



## Original Article

## Disturbed Eating Attitude and Body Shape Apprehension in University Students in Karachi, Pakistan

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## ARTICLE INFO

**Keywords:**

Dietary Habits, Body Shape, Mental Well-being, Body Shape Questionnaire-16, Eating Attitude Test-26

**How to Cite:**Anwar, N., Ali, S., Shahzadi, M., Baig, M., & Bushra, D. (2024). Disturbed Eating Attitude and Body Shape Apprehension in University Students in Karachi, Pakistan : Disturbed Eating Attitude and Body Shape Apprehension in Students . Pakistan Journal of Health Sciences, 5(02). <https://doi.org/10.54393/pjhs.v5i02.1297>**\*Corresponding Author:**

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mafiahshahzadi62@gmail.comReceived Date: 30<sup>th</sup> January, 2024Acceptance Date: 19<sup>th</sup> February, 2024Published Date: 29<sup>th</sup> February, 2024

## ABSTRACT

Eating attitudes play a crucial role in the overall well-being of individuals, particularly among university students who often face various academic, social, and personal stressors. **Objective:** To examine eating attitudes and body shape apprehensions among university students in Karachi, Pakistan, with a particular focus on private and public institutions. **Methods:** A cross-sectional study design was utilized to address this objective, selecting 200 students from private sector universities and 200 from public sector universities in Karachi, Pakistan, using purposive sampling. The participants, aged between 19 and (M=22.55, SD=1.813), completed a respondent's profile form, the Eating Attitude Test-26, and the Body Shape Questionnaire-16. **Results:** The findings revealed that undergraduates in public universities exhibited a significantly higher prevalence of disturbed eating attitudes compared to their counterparts in private universities. However, both groups of students experienced body image concerns at a relatively similar level. Additionally, first-year students in both private and public universities demonstrated significantly higher levels of body shape apprehension and disturbed eating attitudes compared to final-year students. Furthermore, students in social sciences exhibited more body shape apprehension and disturbed eating attitudes than their counterparts in science, engineering, and management faculties in both university sectors. **Conclusions:** This study underscores the noteworthy issue of disturbed eating attitudes and body shape concerns among university students in Karachi. To curb this problem among undergraduates, diligent monitoring and preventive measures are imperative.

## INTRODUCTION

Maintaining mental well-being involves attending to cognitive processes, decision-making, and mood regulation; necessitating sustained energy and mindfulness. The sustenance of this energy is derived from the daily intake of food [1]. Dietary choices wield a direct impact on mental health, contributing to the maintenance of a consistently elevated mood. In the absence of nutritious sustenance, mental health can be compromised in terms of vitality and efficiency [2]. Individuals often establish a profound connection with food, frequently employing it as a means to influence emotional and

physical well-being. Consequently, comprehensive exploration of this subject from various perspectives is imperative [3]. In numerous studies investigating the nexus between individuals and food, the term "attitude" is commonly employed to ascertain attitudes, emotions, and values related to eating [4]. It encapsulates the values, emotions, and ideas directed towards meals [5]. Eating attitude encompasses any thought, belief, effect, or approach towards food and characterizes attitude towards eating as a collective set of opinions and approaches, either constructive or harmful, about a specific thing,

leading to actions aligned with thoughts and emotions related to that particular entity [6]. Patel *et al.*, describes a disturbed attitude towards eating as an unhealthy approach to meals, falling short of being clinically diagnosed as an eating disorder yet exhibiting less severity than clinically identified eating problems [7]. Dingemans *et al.*, distinguishes between clinically diagnosable eating disorders and disturbed attitudes toward eating based on intent and distress levels [8]. Professional assessment becomes essential when individuals resort to meals to address underlying emotional issues and when decisions about what and how to eat become obsessive, rigid, or significantly impact daily life [9]. Disruptive attitudes toward eating as behaviors such as bingeing, restricting, purging, or limiting meals and foods, falling short of meeting the criteria for a diagnosable eating disorder. Additionally, individuals with disturbed attitudes toward eating may not manifest all the emotional features associated with clinical eating disorders [10]. Concerns about body shape involve negative preoccupations and anxiety related to one's physique, encompassing constant comparison and pursuit of an ideal body shape, representing a significant risk factor for eating disorders [11]. Perceptions of body shape anxiety vary in intensity across environments and cultures, exhibiting a noticeable and escalating trend [12]. In consideration of the factors contributing to disturbed eating attitudes and concerns associated with body shape are imbalances in the levels of serotonin and dopamine neurotransmitters, being highly self-critical, seeking admiration, perfectionism, being irritable and stubborn, family and peer remarks, standardized ideals of beauty and the perfect body, low self-esteem, stress, and media influence. In recent decades, a notable rise has been observed in the prevalence of disturbed eating attitudes and concerns regarding body shape in Western and South Asian countries, particularly among pubescent children and adults of both genders. Similarly, in Pakistan, the issue of disrupted eating attitudes and body shape concerns has gained prominence among university populations, with a steady increase in incidence. A substantial number of students exhibit subclinical forms of eating disorders as opposed to clinically diagnosed ones. However, there is limited research that specifically examines the differences between students in public and private university sectors in Karachi regarding eating attitudes and body shape apprehension. The available literature on this aspect is minimal, underscoring the need for further exploration into the distinct experiences of students from different university sectors in Karachi. Another reason for conducting research on observing the relationship between these variables is to identify whether where a

student chooses to study their undergraduate studies affects the risk of developing disordered eating and a negative attitude towards their body. Young students, such as those seen studying in universities, are more likely to be inspired and motivated to act on fad diets, poor eating behaviors they may see online, drastic weight loss programs, and undergo cosmetic treatments, which all hold the promise of beauty.

Taking into account the aforementioned literature concerning body shape apprehension and disturbed eating attitudes, a research study was formulated to investigate these concerns among students enrolled in both private and public institutions of higher education. The aim is to enhance comprehension and explore preventive measures against potential consequences.

## METHODS

A cross-sectional research design was chosen to compare disturbed eating attitudes and body shape apprehension among students in private and public sector universities. This study used a Purposive Sampling Technique to select participants. The study consisted of 400 students, including 200 from private sector universities (100 male; 100 female) and 200 from public sector universities located in Karachi (100 male; 100 female), with equal distribution of participants. The sample size was established through g-power analysis. A purposive sampling technique was utilized to select participants. The participants' ages ranged between 19 to 25 years ( $M=22.55$ ,  $SD=1.813$ ). Permission to conduct the study and collect data was granted by six distinct private and public sector universities in Karachi, Pakistan from January 2023- June 2023. Participants who gave verbal and written consent were incorporated into the study. Undergraduates of social sciences, management sciences, engineering, and faculty of sciences were included. Participants below the age of 19 were excluded. The following measures were utilized in the study. Respondent's Profile Form was structured to gather information on gender, age, academic year, academic faculty, relationship status, height, weight, BMI, socioeconomic status, and the city of residence. Eating Attitude Test-26 (EAT-26) was used to identify the presence of "eating disorder risk" based on attitudes, feelings and behaviours related to eating [13]. There are 26 self-report questions assessing general eating behaviour and five additional questions assessing risky behaviour. The EAT-26 can aid in the screening and diagnosis of eating disorders such as anorexia nervosa, bulimia nervosa and binge eating disorder. The scale has three subscales: Dieting ((Items 1,6,7,10,11,12,14,16,17,22,23,24,26), Bulimia (Items 3,4,9,18,21,25) and Food Preoccupation and oral Control (Items 2,5,8,13,15,19,20). The total score (between 0 and 78) provides an overall risk score, where higher scores

indicating greater risk of an eating disorder. The reported value for Cronbach's alpha for this scale was  $\alpha=0.84$ . Body Shape Questionnaire-16 (BSQ-16) [14], comprising sixteen self-report items, this questionnaire is designed to explore an individual's perception of their own body shape. Scores on this questionnaire range from 0 to 66. The reported value for Cronbach's alpha for this scale was  $\alpha=0.81$ . The following cut points for the 16 item short forms such as less than 38 showed no concern with shape, 38 to 51 showed mild concern with shape, 52 to 66 showed moderate concern with shape and over 66 marked as severe concern with shape. Work began properly (January 2023- June 2023) following permission from the Board of Advance Studies (BAS). The researchers built a connection with the participants by giving a brief introduction to themselves after obtaining authorization from universities. Following an introduction to the research objectives, participants were assured of voluntary participation, and it was emphasized that their individual information would be securely maintained. Subsequently, all participants were instructed to complete the Respondent's Profile Form, Eating Attitude Test-26, and Body Shape Questionnaire-16. Once data was collected, scoring for each research portion was carried out according to the plans outlined in the questionnaires. Data analysis was conducted using SPSS (22.0), t-tests being the primary statistical tools. The data from the study were analyzed using the Statistical Package for the Social Sciences (SPSS). Data were exclusively collected from individuals who willingly provided consent to participate in the research. Participants retained the right to withdraw at any point during the administration of the questionnaires without facing any form of penalty.

## RESULTS

Table 1 shows a frequency distribution and percentages of demographic characteristics.

**Table 1:** Statistical Overview of Demographic Characteristics in Study Sample (N=400)

Demographic Variables	Total (N=400) N(%)	Public (N=200) N(%)	Private (N=200) N(%)
<b>Age</b>			
19	31 (7.75)	15 (7.5)	16 (8)
20	30 (7.5)	15 (7.5)	15 (7.5)
21	20 (10)	41 (10.25)	21 (10.5)
22	103 (25.75)	52 (26)	51 (25.5)
23	44 (11.0)	22 (11)	22 (11)
<b>Socioeconomic Status</b>			
Upper	95 (23.8)	36 (18)	59 (29.3)
Middle	300 (75.0)	159 (79.5)	141 (70.5)
Lower	5 (1.2)	5 (2.5)	0 (0.0)
<b>BMI</b>			
Underweight	79 (19.8)	47 (23.5)	32 (16)
Normal	259 (64.7)	116 (58)	143 (71.5)

Overweight	50 (12.5)	27 (13.5)	23 (11.3)
Obese	12 (3.0)	10 (5)	2 (1)
<b>Relationship status</b>			
Single	366 (91.5)	183 (91.5)	183 (91.5)
Engaged	26 (6.3)	14 (7)	12 (6)
Married	8 (2.0)	3 (1.5)	5 (2.5)
<b>Academic Faculty</b>			
Science	100 (25)	50 (25)	50 (25)
Social sciences	100 (25)	50 (25)	50 (25)
Management sciences	100 (25)	50 (25)	50 (25)
Engineering	100 (25)	50 (25)	50 (25)
<b>Academic Year</b>			
First year	163 (40.8)	89 (44.5)	74 (37)
Second year	137 (34.2)	92 (46)	45 (22.5)
Third year	79 (19.7)	9 (4.5)	70 (35)
Fourth year	21 (5.3)	10 (5)	11 (5.5)

Table 2 shows noteworthy distinction with a moderate effect size was identified in the mean scores of disturbed eating attitudes between private and public sector university students ( $t(398) = -3.17, p = 0.05$ ). However, a less pronounced difference with a small effect size was noted in the mean scores of body shape apprehension between students in both sectors ( $t(398) = -1.75, p = 0.05$ ).

**Table 2:** T-Test for Disturbed Eating Attitudes and Body Shape Apprehensions among University Students in Public and Private Sectors of Karachi

Variables	Private (N=200)	Public (N=200)	df	t	Cohen's d
	M± SD	M± SD			
Body Shape	37.92 ± 17.54	34.96 ± 16.13	398	-1.75	0.17
Eating Attitude	12.24 ± 11.70	16.06 ± 12.36	39	-3.17*	0.51

\* $p < 0.05$

Table 3 presented a significant difference with a moderate effect size in the mean scores of body shape apprehension ( $t(240) = 0.512, p = 0.05$ ) and disturbed eating attitudes ( $t(240) = 2.58, p < 0.05$ ) between first-year and final-year students in private and public sector universities.

**Table 3:** Independent Samples t-Test for Disturbed Eating Attitudes and Body Shape Apprehensions between First-Year and Final-Year Students in Public and Private Sector Universities of Karachi

Variables	First year (N=163)	Final year (N=137)	df	t	Cohen's d
	M± SD	M± SD			
Body Shape	37.39 ± 18.05	35.69 ± 16.23	240	0.512*	0.57
Eating Attitude	15.88 ± 13.53	11.43 ± 10.01	240	2.58*	0.50

\* $p < 0.05$

## DISCUSSION

The results of the first hypothesis in the present study indicate a higher prevalence of disturbed eating attitudes among students in public sector universities compared to their counterparts in private sector universities in Karachi, as evidenced by a significant level in the t-Test ( $t = -3.17, p <$

0.002). Conversely, a less significant difference was found through the t-Test ( $t = -1.75$ ,  $p < 0.080$ ) concerning body shape apprehensions among students in private and public sector universities in Karachi (refer to Table 2). Many of them resort to experimenting with their food intake, such as avoiding mealtimes and engaging in ritualized consumption patterns like making small portions of nutrients, showing a preoccupation with calorie counting, and so forth, all aimed at shaping their bodies. These behaviors consequently lead to the development of disturbed eating patterns [15]. The present study also indicated comparable trends within the student population of public sector universities. Moreover, the study showed that both private and public sector universities in Karachi do not consistently teach their students about healthy lifestyle patterns. This unavailability of education contributes to negative self-perception, negative body perception, high self-expectations, and incomplete understanding about health, fitness, and eating, therefore gradually exposing students towards increasingly disturbed levels [16]. Furthermore, the present study also investigated that private sector universities accommodate their students with amenities like fully equipped gyms and opportunities for physical activities to become involved in healthy pursuits. Similarly, Alegria *et al.*, identified that excessive exercises and obsession with calorie counting as means to sustain body shape among undergraduates in their studies [17]. Similarly, a current survey of private universities in Karachi, including Baqai Medical University, Institute of Business Administration, Aga Khan University, College of Business Management, Indus Valley School of Art and Architecture, NED University, and Iqra University, proposed that approximately 40% of students are worried regarding their body shapes and choose to participate in physical activities to keep themselves fit and attain an ideal shape [18]. The outcomes of the second hypothesis, as determined by the t-Test ( $t = 0.512$ ,  $p < 0.04$ ) for body shape apprehension and ( $t = 2.58$ ,  $p < 0.02$ ) for disturbed eating attitudes, demonstrated a significant difference between first-year and final-year students in both public and private universities (refer to Table 3). Similarly, research conducted by Zagorsky *et al.*, also discovered apprehensions related to body shape and disturbed attitudes toward eating in first-year undergraduates, with an average prevalence between 40% and 50% [19]. This percentage is only slightly higher than that observed in individuals of the same age who are not enrolled in universities. Another study involving 204 first-year university students from three institutions revealed that 27.7% were categorized as having body shape apprehension, and 25.5% exhibited unhealthy eating behaviors [20]. Our results showed that the students in

management sciences, engineering, and science typically experience high academic and professional pressures, limiting their focus on concerns related to beauty, body shapes, weight, and disturbed eating approaches. Similarly, existing research also supports the notion that students in social sciences tend to be more concerned and apprehensive about their body shapes and eating habits [21]. A survey conducted on university students in Ireland also revealed a higher prevalence of body shape concerns and disturbed eating attitudes among social science students [22].

## CONCLUSIONS

It is imperative to incorporate a comprehensive unit on the aspects of body shape and eating attitudes within the academic courses and training for students. This integration should span across different subject units, offering students a thorough understanding of these topics. Additionally, engaging students in discussions about real-life stories and cases, highlighting individuals who have navigated and successfully coped with concerns related to body shape and eating, can prove highly beneficial and motivating. Such discussions provide students with valuable insights into the experiences of others and effective coping strategies.

## Authors Contribution

Conceptualization: NA

Methodology: SA

Formal analysis: NA

Writing-review and editing: MS, MB, DB

All authors have read and agreed to the published version of the manuscript.

## Conflicts of Interest

The authors declare no conflict of interest.

## Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article.

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