weight management		
Physical health	68	22.7
Social appearance	60	20
Both equally	144	48
Neither	28	9.3
Availability of healthy food options on campus		
Excellent	18	6
Good	38	12.7
Average	147	49
Poor	58	19.3
Very poor	39	13
Perceived barriers for weight management		
Lack of time	79	26.3
High cost of healthy food	57	19
Stress or emotional pressure	38	12.7
Lack of nutritional knowledge	99	33
Social pressure/ drinking culture	27	9

The present study found a moderately positive attitude towards nutrition for weight management among the participants. Most respondents were moderately confident in reducing sugary foods (30.0%) and avoiding fried foods (33.3%). In addition, (27.3%) were moderately confident in making healthy food choices. More than half of the participants (51.0%) reported that they probably had knowledge about appropriate meal frequency for weight loss, while 48.0% believed that weight management is equally important for both physical health and social appearance. Regarding the food environment, (49.0%) rated the availability of healthy food options on campus as average. The most commonly perceived barrier to weight management was lack of nutritional knowledge (33.0%), followed by lack of time (26.3%).

These findings are consistent with Moorthy et al. (2022), who reported that participants had a positive attitude towards nutrition and obesity management, although healthy dietary practices remained inadequate. Similarly, Bhujbal et al. (2022) found that participants demonstrated positive attitudes towards weight reduction despite poor adherence to healthy practices. Xue et al. (2021) also observed that although university students showed positive attitudes towards healthy eating and obesity prevention, unhealthy dietary behaviours remained common. Furthermore, Anwar et al. (2024) identified lack of time and motivation as major barriers to weight management among young adults, supporting the findings of the present study.

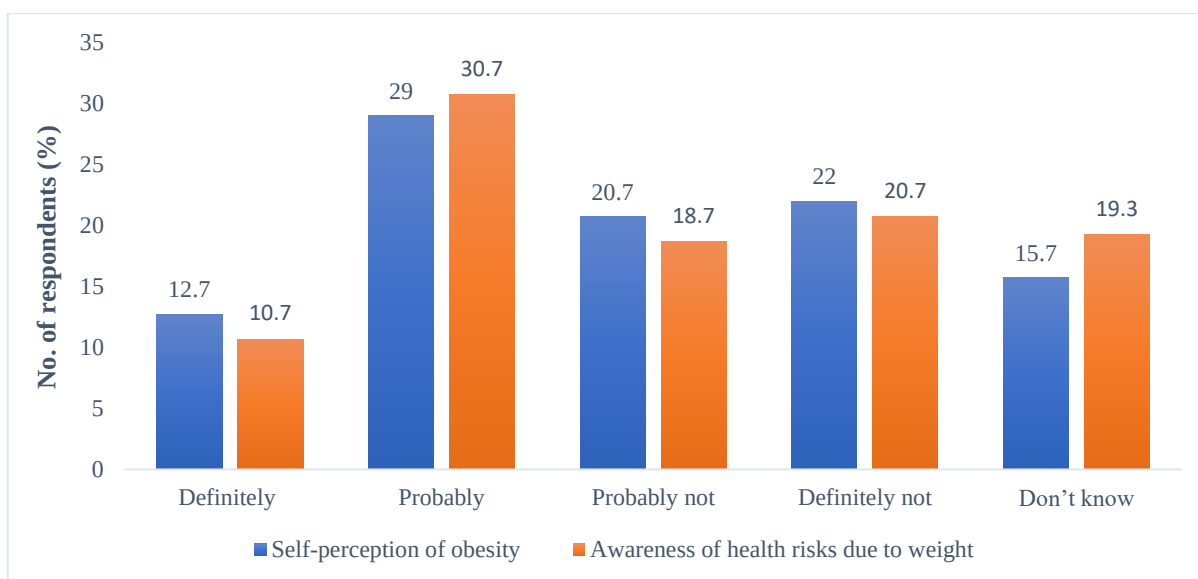


Fig. 3: Attitude towards losing weight

Table 6: Dietary Practices towards Weight Management (N = 300)

	Number	Percentage (%)
Adding extra sugar to coffee/milk		
Always	65	21.7
Very often	80	26.7
Sometimes	85	28.3
Rarely	34	11.3
Never	36	12
Taking desserts after meals		
Always	56	18.7
Very often	64	21.3
Sometimes	86	28.7
Rarely	53	17.7
Never	41	13.7
Eating fried or fast foods		
Always	18	6.0
Very often	104	34.7
Sometimes	73	24.3
Rarely	35	11.7
Never	70	23.3
Consumption of sweetened beverages		
Never	22	7.3
Rarely	107	35.7
1-2time/week	103	34.3
2-3time/week	20	6.7
More than 3times/ week	48	16.0

Snacking between meals/day		
0	39	13.0
1	90	30.0
2	69	23.0
3	69	23.0
More than 3	33	11.0
Consumption of 4 cups of caffeinated drinks/ day		
Yes	37	12.3
No	156	52.0
Don't know	104	34.7
Including carbonated drinks in diet		
Yes	149	49.7
No	74	24.7
Never	75	25.0
Consumption of carbonated drinks/week		
1 time	33	11.0
2 times	53	17.7
3 times	35	11.7
4 times	22	7.3
5 or more	7	2.3

The present study revealed that most respondents reported sometimes adding extra sugar to coffee or milk (28.3%), sometimes consuming desserts after meals (28.7%), and very often consuming fried or fast foods (34.7%). With regard to sweetened beverages, (35.7%) consumed them rarely, while (34.3%) consumed them once or twice per week. Nearly one-third (30.0%) reported snacking once daily, whereas (23.0%) consumed snacks two or three times per day. More than half of the respondents (52.0%) reported that they did not consume four cups of caffeinated drinks per day, while (49.7%) included carbonated drinks in their diet. Among carbonated drink consumers, (17.7%) consumed them twice per week, whereas only (2.3%) consumed them five or more times per week.

The findings indicate that although the frequency of excessive consumption of unhealthy foods was not very high among most participants, regular intake of sugar, desserts, fried foods, carbonated beverages, and frequent snacking remained common practices that may contribute to unhealthy weight gain. Similar findings were reported by Xue et al. (2021), who observed that university students frequently consumed energy-dense foods, sugary beverages, and followed irregular dietary habits despite having moderate knowledge regarding obesity. Likewise, Al-Hazzaa et al. (2014) reported that frequent fast-food consumption, inadequate fruit and vegetable intake, and unhealthy eating behaviors were common among university students despite awareness regarding obesity prevention.

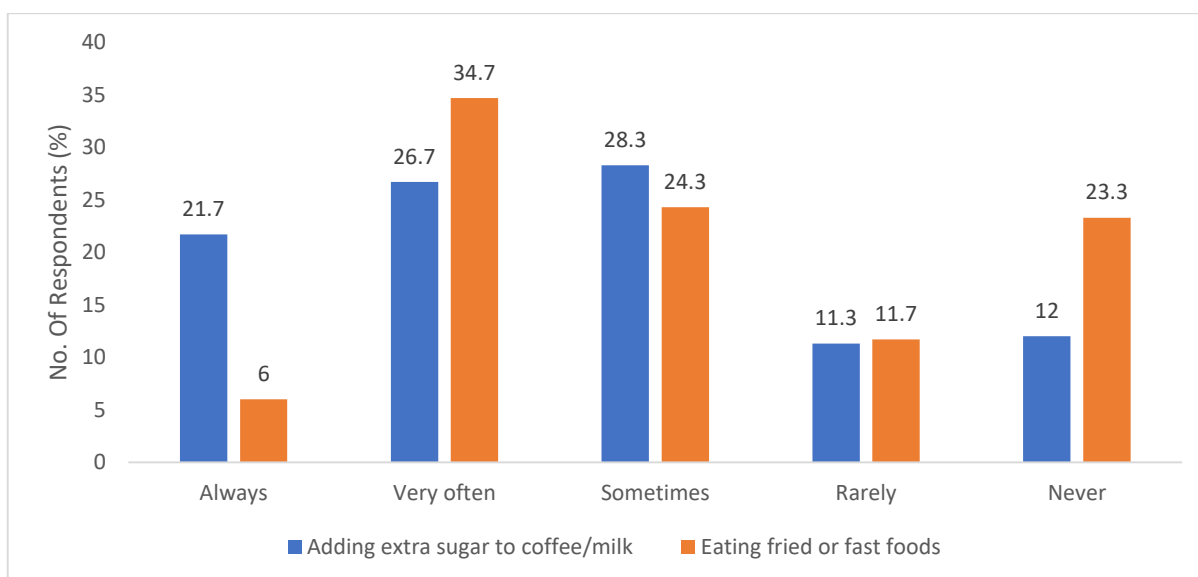


Fig. 4: Dietary practices towards weight management

Table 7: Correlation Between KAP and BMI Level (N = 300)

	Pearson correlation	Sig. (2-tailed)
BMI	1	
Knowledge Total	-0.073	0.206
Attitude Total	-0.005	0.384
Practices total	-0.083	0.149

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

The table shows a weak negative correlation between BMI and knowledge ($r = -0.073$), attitude ($r = -0.050$), and practices ($r = -0.083$). This indicates that as the knowledge, attitude, and practice scores increase, BMI tends to decrease slightly. However, the correlation is very weak and the associations are not statistically significant, as the p-values for knowledge (0.206), attitude (0.384), and practices (0.149) are greater than 0.05. Therefore, although an increase in KAP is associated with a slight decrease in BMI, this relationship is not statistically significant among the study participants.

SUMMARY:

The study was conducted among 300 obese undergraduate girl students to assess their knowledge, attitude, and practices (KAP) towards weight management. The study found that (60.7%) of participants had good knowledge, (70.3%) had a positive attitude, and (54.7%) demonstrated poor weight-management practices. Most respondents also demonstrated a positive attitude towards maintaining a healthy body weight and recognized the importance of healthy eating and regular physical activity. However, despite adequate knowledge and favourable attitudes, healthy practices were comparatively poor, with many students reporting unhealthy dietary habits, inadequate physical activity, and sedentary lifestyles.

Statistical analysis showed a significant association between knowledge and attitude, whereas the translation of knowledge into healthy practices remained inadequate. These findings indicate that awareness alone is insufficient to promote sustainable behaviour change.

CONCLUSION:

The study concludes that 300 obese undergraduate girl students aged 18-25 years had good knowledge and a positive attitude towards weight management, more than half showed poor weight-management practices. This highlights a clear gap between knowledge and its practical application. Therefore, regular nutrition education, behavioural counselling, physical activity promotion, and campus-based weight management programmes are recommended to improve healthy lifestyle practices and reduce obesity-related health risks among undergraduate students. The findings emphasize that strengthening practical interventions is essential for effective long-term obesity prevention and management.

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