Young adults perspective on obesity: a cross sectional observational study of knowledge, attitude and practices

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Abstract: Background: **Obesity is a growing global health concern, especially among young adults, who are increasingly exposed to sedentary lifestyles, poor dietary habits, and misinformation. Understanding their knowledge, attitude, and practices (KAP) related to obesity is critical for designing effective prevention strategies.**

Method: Cross sectional survey including 111 study subjects. It was conducted through self-structured questionnaires among populations in Kerala.

Result: Statistical analysis using Pearson correlation revealed significant positive associations between knowledge, attitude, and practice scores. Knowledge and attitude were moderately correlated (r = 0.341, p < 0.01), and knowledge and practice showed a weak but significant correlation (r = 0.214, p < 0.05). However, there was no significant correlation between attitude and practice (r = 0.065, p = 0.495). These findings suggest that while improved knowledge may enhance both attitude and practice, a positive attitude alone may not lead to better obesity-related behaviors.

Conclusion: The study found that while young adults generally had fair knowledge and attitudes about obesity, their actual preventive practices were poor especially among those under 19. The weak correlation between knowledge and practice highlights the need for strategies that go beyond education to drive behavior change. Future interventions should focus on motivation, structured programs, and policy-level support to improve obesity-related habits.

Keywords: Obesity, Knowledge, Attitude, Practice, dietary habits, sedentary lifestyle.

I. INTRODUCTION

Obesity is a complex, multifactorial condition characterized by excessive fat accumulation that poses a risk to health [1]. It is commonly defined using Body Mass Index (BMI), with a BMI of 25.0–29.9 kg/m² indicating overweight and ≥30 kg/m² indicating obesity[2]. The World Health Organization (WHO) has identified obesity as one of the most serious global health challenges of the 21st century. Worldwide, over 1.9 billion adults were overweight in 2016, of whom more than 650 million were obese. In India, once predominantly affected by undernutrition, the rise in overweight and obesity has become a significant concern, especially among urban populations and young adults[3].

The health implications of obesity are far-reaching. It is a major risk factor for non-communicable diseases (NCDs) such as type 2 diabetes mellitus, hypertension, cardiovascular diseases, dyslipidemia, osteoarthritis, and some forms of cancer. In addition to physical consequences, obesity can adversely affect mental health, contributing to low self-esteem, social isolation, anxiety, and depression [4]. The financial burden of obesity is also considerable due to increased healthcare costs and lost productivity. This combination of physical, psychological, and economic effects makes obesity a high-priority issue for public health interventions [5].

Young adults, typically aged between 16 and 25 years, represent a vulnerable population in the context of obesity [6]. This developmental stage is marked by major lifestyle transitions, including increased autonomy, academic pressure, exposure to processed foods, irregular eating patterns, increased screen time, and reduced physical activity [7]. These factors

contribute to unhealthy weight gain. The growing popularity of fast food, late-night eating, and sedentary recreation (such as binge-watching and gaming) further exacerbate the problem. Notably, obesity during adolescence or early adulthood is strongly associated with continued obesity into later life and early onset of obesity-related diseases [8].

Prevention of obesity is more effective when started early, particularly in young individuals who are still developing long-term habits. Unlike older adults, young people are more open to behavior change when properly motivated [9]. Thus, this age group presents a crucial window for preventive action. Strategies that include promoting physical activity, improving nutritional literacy, and reducing sedentary time can significantly curb the long-term impact of obesity. However, for such strategies to be successful, it is essential to understand the target group's current level of awareness and behavior [10].

This is where Knowledge, Attitude, and Practice (KAP) studies are valuable. A KAP study helps identify what individuals know about a particular health issue, how they feel about it, and how they behave in response [11]. In the context of obesity, knowledge refers to understanding the causes, consequences, and methods of prevention and management. Attitude includes beliefs, perceptions, and feelings about obesity and its seriousness. Practice relates to the actions people take such as dietary choices, exercise habits, and weight monitoring [12].

KAP studies are crucial in highlighting gaps between awareness and actual behavior. It is often observed that even individuals with good knowledge may not adopt healthy practices due to lack of motivation, poor attitudes, social influence, or environmental barriers. Identifying such gaps can guide the design of tailored health education programs, behavioral interventions, and public policies. Moreover, exploring how knowledge correlates with attitude and practice helps understand whether increased awareness alone is enough to trigger behavior change or whether deeper motivational strategies are needed [13]. Given the rapidly changing lifestyle patterns and increasing obesity prevalence in this age group, it becomes essential to evaluate their understanding and behaviors. This study aims to assess the knowledge, attitude, and practices regarding obesity among young adults and explore how these domains are associated with demographic variables such as age, gender, dietary habits, and BMI. It also seeks to evaluate the interrelationships between knowledge, attitude, and practice [14].

Findings from this study are expected to provide insight into the current perceptions and behaviors of young adults regarding obesity and inform the development of targeted, youth-centered public health interventions. Empowering young individuals through knowledge and behavioral support can play a pivotal role in curbing the obesity epidemic and promoting long-term health [15].

II. MATERIALS AND METHOD:

A random sampling method was used in the study. The state Kerala was the only focus for the data collection. Based on previous studies, the final sample size was 111. Survey were conducted among age group of 18 to 25 years in February to march 2025. The researcher obtained signed informed consent and explained the background of the study, the purpose, the principle of privacy and confidentiality and the precautions before conducting the survey. Inclusion criteria included 1. Young adults, age between 18-25 years old. 2. Individuals willing to participate. The exclusion criteria were1.Participants were failure to complete the questionnaire.2.Individuals not from Kerala.

The questionnaires used for survey were self-structured and validated through expert panel. 10, 10 and 10 questions were included in the part of knowledge, attitude and practice respectively regarding the young adults perspective on obesity. All the data were entered in Microsoft spreadsheet and proper analysis were carried out using Pearson correlation. The study was conducted after protocol approval by Institutional Research committee of Ezhuthachan College of Pharmaceutical Sciences.

III RESULT

a) Demographic Characteristics:

Age	Frequency	Percent
<19	10	9.0

20-24	97	87.4
>25	4	3.6
Total	111	100.0

Table I. Age wise distribution

The age distribution of the participants indicates that the majority (87.4%) were between 20-24 years old, making this the predominant age group in the study. A smaller proportion (9.0%) were below 19 years of age, while only 3.6% were above 25 years. This suggests that the study predominantly represents young adults in their early twenties, with minimal representation from older age groups. The mean age of the participants was 22.88 ± 2.11 years, indicating that most individuals were in their early twenties. The age range varied from 16 to 27 years, covering late adolescence and young adulthood.

Gender	Frequency	Percent
Male	54	48.6
Female	57	51.4
Total	111	100.0

Table II. Gender wise distribution

The gender distribution of the study participants was nearly equal, with 51.4% being female and 48.6% being male. This balanced representation ensures that perspectives from both genders are adequately captured in the study, allowing for a comprehensive analysis of obesity-related knowledge, attitudes, and practices among young adults.

b) Dietary habits:

Diet	Frequency	Percent
Mixed	95	85.6
Non vegetarian	16	14.4
Total	111	100.0

Table III. Dietary habits

The dietary habits of the participants showed that a majority (85.6%) followed a mixed diet, while 14.4% identified as non-vegetarians. This indicates that most young adults in the study consumed both plant-based and animal-based foods, which could have implications for their nutritional intake and obesity-related practices.
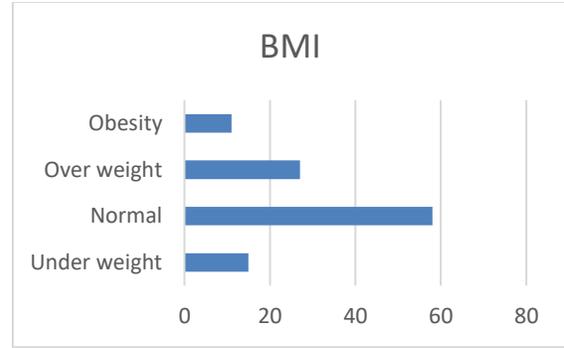
c) BMI Distribution

Figure I. BMI distribution

The BMI distribution among participants revealed that more than half (52.3%) had a normal BMI, indicating a relatively healthy weight status in the majority. However, 24.3% were classified as overweight, and 9.9% fell into the obesity category, highlighting a considerable proportion at risk for weight-related health issues. Additionally, 13.5% of participants were underweight, which also poses potential health concerns. These findings emphasize the need for targeted nutritional and lifestyle interventions to promote balanced weight management among young adults. The mean value was 23.69 ± 5.51, which falls within the normal weight category. However, the BMI values ranged from 14.80 (underweight) to 56.60 (severe obesity), indicating a wide variation in body weight status among participants.
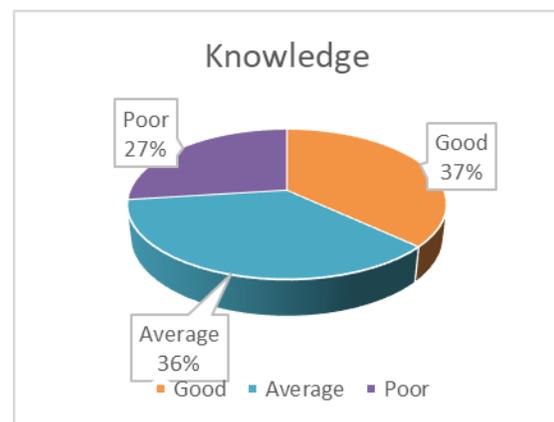
d) Knowledge

Figure II: knowledge

The assessment of knowledge regarding obesity among participants showed that 36.9% had good knowledge, while 36.0% demonstrated an average

understanding. However, 27.0% had poor knowledge, indicating a significant proportion with limited awareness of obesity-related concepts. These findings highlight the need for educational initiatives to enhance knowledge and awareness, which could contribute to better obesity prevention and management practices among young adults.
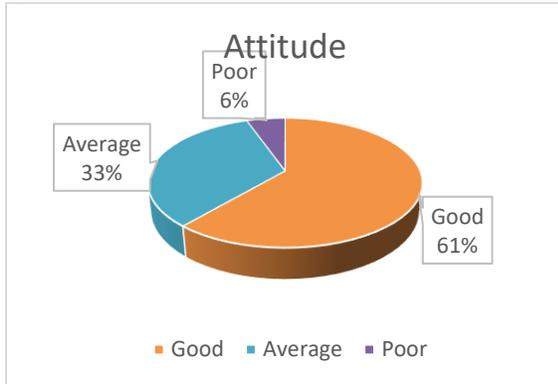
e) Attitude:

Figure III: Attitude

The attitude assessment towards obesity revealed that 61.3% of participants had a good attitude, reflecting a positive outlook on obesity-related health practices and prevention. Additionally, 33.3% exhibited an average attitude, while 5.4% had a poor attitude, indicating a small proportion with a less favourable perspective. These results suggest that while most young adults recognize the importance of obesity-related health measures, further efforts in awareness and motivation could help strengthen their commitment to adopting healthier behaviours.
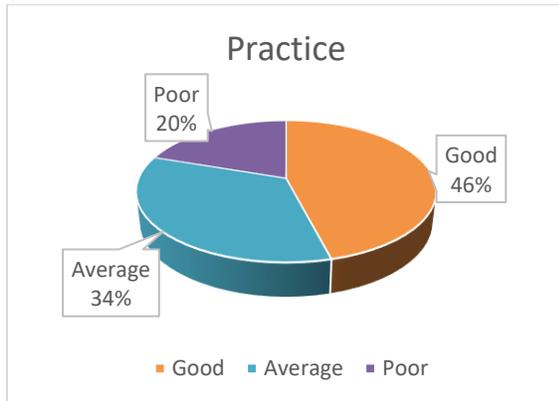
f) Practice:

Figure IV: Practice

The assessment of obesity-related practices among participants indicated that 45.9% demonstrated good practices, suggesting a significant proportion actively engaged in healthy behaviors. Additionally, 34.2% had average practices, while 19.8% exhibited poor adherence to obesity management and prevention strategies. These findings highlight the need for targeted interventions to reinforce healthy lifestyle habits and bridge the gap between knowledge, attitude, and actual practice among young adults.

g) Association of Scocio demographic variables with Knowledge, Attitude, Practice
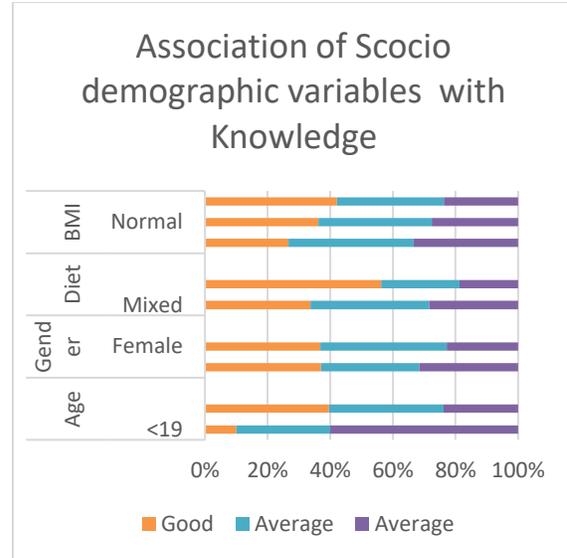

Figure V: Association of Scocio demographic variables with Knowledge

A statistically significant association was observed between age and knowledge ($\chi^2 = 6.7$, p = 0.035), with participants aged 20 years and above showing better knowledge about obesity compared to those below 19 years, who had a higher proportion of poor knowledge. In contrast, gender, diet, and BMI showed no significant association with knowledge. Males and females had comparable knowledge levels, and while non-vegetarians appeared to have slightly better knowledge than mixed-diet individuals, the difference was not statistically significant. Similarly, knowledge varied across BMI categories but without meaningful trends. These findings suggest that age plays a key role in determining obesity-related knowledge, emphasizing the need for focused educational strategies among younger individuals to improve awareness and understanding.
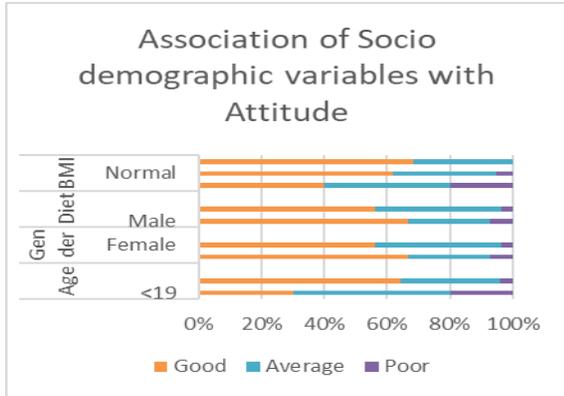
Figure VI: Association of Scocio demographic variables with Attitude

A significant association was found between age and attitude (χ^2 = 7.1, p = 0.031), with older participants (≥20 years) more likely to have a good attitude toward obesity-related health practices, while those under 19 years had higher proportions of average and poor attitudes. BMI was also significantly associated with attitude (χ^2 = 9.6, p = 0.047), as overweight/obese individuals exhibited the most positive attitudes and none showed poor attitude, possibly due to increased health awareness. In contrast, gender and diet were not significantly associated with attitude. Although males showed slightly better attitudes than females, and dietary groups had minor differences, these were not statistically meaningful. Overall, age and BMI appeared to influence attitude positively, indicating the need for early motivational efforts among younger and underweight individuals to cultivate positive health perspectives regarding obesity.
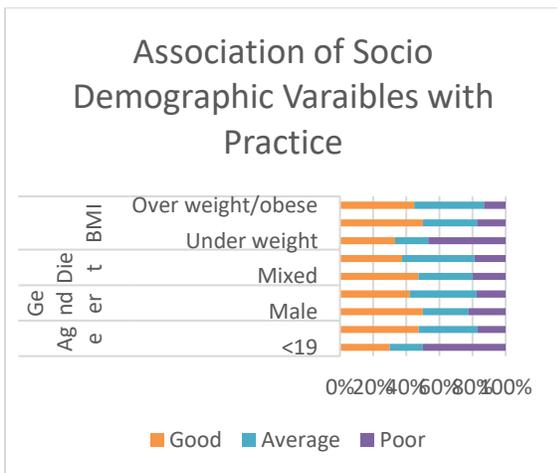

Figure VII: Association of Socio Demographic Varaibles with Practice

A statistically significant association was found between age and practice (χ^2 = 6.3, p = 0.043), with younger participants (<19 years) demonstrating poorer obesity-related practices compared to those aged 20 and above, who reported higher adherence to healthy behaviors. Gender and diet showed no significant association with practice, as males and females, as well as mixed-diet and non-vegetarian groups, had comparable distributions. Although the association between BMI and practice was not statistically significant (p = 0.065), underweight individuals tended to have poorer practices, while those with normal or higher BMI showed relatively better adherence. These findings suggest that younger individuals and those underweight may benefit most from targeted behavioral interventions aimed at improving obesity-related practices.

h) Correlation of Knowledge with Attitude and Practice

		Attitude	Knowledge	Practice
Attitude	Pearson Correlation	1	.341**	.065
	Sig. (2-tailed)		.000	.495
	N	111	111	111
Knowledge	Pearson Correlation	.341**	1	.214*
	Sig. (2-tailed)	.000		.024
	N	111	111	111
Practice	Pearson Correlation	.065	.214*	1
	Sig. (2-tailed)	.495	.024	
	N	111	111	111

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

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

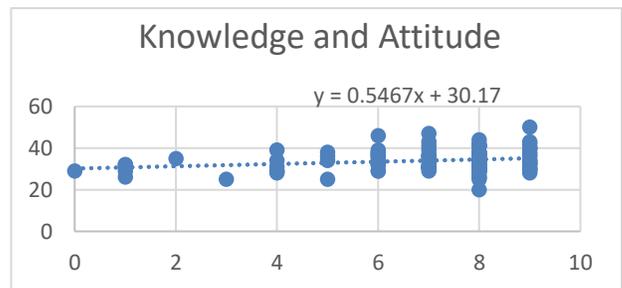Table IV: Correlation of Knowledge with Attitude and Practice

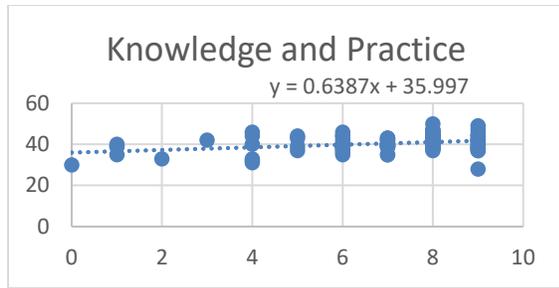Figure VIII: Correlation of Knowledge with Attitude

Figure IX: Correlation of Knowledge with Practice.

There is a moderate positive correlation between attitude and knowledge (r = 0.341, p < 0.01), which is statistically significant at the 0.01 level. A weak but significant positive correlation exists between knowledge and practice (r = 0.214, p < 0.05). There is no significant correlation between attitude and practice (r = 0.065, p = 0.495). Knowledge is significantly correlated with both attitude and practice, indicating that improving knowledge can have a positive impact on both how individuals perceive obesity and their actual behaviours.

Attitude and practice are not significantly correlated, suggesting that while people may have positive perceptions about obesity management, it does not necessarily translate into consistent healthy practices.

These findings highlight the need for behavioural interventions that go beyond knowledge enhancement and focus on motivation and habit formation to improve obesity-related practices.

IV: DISCUSSION

This study explored the knowledge, attitude, and practice (KAP) related to obesity among young adults. While 36.9% of participants had good knowledge and 61.3% exhibited a positive attitude, only 45.9% practiced healthy obesity-related behaviors. The results revealed significant associations between age and all three KAP domains, indicating that older participants (≥20 years) were more likely to possess better awareness, a more positive attitude, and healthier practices. BMI was significantly associated with attitude, with overweight/obese participants displaying greater concern about obesity-related health issues. However, gender and diet type showed no significant associations with any domain. Correlation analysis indicated a moderate positive relationship between knowledge and attitude (r =

0.341, p < 0.01) and a weak but significant correlation between knowledge and practice (r = 0.214, p < 0.05). Notably, no significant correlation was found between attitude and practice (r = 0.065), suggesting that a positive mindset alone does not guarantee healthy behavioral change. These findings underscore the gap between awareness and implementation.

V: CONCLUSION

The study findings indicate that while most young adults had an average to good level of knowledge and attitude regarding obesity, their actual practice of obesity prevention and management was lacking. Older participants and those with higher BMI were more likely to have better knowledge and a positive attitude. However, younger individuals, especially those under 19 years, had poorer knowledge, attitude, and practice, suggesting a need for targeted awareness programs and behavioural interventions to improve obesity-related habits.

Given the weak association between knowledge and practice, efforts should focus not only on educating young adults about obesity but also on motivating behavioural changes through structured interventions. Future studies could explore the impact of behavioural reinforcement strategies, policy-level changes, and lifestyle interventions in improving obesity-related health behaviours among young adults.

VI: FUTURE RECOMMENDATIONS

Based on the findings of this study, the following public health recommendations are suggested to improve knowledge, attitude, and practices related to obesity among young adults:

1. Integrate Obesity Education into School and College Curricula

- Implement structured health education programs focusing on obesity prevention, nutrition, and physical activity in schools and universities.

- Conduct workshops and interactive sessions to raise awareness about the long-term health risks of obesity and the importance of maintaining a healthy lifestyle.

2. Promote Healthy Eating and Lifestyle Campaigns

- Launch public health campaigns emphasizing the benefits of balanced diets, reduced consumption of processed and fast foods, and increased intake of fruits and vegetables.

- Encourage local governments and institutions to provide healthier food options in cafeterias and vending machines.

3. Encourage Physical Activity Through Community Initiatives

- Develop accessible and affordable community-based fitness programs, including outdoor exercise facilities, walking trails, and subsidized gym memberships for young adults.

- Organize fitness challenges and awareness drives to encourage regular physical activity and reduce sedentary behavior.

4. Implement Behavioral Change Programs

- Use evidence-based behavioral interventions, such as motivational counseling, goal-setting strategies, and peer support groups, to improve obesity-related practices.

- Leverage digital health solutions, including mobile apps and social media campaigns, to promote healthy habits and track progress.

5. Strengthen Policy Interventions on Obesity Prevention

- Advocate for stricter regulations on marketing unhealthy foods, particularly those targeting young adults.

- Implement policies that encourage physical activity, such as active transport initiatives (cycling lanes, pedestrian-friendly spaces) and workplace wellness programs.

By implementing these recommendations, public health authorities can work towards enhancing obesity awareness, fostering healthier lifestyles, and ultimately reducing the burden of obesity-related diseases among young adults.

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