

Eating Attitudes Across BMI Categories Among Female University Students

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Abstract—The present study was conducted to examine differences in eating attitudes among female university students belonging to different BMI categories. A total of 80 female university students (N = 80) were selected using a simple random sampling technique. The participants were classified into four BMI categories: Underweight (n = 21), Normal Weight (n = 39), Overweight (n = 18), and Obese (n = 2). The Eating Attitudes Test-26 (EAT-26) was used to assess eating attitudes. Besides descriptive statistics, one-way Analysis of Variance (ANOVA) was applied to determine differences among BMI categories and the Least Significant Difference (LSD) post hoc test was employed to identify pairwise differences whenever the F-ratio was significant. The findings revealed significant differences among BMI categories in Total Eating Attitude (F = 8.34, $p < .001$), Dieting (F = 6.51, $p = .001$) and Bulimia and Food Preoccupation (F = 4.42, $p = .006$). No significant differences were observed for Oral Control (F = 1.60, $p = .195$). The LSD analysis further indicated that overweight and obese students generally scored higher on eating attitude measures than underweight and normal-weight students. However, no significant differences were found among BMI categories with regard to Oral Control scores. It was concluded that BMI has a significant influence on eating attitudes among female university students.

Index Terms—Eating Attitudes, Body Mass Index (BMI), Female University Students, EAT-26, Dieting Behaviour, Bulimia and Food Preoccupation.

I. INTRODUCTION

Food and nutrition are essential components of human health, growth, development and overall well-being. Proper nutrition is necessary for maintaining physical fitness, mental efficiency, emotional stability and disease prevention. Beyond the biological requirement

of food intake, the way individuals think, feel and behave toward food significantly influences their dietary habits and health outcomes. These beliefs, emotions, perceptions and behaviours related to food, body image, body weight and eating practices are collectively referred to as eating attitudes (Fairburn, 2008). Eating attitudes include perceptions regarding food consumption, dieting behaviour, meal patterns, body shape concerns and weight-control practices (Garner & Garfinkel, 1979).

Healthy eating attitudes promote balanced dietary habits, positive body image, emotional well-being and favourable health outcomes. In contrast, unhealthy eating attitudes may contribute to nutritional deficiencies, overweight and obesity, psychological distress, impaired academic performance and the development of eating disorders (Treasure et al., 2020). Such negative attitudes are often characterized by behaviours such as meal skipping, restrictive dieting, binge eating, emotional eating, overeating and excessive concern regarding body weight and body shape (Dakanalis et al., 2023).

Eating attitudes are influenced by a variety of biological, psychological, social, cultural and environmental factors. Biological factors include hunger, appetite, metabolism, genetics and hormonal influences that regulate eating behaviour. Psychological factors such as stress, anxiety, depression, low self-esteem, perfectionism and body dissatisfaction can negatively affect eating behaviour and food choices (Polivy & Herman, 2020). Similarly, sociocultural influences, including peer pressure, family environment, cultural beliefs and media exposure, play an important role in shaping eating attitudes among young adults (Thompson et al., 1999).

Social media and contemporary beauty standards often promote unrealistic body ideals, particularly among females, which may contribute to unhealthy dieting practices and body dissatisfaction (Perloff, 2014). Eating attitudes are closely associated with eating behaviour, which encompasses patterns and habits related to food consumption, including meal frequency, portion size, food preferences, snacking habits, emotional eating and dietary choices.

Body Mass Index (BMI) is a widely used indicator of nutritional status and is commonly employed to classify individuals as underweight, normal weight, overweight and obese. Previous research has demonstrated that BMI is closely associated with eating attitudes and eating behaviours. Individuals with higher BMI often report greater concerns about body weight, dieting practices, body dissatisfaction and disordered eating patterns, while underweight individuals may also exhibit unhealthy eating attitudes due to excessive concern about body shape and weight control (Neumark-Sztainer et al., 2006; Quick et al., 2014). The assessment of eating attitudes according to BMI categories among female university students is important because eating behaviours developed during university life may influence long-term physical and mental health outcomes. Understanding the relationship between BMI and eating attitudes may help health professionals, educators and university authorities develop effective nutrition education programmes, counselling services and health promotion strategies aimed at improving the nutritional and psychological well-being of female students.

II. PURPOSE OF THE STUDY

The purpose of the present study was to assess the eating attitudes of female university students and to examine differences in eating attitudes across Body

Mass Index (BMI) categories. The study also aimed to compare total eating attitude scores and their dimensions (dieting, bulimia and food preoccupation, oral control) among underweight, normal-weight, overweight and obese female university students.

A. Tool Used: Eating attitudes of female university students were measured using the Eating Attitudes Test-26 (EAT-26) developed by Garner, Olmsted, Bohr and Garfinkel (1982). The EAT-26 consists of 26 items and assesses eating attitudes through three dimensions: dieting, bulimia and food preoccupation and oral control.

B. Data Collection: For the purpose of the study, a total of eighty female university students ($N = 80$) were selected from Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab. The subjects were selected using a simple random sampling technique. Prior permission was obtained from the concerned authorities before data collection. The purpose of the study was explained to the participants, and necessary instructions regarding completion of the questionnaire were provided. The Eating Attitudes Test-26 (EAT-26) was administered to collect the required data. Participants were assured of the confidentiality of their responses and were requested to complete the questionnaire honestly and independently.

C. Statistical Analysis: Besides descriptive statistics, one-way Analysis of Variance (ANOVA) was employed to compare Total Eating Attitude scores and their dimensions (dieting, bulimia and food preoccupation and oral control) across different Body Mass Index (BMI) categories among female university students. In cases where the F-ratio was found to be significant, the Least Significant Difference (LSD) post hoc test was applied to determine the significance of differences between paired group means.

III. ANALYSIS AND STATISTICAL TREATMENT

Table 1. Descriptive Statistics of Eating Attitude Scores Across BMI Categories

BMI Category	n	Total Eating Attitude (Mean $\pm$ SD)	Dieting (Mean $\pm$ SD)	Bulimia and Food Preoccupation (Mean $\pm$ SD)	Oral Control (Mean $\pm$ SD)
Underweight	21	19.29 $\pm$ 4.72	13.52 $\pm$ 4.62	3.52 $\pm$ 1.40	2.24 $\pm$ 2.34
Normal Weight	39	22.56 $\pm$ 3.84	16.77 $\pm$ 2.68	3.97 $\pm$ 1.97	1.82 $\pm$ 1.12
Overweight	18	26.11 $\pm$ 7.71	18.61 $\pm$ 5.64	5.00 $\pm$ 2.03	2.50 $\pm$ 1.65
Obese	2	33.00 $\pm$ 2.83	21.50 $\pm$ 0.71	7.50 $\pm$ 0.71	4.00 $\pm$ 2.83
Total	80	22.76 $\pm$ 5.84	16.45 $\pm$ 4.44	4.18 $\pm$ 1.95	2.14 $\pm$ 1.69

Table 1 presents the descriptive statistics of Total Eating Attitude scores and their dimensions across BMI categories. Obese students recorded the highest mean scores for Total Eating Attitude, Dieting, Bulimia and Food Preoccupation, and Oral Control, whereas underweight students generally exhibited the lowest mean scores. The findings suggest an increasing trend in eating attitude scores across higher BMI categories.

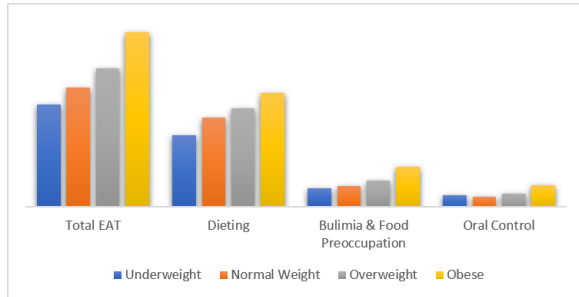


Figure 1 Mean total eating attitude scores across BMI categories among female university students.

Table 2. ANOVA of Eating Attitude Scores Across BMI Categories

Variable	F value	Sig
Total EAT	8.34*	< .001
Dieting	6.51*	.001
Bulimia and Food Preoccupation	4.42*	.006
Oral Control	1.60	.195

*Significant at $p < .05$.

Table 2 indicates significant differences among BMI categories for Total Eating Attitude ($F = 8.34$, $p < .001$), Dieting ($F = 6.51$, $p = .001$) and Bulimia and Food Preoccupation ($F = 4.42$, $p = .006$). However, no significant difference was found for Oral Control ($F = 1.60$, $p = .195$).

Table 3. LSD Post Hoc Comparisons for Total Eating Attitude Scores

Dependent Variable	Group		Mean Difference (I-J)	Std. Error	p-value
	Group (I)	Group (J)			
Eat Total	Underweight	Normal	-3.278*	1.397	.022
		Overweight	-6.825*	1.658	< .001
		OBESE	-13.714*	3.820	.001
	Normal	Overweight	-3.547*	1.471	.018
		OBESE	-10.436*	3.743	.007
	Overweight	OBESE	-6.889	3.848	.077

*. The mean difference is significant at the 0.05 level.

Table 3 indicates that significant differences were observed in Total Eating Attitude scores between underweight and normal-weight, overweight and obese students. Significant differences were also found between normal-weight and overweight as well as obese students. However, no significant difference was observed between overweight and obese students.

Table 4 LSD Post Hoc Comparisons for Dieting Scores

Dependent Variable	Group		Mean Difference (I-J)	Std. Error	p-value
	Group (I)	Group (J)			
Dieting	Underweight	Normal	-3.245*	1.094	.004
		Overweight	-5.087*	1.298	< .001
		OBESE	-7.976*	2.990	.009
	Normal	Overweight	-1.842	1.151	.114
		OBESE	-4.731	2.930	.110
	Overweight	OBESE	-2.889	3.012	.341

*. The mean difference is significant at the 0.05 level.

Table 4 shows that significant differences in Dieting scores were observed between underweight students and those belonging to the normal-weight, overweight and obese categories. However, no significant differences were found among the remaining BMI groups. These findings suggest that dieting behaviour differs primarily between underweight students and students belonging to higher BMI categories.

Table 5 LSD Post Hoc Comparisons for Bulimia and Food Preoccupation Scores

Dependent Variable	Group				
Bulimia and food preoccupation	Group (I)	Group (J)	Mean Difference (I-J)	Std. Error	p-value
	Underweight	Normal	-.451	.497	.368
		Overweight	-1.476*	.590	.015
		OBESE	-3.976*	1.360	.005
	Normal	Overweight	-1.026	.524	.054
		OBESE	-3.526*	1.332	.010
	Overweight	OBESE	-2.500	1.370	.072

*. The mean difference is significant at the 0.05 level.

Table 5 demonstrates that significant differences in Bulimia and Food Preoccupation scores were observed between underweight and overweight students, underweight and obese students, and normal-weight and obese students. No significant differences were found among the remaining BMI groups.

IV. CONCLUSION

The study examined differences in eating attitudes across BMI categories among female university students. The findings revealed significant differences in overall eating attitudes, dieting, bulimia and food preoccupation across BMI groups. Students with higher BMI, particularly those in the overweight and obese categories, exhibited higher levels of eating-related concerns compared to underweight and normal-weight students. However, no significant differences were found in oral control across BMI categories. Overall, the results suggest that higher BMI is associated with greater concerns related to eating behaviours and weight management, highlighting the importance of promoting healthy eating attitudes and positive body image among university students. The findings should be interpreted with caution due to the small number of participants in the obese category. Future studies should include larger and more balanced BMI groups to enhance the generalizability of the results.

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