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The association of binge eating with internet addiction, body shape concerns, and BMI among university students in the United Arab Emirates

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Abstract

Background Binge-eating disorder (BED) is the most common eating disorder with university students being particularly vulnerable. The study aimed to investigate the association between binge eating and Internet addiction (IA), body shape (BS) concerns, and body mass index (BMI) among university students.

Methods In this cross-sectional study, 448 university students (221 males and 227 females) aged between 18 and 25 years were recruited. A multicomponent questionnaire included socio-demographic information, and validated scales such as the International Physical Activity Questionnaire (IPAQ), Binge-Eating Disorder Screener-7 (BEDS-7), Internet Addiction Test (IAT), and Body Shape Questionnaire (BSQ). Anthropometric measurements [weight, height, and waist circumference (WC)] were recorded, and BMI was calculated.

Results The findings reported that approximately 31% of the participants were at risk of BED, 24.3% had moderate/severe IA, 27.8% were moderate/marked concerned about their BS, and 41.1% were overweight/obese. The risk of BED was significantly associated with IA (OR = 1.06, 95%CI: 0.34–0.93; $p < 0.005$), BS concerns (OR = 1.39, 95%CI: 0.90–2.16; $p < 0.001$), BMI (OR = 1.74, 95%CI: 1.16–2.60; $p < 0.005$), and WC (OR = 1.78, 95%CI: 1.16–2.75; $p < 0.006$). Regression analysis showed that the risk of BED had a highly significant positive association with WC, BSQ, and IA with the WC identified as the strongest predictor for risk of BED ($\beta = 0.23$, $p < 0.001$).

Conclusions This study underscores the need for targeted national initiatives and awareness programs that promote balanced food consumption, healthy internet use, and increased physical activity among young adults of both sexes. By fostering these healthy habits, such interventions can reduce the risk of binge eating disorder and support overall mental and physical well-being in this population.

Plain English Summary

Binge-eating disorder (BED) is a common eating problem, especially among university students. This study looked at how BED risk is related to Internet addiction (IA), body shape concerns (BS), and body mass index (BMI) among

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students. The study involved 448 students aged 18 to 25. They filled out questionnaires and had their weight, height, and waist size measured. The findings highlight the high prevalence of risk of BED among university students and its strong associations with IA, BS concerns, WC, and BMI. The study suggests that there's a need for programs to help students both men and women eat healthily, stay active, and practice healthy internet use with support from experts like psychologists, counselors, and nutritionists.

Keywords Binge-eating disorder, Internet addiction, Body shape concerns, Body mass index, Waist circumference, University students, UAE

Introduction

In recent decades, eating disorders have gained significant global attention due to their increasing prevalence with binge eating disorder (BED) accounting for a notable portion of these cases [1]. In 2019, 17.3 million of the 41.9 million global cases of eating disorders were attributed to BED, accounting for one-fifth of the total Disability-Adjusted Life Years (DALYs) due to eating disorders [2]. BED is characterized by recurrent episodes of consuming large quantities of food, accompanying feelings of loss of control and distress [3]. Often leading to weight gain and health problems related to obesity, including type 2 diabetes, cardiovascular disease, and other psychiatric illnesses such as anxiety and depression [4]. Recent research has shown that youth are particularly vulnerable to disordered eating behaviors, and face significant health challenges due to BED [5]. Specifically, youth aged 18 to 24 years are particularly vulnerable to BED, body shape (BS) concerns, and Internet addiction (IA), facing a complex array of health [6, 7].

BED shares similarities with addictive behaviors, as it meets many of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for addiction [8]. Another behavior with similar characteristics and associations is Internet addiction (IA), defined as pathological Internet use that disrupts daily functioning [9]. IA is of particular relevance among young adults, who are exposed to social media platforms that frequently portray idealized body images. This exposure can trigger body image concerns, increase body dissatisfaction, and contribute to disordered eating behaviors [10, 11]. IA also been linked to decreased physical activity and increased risk of obesity due to a sedentary lifestyle [12, 13]. For individuals with BED, body shape concerns and dissatisfaction with body image are common, further linking IA and BED through shared vulnerabilities [13].

Although the associations between binge eating, IA, body shape concerns, and BMI have been extensively studied worldwide, research remains limited in the Middle East and North Africa (MENA) region, particularly in the UAE. A scoping review of eating disorders in the Middle East highlighted the elevated risk of BED, with reported prevalence rates of 1.0% in Turkey, 1.8% in Jordan [13, 14], and 18.8% in Saudi Arabia [15]. While in Palestine, a study found that 50% of female college students

exhibited binge eating symptoms [6]. Studies show that binge eating disorder (BED) is generally more common in females, though some research in Middle Eastern populations suggests a more balanced prevalence between sexes. Cultural influences in the Middle East may affect eating behaviors uniquely, potentially narrowing the gender gap seen in Western countries [16].

In recent years, the rapid digitalization and widespread Internet access in the UAE have facilitated a sedentary lifestyle, increasing the risk of IA and its associated consequences. These changes have contributed to a rise in obesity rates and eating disorders, particularly among the youth [17, 18, 19]. A study measuring the predictors of BED among males and females in the UAE found that approximately 24–36% reported binge eating [20] with another study noting a BED rate of 20.3% among adolescents aged 15 to 18, indicating a significant public health concern [21]. Additionally, the portrayal of idealized body images on social media platforms has intensified body dissatisfaction and contributed to disordered eating behaviors among young adults in the UAE [16, 22]. The intersection of BED and IA and their impact on BS concerns, and BMI presents a unique challenge in the UAE, particularly for university students who face academic, social, and personal pressures that can contribute to mental health issues and unhealthy behaviors. Identifying associations between these variables is essential for the early identification of high-risk individuals and for understanding the mechanisms driving these behaviors. This study aims to examine the associations between BED, IA, body shape concerns, and BMI among university students in the UAE, offering insights that could inform holistic strategies to address the mental health and lifestyle factors affecting this population's well-being.

Methods

Study design

A quantitative cross-sectional study was conducted by recruiting undergraduate students from different colleges at the University of Sharjah, Sharjah, UAE.

Participants

A convenient sample of 448 participants (221 males and 227 females) was recruited from different colleges (health and non-health colleges) at the university. The

inclusion criteria for this study included male and female students registered at the university for the academic year 2019/2020 from different educational levels, aged between 18 and 25 years, and willing to participate. The exclusion criteria were postgraduate students, those previously diagnosed with mental disorders, lactating and pregnant females, and those aged more than 25 years. All participants were fully informed about the voluntary nature of their participation and the confidentiality of their collected data and provided their informed consent before the data collection.

Data collection

Data was collected by a trained research coordinator via face-to-face interviews using a multicomponent questionnaire which consisted of 74 questions. It included sociodemographic and lifestyle information (such as sex, age, nationality, place of living, study major, marital status, educational level, number of sleeping hours, smoking status, following a diet, and the reasons for their screen use time). After that, valid and reliable questionnaires such as the International Physical Activity Questionnaire (IPAQ), Binge-Eating Disorder Screener-7 (BEDS-7), the Internet Addiction Test (IAT), and Body Shape Questionnaire (BSQ) were used to assess the physical activity (PA), binge-eating practices, level of IA, and body shape concern respectively. Validated Arabic versions of the BSQ and IAT scales were used. At the end, the anthropometric measurements [weight (kg), height (cm), waist circumference (WC) (cm)] of the participants were measured. The questionnaire that included the sociodemographic and lifestyle information was adapted from different studies to suit the research questions. It was prepared in English and then translated into Arabic using translation and back-translation techniques then the two versions were cross-checked with the original valid questionnaire by a panel of experts. The final English and Arabic versions of the questionnaires and scales were pilot-tested to evaluate their validity and ensure that the questions were well formulated, and culturally adapted by the respondents. The questionnaire needed about 25 min to complete.

Binge-eating disorder screener-7 (BEDS-7)

BEDS-7 is a self-reported screening tool designed to detect symptoms of BED rather than to make a clinical diagnosis. It was validated based on DSM-5 diagnostic criteria that can help physicians identify patients who might be at risk of BED [23]. The BEDS-7 scale was translated into Arabic using translation and back-translation techniques due to the absence of a validated Arabic version. The translated scale was pilot-tested on 10 subjects, who were not included in the final analysis, to assess its clarity and validity and there was no need to make any changes to the scale. The BEDS-7 screener consists of

seven questions assessing participants' eating behaviors over the past three months. Participants who respond 'No' to the first question are categorized as having 'No risk of BED' and do not complete the rest of the screener. Questions 3 to 7 assess the frequency of specific behaviors, including lack of control overeating, eating when full, embarrassment about eating, feelings of disgust or guilt, and self-induced vomiting to control weight. Responses range from 'Never/Rarely,' 'Sometimes,' 'Often,' to 'Always.' Those who responded 'Yes' to questions 1 and 2, checked one of the boxes for questions 3 through 6, and responded with "Never/rarely" to Question 7 were categorized as "At risk of BED".

Physical activity questionnaire (IPAQ)

Physical activity (PA) among the participants was measured using the International Physical Activity Questionnaire (IPAQ) short form [24], which consists of 7 questions. It assesses the frequency (days per week), and the duration (hours and minutes per day) spent doing low-intensity PA (like sitting and walking), moderate-intensity PA (brisk walking, water aerobics, riding a bike, etc...), and vigorous-intensity PA (running, swimming, riding a bike fast or on hills, walking up the stairs, playing football, etc.,...) in the past week. The participants were classified into three different categories of PA based on METs considering the sum of the MET-(min/week) of walking, moderate-intensity, and vigorous-intensity physical activities: Low PA (<700 MET-minutes/week), moderate PA (700–2500 MET-minutes/week), and high PA (\geq 2500 MET-minutes/week) according to the scoring system provided by IPAQ analysis guidelines. A validated Arabic version of the scale was used also for Arabic-speaking participants [25].

Internet addiction test (IAT)

The IAT is a self-assessment tool composed of 20 items and scored on a 6-point Likert scale ranging from zero to 5 "does not apply, rarely, occasionally, frequently, often, and always" [26]. The total scores ranged between (0-100) with higher scores, indicating a greater level of addiction. Participants were classified as normal Internet users if the score ranged between (0–30), mild IA [31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49], moderate IA (50–79), or severe IA (80–100). The responses were recategorized into two groups (Normal/mild IA = 0) and (Moderate/severe IA = 1). A validated Arabic version of the scale was used also for Arabic-speaking participants [27].

Body shape questionnaire (BSQ)

The BSQ is an 8-item self-applied questionnaire assessing body dissatisfaction caused by feelings of being fat over the past month. Items were ranked using a 6-point Likert

scale (never, rarely, sometimes, often, very often, and always) [28]. The higher the score, the more the dissatisfaction with body shape. The participants were classified as follows: (<19) “No concern,” [19, 20, 21, 22, 23, 24, 25] “Mild concern with shape” [26, 27, 28, 29, 30, 31, 32, 33] “Moderate concern with shape” and (>33) “Marked concern with shape”. The responses were recategorized into two groups (No/mild concern=0) and (Moderate/ marked concern=1). A validated Arabic version of the scale was used also for Arabic-speaking participants [29, 30].

Anthropometric measurements

At the end of the interview, the participant’s weight (kg) and height (cm) were measured by using Seca 220 Telescopic Measuring Rod for Column Scales for height/weight measurements (Seca, Hamburg, Germany) and the WC was measured using inextensible anthropometric tape (Seca 201). A WC above 94 cm for males and 80 for females is considered a large WC [31]. BMI was calculated by dividing weight (kg) by the height squared (m^2) and classified based on the World Health Organization (WHO) as underweight (<18.5 kg/m^2), normal weight (18.5–24.9 kg/m^2), overweight (25–29.9 kg/m^2), and obesity (≥ 30 kg/m^2) [32].

Statistical analysis

The statistical analysis of the data was performed using Statistical Package for the Social Sciences (SPSS) version 29.0. (Version 22, IBM Corp., USA). The data were tested for normality distribution by using the Shapiro-Wilk test. Non-normally distributed variables were expressed as medians and interquartile ranges (IQR). Cross-tabulation

was done using a Chi-square test to examine the association of different categorical variables with the BED score. The difference between males and females in their BED, IAT, and BSQ scores were analysed using Mann Whitney U test was applied to compare the BEDS-7 scores between males and females. A stepwise linear regression test was applied to find the association and the best predictor for the BED score. Statistical significance was set at $p < 0.05$.

Ethical considerations

The study protocol was approved by the Research Ethics Committee (REC) at the University of Sharjah (REC-20-02-06-01-S) and participants signed a written consent form before their participation.

Results

Sample characteristics

The study sample consisted of 448 undergraduate students of which 227 (50.7%) were females and 221(49.3%) were males. Almost all participants were single (97.8%) of Arab nationality (92.9%), living with their families (63.4%). About half of the participants (48.8%) were between 18 and 20 years old, and 45.5% were from health-related majors. The sample was distributed equally among the educational levels (Table 1).

Lifestyle factors, BMI, and WC

Table 2 reports the lifestyle factors, BMI, and WC of the participants. About 40% of the participants had low PA, 30.4% had medium PA, and 30.4% had high PA. The majority of the participants were non-smokers (80.1%), 76.1% did not follow a specific, and 55.8% of the students reported sleeping less than 7 h per night. More than half of the participants (52.9%) had normal BMI, 23.3% were overweight, and 17.9% were classified as obese. Additionally, over a quarter of the participants (27.7%) had a large WC. The majority did not measure their weight daily (88.2%) and 62.3% spent most of their Internet time on social media.

Frequency distribution of binge eating, internet addiction, and body shape concerns among participants

Table 3 reported the results of the BED screener, IAT, and BSQ of the participants. Over one-third of the participants were at risk of BED (31.0%; 139 out of 448). The majority of the participants had concerns with their body shape (BSQ)(Mild/Moderate/Marked) (60.3%; 271 out of 448) and were classified as having Internet addiction (IAT)(Mild/Moderate/Severe) (68.4%, 307 out of 448) (Table 3).

Figure 1 presents the median (IQR) score of BED, BS concern (BSQ), and IAT among male and female university students. The median (IQR) BED score among males

Table 1 Sociodemographic characteristics of participants (N=448)

Variables		N	%
Sex	Males	221	49.3
	Females	227	50.7
Marital Status	Single	438	97.8
	Married	10	2.2
Age	18–20	223	49.8
	21–25	225	50.2
Nationality	Arab	416	92.9
	Non-Arab	32	7.1
Type of living	Dorms/Rented apartment	164	36.6
	With family	284	63.4
Major	Health	244	45.5
	Non-Health	204	54.5
Education level	First-year	122	27.2
	Second-year	107	23.9
	Third-year	98	21.9
	Fourth-year	86	19.2
	Fifth-year	35	7.8

Table 2 Distribution of the lifestyle variables, BMI, and WC among participants ($N=448$)

Variables		N	%
Physical activity	Low	176	39.3
	Medium	136	30.4
	High	136	30.4
Dieting	Yes	107	23.9
	No	341	76.1
Sleep	< 7 h	250	55.8
	≥ 7 h	198	44.2
Smoking	Yes	89	19.9
	No	359	80.1
BMI	Underweight	39	8.7
	Normal weight	225	50.2
	Overweight	104	23.2
	Obese	80	17.9
WC (cm)	Normal	324	72.3
	Large	124	27.7
Measure weight daily	Yes	53	11.8
	No	395	88.2
Screen Time use	Gaming	46	10.3
	Social Media	279	62.3
	Movies/Series	80	17.9
	Other	43	9.6

Abbreviations BMI: Body mass index, WC: Waist circumference

Table 3 Distribution of binge eating, internet addiction, and body shape concerns among participants ($N=448$)

Variables		N	%
BED	At risk of BED	139	31.0
	No risk of BED	309	69.0
IAT	Normal	142	31.6
	Mild	198	44.1
	Moderate	105	23.4
	Severe	4	0.9
BSQ	No Concern with Shape	178	39.6
	Mild Concern with Shape	146	32.5
	Moderate Concern with Shape	97	21.6
	Marked Concern with Shape	28	6.2

Abbreviations BED: Binge-eating disorder screener, IAT: Internet Addiction test, BSQ: Body shape questionnaire

was significantly higher than that of females [6 [2] vs. 5 [2], $p=0.001$]. However, there was no significant difference in IAT score [40 (78) vs. 37 (85)] and BSQ score [20 [35] vs. 21 [35]] among male and female students.

Association of BED with different factors

Table 4 shows the variables associated with the risk of BED among the study participants. Males were at a higher risk of BED compared to females (OR = 1.94, 95% CI: 0.63–1.40, $p < 0.001$). Moreover, non-smokers were significantly at higher risk of BED as compared to smokers (OR = 1.50, 95% CI: 0.92–2.43, $p = 0.006$), and students studying non-health majors were significantly at higher

risk of BED as compared to those studying health majors (OR = 1.06, 95% CI: 0.71–1.58, $p < 0.001$). The risk of BED was higher by 1.6 times among participants with moderate to severe IA compared to those with normal to mild IA (OR = 1.60, 95% CI: 0.34–0.93; $p = 0.014$). Participants with moderate to marked BS concerns were 1.39 times more likely to be at risk of BED participants than those with no or mild concerns (OR = 1.39, 95% CI: 0.90–2.16; $p < 0.001$). Furthermore, participants who were overweight or obese (OR = 1.74, 95% CI: 1.16–2.60; $p = 0.005$) and those with large WC (OR = 1.78, 95% CI: 1.16–2.75; $p = 0.006$) had significantly higher risk of BED as compared with participants with normal WC and BMI.

Predictors for the risk of BED

A linear regression analysis was performed with BED scores as the dependent variable. Variables like WC, IA, and BS concern were tested in three models. Model 3, which included all three variables, emerged as the best model, explaining 17% of the change in the BED score ($R^2: 0.17$, $p < 0.001$). All three variables showed a highly significant positive association with the BED score with the WC identified as the strongest predictor for risk of BED ($\beta = 0.23$, $p < 0.001$) (Table 5).

Discussion

This study aimed to explore the relationship between BED, IA, BS concerns, and BMI among university students. The findings revealed a high prevalence rate of risk of BED (31.0%) in this population and identified significant associations with IA, BS concerns, BMI, and WC. The elevated risk of binge eating among university students may be attributed to the emotional response to academic and social stress and the transition from late adolescence to early adulthood [33, 34].

Compared to previous studies, this research reported a higher prevalence rate of BED risk than those documented at Northeastern University in the United States (25%) [35], Midwestern University in the United States (21.3%), a public higher education institution in Brazil (12.9%) [36], among youth in Bahrain (21.2%) [37], and in the UAE (30%) [20]. The higher prevalence in this study could be due to methodological differences in assessing BED risk, such as variations in screening criteria, assessment tools, or data collection methods. Additionally, cultural or environmental factors specific to the population studied, including societal norms, academic and social pressures, or shifts in dietary habits, may have contributed to higher stress levels and emotional eating behaviors.

Interestingly, male participants in this study had more than double the risk of BED compared to female participants. Although previous studies suggest that females are generally more prone to binge eating [38, 39] and more

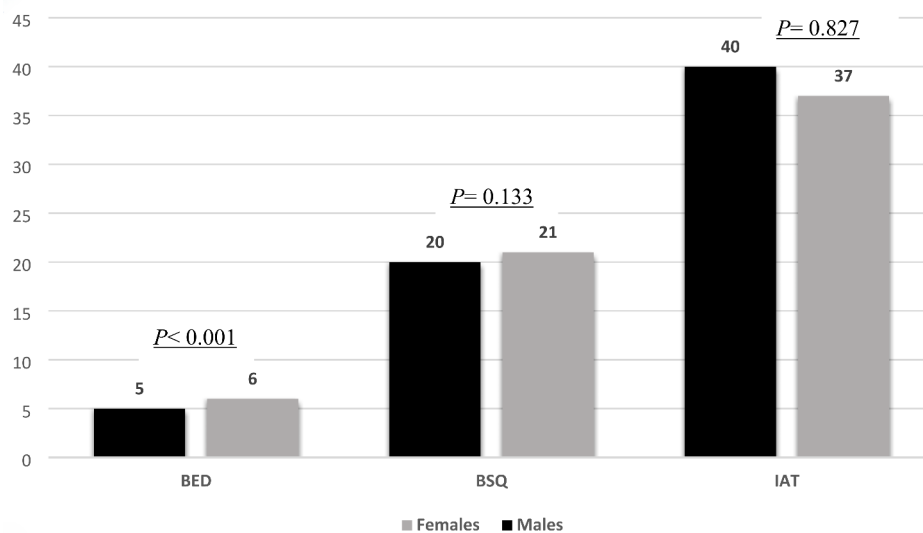


Fig. 1 Comparison of the median scores of BED, BSQ, IAT among male and female participants using Mann-Whitney U Test

Table 4 Association of BEDS-7 with different factors ($N = 448$)

Variables		BEDS-7		OR (95% CI)	P-value
		No risk of BED	At risk of BED		
Sex	Females	155 (50.2%)	72 (51.8%)	1.94 (0.63–1.40)	<0.001
	Males	154 (49.8%)	67 (48.2%)		
Smoking	Yes	254 (82.2%)	105 (75.5%)	1.50 (0.92–2.43)	0.006
	No	55 (17.8%)	34 (24.5%)		
Major	Health	167 (54.0%)	77 (55.4%)	1.06 (0.71–1.58)	<0.001
	Non-health	142 (46.0%)	62 (44.6%)		
Dieting	Yes	67 (21.7%)	40 (28.8%)	1.46 (0.93–2.30)	0.005
	No	242 (78.3%)	99 (71.2%)		
IAT	Normal/Mild	225 (72.8%)	115 (82.7%)	1.60 (0.34–0.93)	0.014
	Moderate/Severe	84 (27.2%)	24 (17.3%)		
BSQ	No/mild concern	230 (74.4%)	94 (67.6%)	1.39 (0.90–2.16)	<0.001
	Moderate/Marked concern	79 (25.6%)	45 (32.4%)		
BMI	<25	195 (63.1%)	69 (49.6%)	1.74 (1.16–2.60)	0.005
	≥ 25	114 (36.9%)	70 (50.4%)		
WC	Normal	235 (76.1%)	89 (64.0%)	1.78 (1.16–2.75)	0.006
	Large	74 (23.9%)	50 (36.0%)		

Abbreviations BED: Binge-eating disorder screener, IAT: Internet Addiction test, BSQ: Body shape questionnaire, BMI: Body mass index, WC: Waist circumference, OR: odds ratio, CI: confidence interval

likely to report body weight dissatisfaction and dieting [40], males may be underreporting such behaviors. Research suggests that males are more likely to binge eat in response to negative emotions rather than strict dieting [41, 42]. Additionally, predictors of the risk of binge eating may differ for males as they aim to gain weight to strive for a muscular or lean build [43]. Further studies are needed to investigate the cultural impact of BED risk among male university students who may be more vulnerable to earlier onset of binge-eating behaviour [44].

Association of BED with internet addiction

In this study, BED risk was significantly associated with IA with about one-third (30.9%) of participants who screened with risk of BED also experiencing moderate/severe IA. A study conducted in the USA on 1000 adult participants reported that binge-eating episodes were more frequent among those with IA compared to non-addicted individuals [45]. Another study on 50 adult outpatients in the USA and Italy reported a clinical diagnosis of BED in 7% of those with IA [46]. Additionally, binge eating and excessive Internet use may serve as coping strategies for university students particularly those living in high-density residential dormitories [47]. The

Table 5 Linear regression analysis using BEDS-7 score as the dependent variable

Predicted variables	Model 1 R ² = 0.100				Model 2 R ² = 0.146				Model 3 R ² = 0.171			
	Beta	95% CI		P-value	Beta	95% CI		P-value	Beta	95% CI		P-value
		Lower	Upper			Lower	Upper			Lower	Upper	
BSQ	0.32	0.23	0.41	<0.001	0.28	0.2	0.38	<0.001	0.22	0.13	0.32	<0.001
WC	--	--	--	--	0.22	0.07	0.16	<0.001	0.23	0.08	0.17	<0.001
IAT	--	--	--	--	--	--	--	--	0.17	0.04	0.13	<0.001

Abbreviations BED: Binge-eating disorder screener, IAT: Internet Addiction test, BSQ: Body shape questionnaire, WC: Waist circumference

convenience of ordering food online, avoiding cooking, and leading a sedentary lifestyle associated with IA may further increase the likelihood of BED behaviours [48]. IA and binge eating share addictive characteristics that may contribute to sedentarism, which can lead to weight gain and body dissatisfaction [49].

Association of BED with BMI, BS concerns, and WC

The study found a significant association between the risk of BED and BMI, BS concerns, and WC. Participants at risk of BED were more likely to be overweight or obese, have moderate/marked BS concerns, and have large WC. Previous research has demonstrated that BS concerns can predict the onset of binge eating during adolescence and young adulthood [50]. Individuals with binge eating who reported higher BS concerns [51] and feelings of guilt about their physical appearance were more likely to binge [20]. According to escape theory, individuals with binge eating behaviours may use food to escape negative thoughts about themselves [52]. Other studies have found that people with BED have higher levels of body dissatisfaction which may lead to improper dieting, and consequently, increase the risk of binge eating as individuals attempt to counteract caloric deprivation with excessive food intake [53, 54]. Johnson and Wardle (2005) identified body dissatisfaction as a stronger predictor of compulsive eating than restrictive diets [55]. Furthermore, studies have consistently reported a strong association between BED risk and BMI, with the severity of binge eating increasing with higher BMI [6, 37]. McCuen-Wurst et al., (2018) described binge eating as a coping mechanism to reduce negative emotions, where negative feelings about weight and shape can lead to binge eating and higher caloric consumption [4].

In this study, WC emerged as the strongest predictor of BED risk. Previous research has reported that individuals with larger WC had significantly higher rates of risk of BED [56]. Those suffering from BED typically consume high-calorie, high-fat foods, resulting in increased abdominal obesity [57]. WC is associated with abdominal or central obesity, which increases the risk of cardiovascular disease, type 2 diabetes mellitus, hyperlipidemia, and metabolic syndrome [58]. Therefore, effective preventative measures should target university students at risk for BED and encourage them to seek appropriate help.

Limitations

This study has several limitations. First, the use of self-report questionnaires may introduce social desirability bias. Another limitation of this study is the use of the BEDS-7 screening tool which was not validated in the Arabic language since this is the first study that uses this tool in Arabic. While this tool was chosen for its

accessibility and practicality, its lack of prior validation may impact the generalizability of the findings. Future research should aim to validate this tool to enhance the accuracy and credibility of the results. The cross-sectional design of the study can infer relationships or correlations but not causality. Moreover, all the participants were recruited from a single university; therefore, the findings cannot be generalized to broader clinical settings.

Conclusions

This study is the first to explore the relationship between BED risk and its association with IA, BS concerns, and BMI among university students in the UAE. It highlighted the high prevalence of BED risk among university students and significant associations with moderate/severe IA, marked/severe BS concerns, large WC, and high BMI. The findings underscore the need for community and government awareness programs targeting young adults. National initiatives are required to address and reduce binge-eating behaviours among this vulnerable group focusing on reducing anxiety and stress related to IA and BS concerns. Promoting balanced eating, healthy internet use, and physical activity is crucial among university students. Raising awareness about the clinical implications of BED among both young women and men who should be encouraged to seek help. Men need to be informed about the health risks associated with BED, including weight gain and diabetes. A multidisciplinary approach involving psychologists, counselors, and nutritionists is essential to improve university students' eating habits, nutritional status, and mental health while promoting balanced perspectives on body weight and shape.

Abbreviations

BED	Binge-eating disorder
BEDS-7	Binge-eating Disorder Screener-7
BMI	Body Image Index
BS	Body Shape
BSQ	Body Shape Questionnaire
IA	Internet Addiction
IAT	Internet Addiction Test
IPAQ	International Physical Activity Questionnaire
PA	Physical Activity
UAE	United Arab Emirates
WC	Waist circumference

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Author contributions

Conceptualization: HR, HH, Data Curation: DNAFormal analysis: HH, DNAFunding acquisition: -Investigation: HR, HH, Methodology: HR, HH, DNA, YT, HB, MK, AH, ADProject administration: HR, HHResources: HR, HHSsoftware: -Supervision: HR, HHValidation: HR, HHVisualization: DNAWriting– original draft: YT, HB, MK, AH, AD, DNAWriting– review and editing: HR, HH, TO, OM, DNAThe manuscript has been read and approved by all the authors.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

The study received ethical approval from the Research Ethics Committee at the University of Sharjah under reference number REC-20-02-06-01-S

Clinical trial registration: This was a quality project implementing evidence-based care into general mental health inpatient care. Therefore, clinical trial registration was not.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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