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Associations between intuitive eating, body self-compassion, and orthorexia nervosa in young adults: a cross-sectional analysis

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ABSTRACT

Aims: Orthorexic tendencies are increasingly recognized as an emerging problem in eating behavior, while intuitive eating and body self-compassion (i.e., treating one's body with kindness and acceptance) are adaptive factors supporting healthier eating and body image. Recognizing the protective role of these constructs is crucial. This study aimed to examine the relationship between intuitive eating, body self-compassion, and orthorexia nervosa (ON) in university students.

Methods: This descriptive cross-sectional study was conducted with university students aged 18-25 years. A convenience sampling method was used to recruit participants. Socio-demographic characteristics and anthropometric measurements were assessed using a structured questionnaire. The risk of ON was evaluated with the Orthorexia Nervosa Risk Assessment Scale, intuitive eating with the Intuitive Eating Scale-2, and body self-compassion with the Body Self-Compassion Scale. Data were collected through face-to-face interviews and analyzed using descriptive, correlational, and linear regression analyses.

Results: The study included 500 students (mean age: 19.67±1.65 years; 51.4% female). The mean body mass index (BMI) was 22.55±3.02 kg/m²; 74.4% of participants were classified as normal weight, while 15.4% were overweight. ON scores were negatively correlated with intuitive eating ($r=-0.404$, $p<0.001$) and body self-compassion ($r=-0.372$, $p<0.001$). Regression analysis showed that intuitive eating ($\beta=-0.391$, $p<0.001$) and body self-compassion ($\beta=-0.258$, $p<0.001$) were significantly associated with ON. Emotional eating was positively associated with BMI ($r=0.315$, $p<0.001$) and identified as the strongest factor ($\beta=0.308$, $p<0.001$).

Conclusions: This study found that higher intuitive eating and body self-compassion scores were linked to lower orthorexic tendencies and healthier weight-related behaviors, while higher BMI was related to maladaptive patterns. Promoting intuitive eating and body self-compassion may help protect against disordered eating. From a public health perspective, integrating these constructs into interventions could support healthier eating behaviors among young adults.

Introduction

Eating disorders have become increasingly common and pose a serious threat to health. Eating disorders, defined as negative eating behavior by the World Health Organization (WHO), are characterized by body weight control, body image anxiety, and low self-esteem (1). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), categorizes eating disorders into five main types: anorexia nervosa (AN), bulimia nervosa, binge eating disorder, and two additional categories for specified and unspecified feeding and eating disorders (2). Although orthorexia nervosa (ON) is not officially recognized as a distinct eating disorder in the DSM-5, it shares certain characteristics with clinically diagnosed eating pathologies and is increasingly examined in the context of disordered eating (1). ON is a newly emerging concept related to eating disorders, derived from the Latin word “orthos”, meaning correct. Although researchers define it as an obsession with healthy and proper nutrition, it shares similarities with other eating disorders. Unlike AN and bulimia nervosa, ON focuses on the health, purity, and quality of food rather than quantity. Individuals may prefer to remain hungry instead of consuming foods considered impure or harmful to health which can lead to malnutrition and weight loss, similar to what is seen in AN. In ON, individuals spend much of their time contemplating the foods they will consume and adhering to strict rules, which resembles obsessive-compulsive disorder (3). While ON has gained increasing attention in recent years, it is important to distinguish between a healthy interest in nutrition and ON, as these terms are often used interchangeably in public discourse. Healthy orthorexia reflects a flexible, health-conscious approach to eating without obsessive behaviors or emotional distress. In contrast, ON is characterized by rigid dietary rules, preoccupation with food purity, and compulsive behaviors that interfere with social and psychological functioning. Individuals with ON may exhibit anxiety, guilt, or avoidance when confronted with foods perceived as unhealthy. This pathological fixation is thought to contribute to disruptions in self-regulation and is associated with disordered eating patterns and psychological distress (4).

Recently, it has been suggested that individuals may adopt eating patterns aimed at weight loss under the guise of healthy eating. In this regard, it is noteworthy that ON may be related to body weight and body image (5).

Body image encompasses an individual’s perceptions, attitudes, and behaviors related to their physical appearance (6). Prior studies have suggested that negative body image may play a key role in the development of orthorexic tendencies, as individuals with high appearance-related anxiety may adopt rigid dietary rules to attain perceived ideals of health and purity (7,8). In eating behavior disorders, there is excessive preoccupation with food, body, weight, and body dissatisfaction, and this preoccupation may impair body image. There are data suggesting a relationship between negative body image and symptoms of ON (9,10). Given this connection, understanding how individuals relate to their bodies—particularly through constructs like self-compassion—may offer insight into mitigating the psychological burden of ON.

Self-compassion, which has a reducing effect on eating behavior disorders and negative body image, draws attention (11). Self-compassion refers to treating oneself with kindness and understanding, especially during difficult moments. There are studies showing that self-compassion is associated with positive eating behaviors, less body image anxiety, and also prevents risk factors for eating behavior disorders and body image anxiety (12-14). In light of this restrictive pattern, intuitive eating emerges as a promising counter-approach, emphasizing flexibility, internal cues, and a non-judgmental stance toward eating (15,16). Both intuitive eating and body self-compassion promote self-acceptance and internal awareness, encouraging individuals to respond to their physical and emotional needs without guilt or rigid control (13,17,18). Individuals with higher body self-compassion are more likely to respect their body’s signals and detach from societal body ideals, which in turn facilitates intuitive eating behaviors (12,14). Therefore, these two constructs may not only buffer the psychological impact of disordered eating but also support each other in fostering a healthier relationship with food and body image (13,18).

In this context, it becomes increasingly important to understand the potential role of intuitive eating in transforming these rigid and rule-driven eating behaviors commonly observed in individuals with ON. Changing restrictive eating behaviors in individuals with ON is a long and challenging process. In this context, intuitive eating has been proposed as a potential approach to alleviate symptoms (19). Intuitive eating is defined as having a strong connection with hunger and satiety signals and consuming nutrients in response to these signals (15). Intuitive eating behavior does not categorize foods as “healthy” or “unhealthy”, but instead focuses on individuals’ hunger signals. This perspective sets intuitive eating apart from restrictive patterns (20). Intuitive eating behavior has been linked to positive eating patterns and lower body image anxiety (18). However, some evidence suggests that ON may not show a consistent association with intuitive eating (4,21).

Upon reviewing the studies, it is observed that the relationship between intuitive eating behavior, body image, and eating behavior disorders is generally evaluated (4,18,21). However, studies on the mediating role of intuitive eating behavior in this context are needed. Therefore, this study aims to clarify the mediating role of intuitive eating behavior on ON and body self-compassion, contributing new insights to the literature.

Methods

Study desing and participants

This cross-sectional study was conducted between January and March 2024 among university students aged 18-25 at Health Sciences University. The cross-sectional design was selected for its practicality in assessing multiple variables simultaneously within a limited timeframe and resource availability. A convenience sampling method was used to recruit participants. Eligible university students were contacted and invited to participate in the study through scheduled face-to-face appointments. This method was preferred over online data collection to ensure controlled conditions, minimize distraction, and reduce data loss or misunderstanding during the survey. University students were chosen as the target population due to their heightened vulnerability to disordered eating behaviors, given the transitional nature of this life stage and the increasing societal pressures surrounding body image and healthy eating. After individuals read and signed the voluntary consent form, they were evaluated by researchers based on inclusion and exclusion criteria. The inclusion criterion for the study was being aged between 18 and 25, while the exclusion criteria included being pregnant or breastfeeding, having any chronic illness, syndrome or systemic disease, using medications that could affect appetite (such as corticosteroids, antidepressants, metformin, etc.), receiving hormone supplementation, and following an energy-restricted diet.

To determine an adequate sample size for the study, an a priori power analysis was performed using G*Power software (version 3.1), which indicated that a minimum of approximately 320 participants would be sufficient to detect a medium effect size (f^2=0.15) with 95% power at α=0.05. To increase the reliability and generalizability of the results, a larger sample was targeted. Accordingly, 500 students who met the inclusion criteria were included in the study. Since all participants fulfilled the eligibility requirements, no data loss occurred.

The study protocol approved by the Gülhane Scientific Research Ethics Committee of University of Health Sciences Türkiye (decision no.: 2024-22, date: 03.01.2024). All procedures were conducted in accordance with the Helsinki Declaration. Before data collection, participants were provided with detailed study information and asked to sign a written informed consent form.

Data collection

Individuals eligible for the study were invited by appointment for face-to-face questionnaire administration, during which their socio-demographic characteristics were recorded and anthropometric measurements, including body weight and height, were taken by the researcher using a standardized method. The risk of ON in individuals was assessed using the Orthorexia Nervosa Risk Assessment Scale (ORTO-11), intuitive eating behavior levels were assessed with the Intuitive Eating Scale-2 (IES-2), and their body-related self-compassion was assessed through the Body Self-Compassion Scale (BSCS).

ORTO-11 Scale

To assess the risk of ON, this study utilized the ORTO-11 Scale which is a modified version of the original ORTO-15 developed by Donini et al. in 2005 (3). The Turkish validity and reliability of the scale were established in 2008 by Arusoğlu et al. (22), who refined the tool by eliminating specific items. The final version includes eleven items rated on a four-point Likert scale ranging from “always” to “never”. Higher total scores indicate a lower risk of ON as the scale is reverse-coded; lower scores reflect more rigid and obsessive eating-related attitudes (22).

Intuitive Eating Scale (IES)

To assess intuitive eating behaviors, the IES-2 was used. The IES-2 consists of 23 items rated on a five-point Likert scale (1=strongly disagree to 5=strongly agree) and covers four subscales: unconditional permission to eat, eating for physical rather than emotional reasons, reliance on hunger and satiety cues, and body–food choice congruence. Items 1, 2, 3, 6, 7, 8, and 9 are reverse-coded, consistent with the original version developed by Tylka and Kroon Van Diest (15). Higher scores indicate a stronger tendency toward intuitive eating. The Turkish adaptation was conducted using standard back-translation procedures and validated by Bas et al. (23), ensuring conceptual and linguistic equivalence with the original scale.

Body Self-Compassion Scale (BSCS)

The original form of the BSCS developed by Altman et al. (24) is a 23-item, five-point Likert-type measurement tool consisting of three sub-dimensions (dissociation, common human values, and bodily acceptance).

The scale items are rated on a five-point Likert scale ranging from 1 (never) to 5 (always), with intermediate options including rarely, sometimes, and most of the time. The Cronbach alpha internal consistency coefficient of the scale was found to be 0.92, 0.92, 0.91, and 0.87 for the total score, dissociation, common human values, and bodily acceptance sub-dimensions of the BSCS, respectively. It was determined that the sub-dimensions showed a positive and significant relationship with each other (0.25, 0.43, 0.61). The items in the dissociation dimension of the measurement tool (1, 2, 3, 4, 5, 11, 12, 14, 15) are reverse scored. The scores that can be obtained from the scale range from 23 to 115. High scores obtained from the scale indicate a high level of body self-compassion (24-26).

Anthropometric measurements

Participants' body weight and height were measured directly by the researcher. During the assessments, individuals wore lightweight clothing, and metal accessories or objects were removed to avoid measurement bias. Body weight was recorded using a TANITA BC 418 ST body composition analyzer, and height was measured with a fixed wall stadiometer and a flexible, non-elastic measuring tape. Body mass index (BMI) was calculated as weight in kilograms divided by height in meters squared. BMI classifications followed WHO standards, with underweight defined as <18.50 kg/m², normal weight as 18.50-24.99 kg/m², overweight as 25.00-29.99 kg/m², and obesity as ≥30.00 kg/m² (27).

Statistical Analysis

All statistical analysis were performed using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). The normality of the data was evaluated through distribution tests and skewness values, with results expressed as mean ± standard deviation or median (minimum-maximum). Group comparisons were carried out using either independent samples t-tests or Mann-Whitney U tests, depending on the data distribution. For categorical data, chi-square tests (Pearson or Fisher's exact) were used where appropriate. Associations between variables were explored through correlation coefficients, including Pearson, Spearman, and eta. To identify predictors of intuitive eating scores, linear regression analysis was conducted. In cases of non-normally distributed data, logarithmic transformation was applied. Statistical significance was defined as $p<0.05$.

Results

A total of 500 university students participated in the study (female: 257, male: 243) with an average age of 19.67±1.65 years. Of the university students who participated in the study, 91.6% did not have any health problems, 30.2% exercised regularly, and 32.4% had a smoking habit. The mean ORTO-11 total score was 27.90±4.33, the mean intuitive eating score was 2.79±0.44, and the mean body self-compassion total score was 69.49±13.20. 74.4% of the students had normal body weight according to the BMI classification. The socio-demographic, anthropometric, and psychometric characteristics of the students who participated in the study are shown in Table 1.

The relationship between the ORTO-11 scores of university students participating in the study, intuitive eating, body self-compassion, and BMI levels was evaluated (Table 2). Accordingly, a positive, weak, and significant correlation was observed between the total ORTO-11 score and intuitive eating, as well as its sub-dimensions: unconditional eating permission, physical eating, and trust in hunger signals. Additionally, a positive, weak, and significant relationship was found between the total score of the BSCS and its sub-dimensions, namely dissociation and body acceptance. As the level of intuitive eating increased, the level of body self-compassion also increased. Furthermore, the sub-dimensions of body self-compassion—dissociation and body acceptance—showed a positive, weak, and significant relationship with the total intuitive eating score. In addition, the study examined the correlation between BMI and the scale assessments, revealing that as BMI increased, intuitive eating scores decreased, demonstrating a significant, negative, and weak relationship with the sub-dimensions of intuitive eating: unconditional eating, physical eating, and trust in hunger signals. Moreover, it was found that as BMI increased, both the total body self-compassion score and its sub-dimensions (dissociation and physical acceptance) exhibited a decrease.

Table 3 and Figure 1 present the results of the linear regression analysis conducted to predict intuitive eating scores. The overall model was statistically significant ($R^2=0.129$; $p<0.001$), indicating a meaningful relationship between the predictor variables and intuitive eating levels. Among the predictors, ORTO-11 total score [$\beta=0.157$, 95% confidence interval (CI): 0.008 to 0.025, $p<0.001$] and body self-compassion score ($\beta=0.262$, 95% CI: 0.006 to 0.012, $p<0.001$) showed significant positive associations with intuitive eating. This suggests that individuals with fewer orthorexic tendencies and higher body self-compassion are more likely to eat intuitively. Conversely, BMI was negatively associated with intuitive eating ($\beta=-0.106$, 95% CI:-0.028 to -0.003, $p=0.014$), indicating that higher BMI predicted lower intuitive eating levels. Gender also emerged as a significant predictor ($\beta=0.114$, 95% CI: 0.026 to 0.176, $p=0.008$), with female participants reporting higher intuitive eating scores.

Figure 1 provides a visual summary of the standardized beta coefficients. The strongest contributor to intuitive eating was body self-compassion, followed by ORTO-11 total score and gender, while BMI showed a negative relationship. This figure highlights the direction and relative strength of each predictor's association with intuitive eating.

Discussion

This study demonstrated that orthorexic tendencies were negatively associated with both intuitive eating and body self-compassion among young adults. Individuals with higher intuitive eating scores also reported greater body self-compassion, while both constructs showed significant negative correlations with BMI. Additionally, intuitive eating was found to be higher among male participants than females. Regression analyses further indicated that ORTO scores, body self-compassion, BMI, and gender were significant predictors of intuitive eating. These findings highlight the protective role of intuitive eating and body self-compassion in relation to orthorexic tendencies and weight-related outcomes.

Growing awareness of rigid dietary patterns and their psychological consequences has led to increased interest in ON in recent literature (25,28). Findings supported the hypothesis that higher levels of intuitive eating and self-compassion are related to lower ON risk and healthier BMI outcomes. The obsessive focus on consuming pure and natural foods observed in ON is known to be associated with physical and mental health issues (25). There is a strong relationship between negative body image perception, a factor affecting an individual's physical and mental health, and eating behavior. This relationship has led to an increase in interest in ON. However, due to the insufficient number of studies on the subject in the literature, the results appear to be conflicting (4). One study found that individuals with ON did not exhibit negative body image (29). In another study, it was observed that ON, was positively associated with negative body image attitudes (4). In addition, it is suggested that self-compassion and intuitive eating will be effective as a protective measure against negative eating behavior and negative body image perception (30).

Table 1. Socio-demographic, anthropometric, and psychometric characteristics of participants by gender

Variables	Female		Male		Total		p-value
	n	%	n	%	n	%	
Gender	257	51.4	243	48.6	500	100.0	-
Regular exercise status							
Yes	55	21.4	96	39.5	151	30.2	**p<0.001***
No	202	78.6	147	60.5	349	69.8	
Food preferences							
Fatty foods	30	11.7	27	11.1	57	11.4	
Carbohydrate foods	122	47.5	48	19.8	170	34.0	**p<0.001***
Protein foods	80	31.1	157	64.6	237	47.4	
Vegetable-based foods	25	9.7	11	4.5	36	7.2	
Body weight perception							
Very weak	3	1.2	3	1.2	6	1.2	
Weak	36	14.0	29	11.9	65	13.0	0.018
Normal	140	54.5	168	69.1	308	61.6	
Light overweight	67	26.1	38	15.6	105	21.0	
Obese	11	4.3	5	2.1	16	3.2	
Presence of health problems							
Yes	20	7.8	22	9.1	42	8.4	0.62
No	237	92.2	221	90.9	458	91.6	
Smoking habit							
Yes	60	23.4	102	42.8	162	32.4	**p<0.001***
No	197	76.7	141	58.0	338	67.6	
BMI classification (kg/m²)							
Underweight (<18.5)	32	12.5	6	2.5	38	7.6	
Normal (18.5-24.99)	189	73.5	183	75.3	372	74.4	**p<0.001***
Overweight (25-29.99)	28	10.9	49	20.2	77	15.4	
Obese (≥30)	8	3.1	5	2.1	13	2.6	
	Mean ± SD		**Mean ± SD**		**Mean ± SD**		
Age (years)	19.67±1.50		19.67±1.79		19.67±1.65		0.232
BMI (kg/m²)	21.94±3.22		23.19±2.65		22.55±3.02		**p<0.001***
ORTO-11 total score	27.73±3.99		28.08±4.66		27.90±4.33		0.254
Intuitive eating score	2.75±0.41		2.84±0.46		2.79 ±0.44		0.073
Unconditional permission to eat	3.50±0.64		3.21±0.68		3.36±0.67		**p<0.001***
Physical eating	2.84±0.87		3.29±0.80		3.06±0.86		**p<0.001***
Relying on hunger satiety signals	3.35±0.79		3.26±0.96		3.31±0.87		0.236
Harmony of body-nutrient selection	3.24±0.83		3.34±0.93		3.29±0.88		0.210
Body self-compassion total score	69.33±15.26		69.67±10.63		69.49±13.20		0.994
Dissociation	31.63±8.77		33.62±7.40		32.60±8.19		**0.041***
Bodily acceptance	16.10±4.51		16.07±4.43		16.09±4.46		0.928
Common human values	21.58±6.59		19.97±6.00		20.80±6.36		**0.006***

Mann-Whitney U test, chi-square test *p<0.05, **p<0.001.
BMI: Body mass index, ORTO-11: Orthorexia Nervosa Risk Assessment Scale, SD: Standard deviation

Table 2. Evaluation of the relationship between ORTO-11, intuitive eating, body self-compassion and BMI levels of individuals

	ORTO-11 total score	Intuitive eating score	Unconditional permission to eat	Physical eating	Relying on hunger satiety signals	Harmony of body-nutrient selection	Body self-compassion total score	Dissociation	Bodily acceptance	Common human values
ORTO-11 total score	-									
Intuitive eating score	0.189 **(<0.001)****	-								
Unconditional permission to eat	0.180 **(<0.001)****	0.330 **(<0.001)****	-							
Physical eating	0.102 (0.022)*	0.763 **(<0.001)****	-0.093 **(0.037)***	-						
Relying on hunger satiety signals	0.130 **(0.003)****	0.657 **(<0.001)****	0.128 (0.004)**	0.318 **(<0.001)****	-					
Harmony of body-nutrient selection	0.013 (0.775)	0.494 **(<0.001)****	-0.049 (0.271)	0.181 **(<0.001)****	0.458 **(<0.001)****	-				
Body self-compassion total score	0.100 **(0.025)***	0.298 **(<0.001)****	0.089 **(0.048)***	0.212 **(<0.001)****	0.255 **(<0.001)****	0.187 **(<0.001)****	-			
Dissociation	0.124 (0.005)**	0.276 **(<0.001)****	0.94 **(0.036)***	0.226 (<0.001)**	0.190 **(<0.001)****	0.137 (0.002)**	0.718 **(<0.001)****	-		
Bodily acceptance	0.126 (0.005)**	0.260 (0.001)**	0.110 **(0.014)***	0.173 (0.001)**	0.237 **(0.001)****	0.096 **(0.031)***	0.775 (0.001)**	0.419 (0.001)**	-	
Common human values	-0.026 (0.557)	0.076 (0.092)	0.10 (0.820)	0.002 (0.957)	0.111 **(0.013)***	0.165 **(<0.001)****	0.548 **(<0.001)****	-0.018 (0.692)	0.315 **(<0.001)****	-
BMI (kg/m^2)	0.006 (0.897)	-0.111 **(0.013)***	-0.147 **(<0.001)****	-0.040 (0.367)	-0.084 (0.059)	0.004 (0.932)	-0.124 (0.006)**	-0.100 **(0.025)***	-0.115 **(0.010)***	-0.038 (0.398)

*p<0.05, **p<0.001, Spearman rank correlation coefficient test was applied.
ORTO-11: Orthorexia Nervosa Risk Assessment Scale, BMI: Body mass index

Table 3. Linear regression analysis for prediction of young adult intuitive eating level

	Intuitive eating score				
Model	**Beta**	**t**	**95% CI Lower**	**95% CI Upper**	**p-value**
ORTO-11 total score	0.157	3.721	0.008	0.025	**<0.001**
Body self-compassion total score	0.262	6.163	0.006	0.012	**<0.001**
BMI (kg/m^2)	-0.106	-2.464	-0.028	-0.003	0.014
Gender	0.114	2.650	0.026	0.176	0.008
	R^2=0.129;p<0.001*				

*Significant at p-value <0.05.
ORTO-11: Orthorexia Nervosa Risk Assessment Scale, BMI: Body mass index, CI: Confidence interval

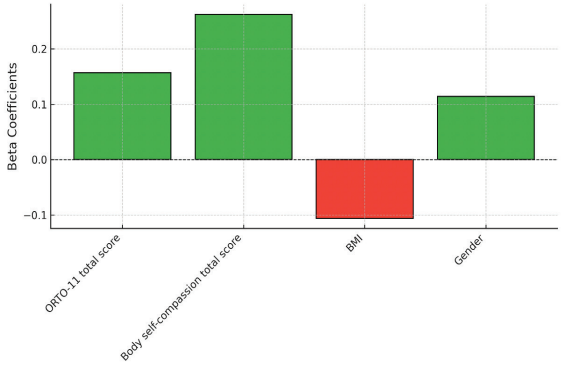

Figure 1. Regression analysis: factors affecting intuitive eating
ORTO-11: Orthorexia Nervosa Risk Assessment Scale, BMI: Body mass index

There are some studies examining the relationship between ON and negative body image perception (9,10). Accordingly, it has been observed that individuals with ON symptoms also have negative body image (10). When ON was first defined, it was seen as a disorder related only to healthy eating, but today it is now accepted that it may also include negative body image. Promotion of unrealistic body standards by social media and society has increased disordered eating behaviors in different age groups and genders (31). In addition to all these, self-compassion intervention is recommended as a protective factor against negative eating behavior and negative body image perception (11). Multiple studies have indicated a protective role of self-compassion against disordered eating and negative body image. A meta-analysis revealed a significant inverse relationship between self-compassion and both dysfunctional eating behaviors and negative body perceptions (12). Another comprehensive review emphasized that self-compassion can directly mitigate adverse outcomes related to body dissatisfaction and eating disorders by reducing underlying risk factors (13). Additionally, research examining the link between body-related self-compassion and eating behavior reported that higher levels of self-compassion indirectly contributed to a reduction in maladaptive eating patterns (14). These results suggest that individuals with higher levels of body self-compassion may be more likely to trust their physical hunger signals and approach food in a more relaxed and less anxious manner. In addition, responding to negative body image with self-compassion enables the individual to accept his/her physical appearance as it is and protects him/her from weight control efforts (32). In a study, as BMI increased, negative eating behavior and a negative body image increased, and a decrease in self-compassion was observed (33). In this study, consistent with previous findings, ON was negatively associated with self-compassion in young adults; BMI decreased as self-compassion increased.

Intuitive eating has been suggested as another protective factor in individuals with negative eating behaviors (19). A study showed that individuals with low ON scored higher on self-esteem and intuitive eating measures (21). A systematic review highlighted that intuitive eating is linked to a decreased risk of developing eating disorders, as well as enhanced body image and improved emotional well-being (18). Similarly, another study reported a positive correlation between intuitive eating and indicators of positive body image, while also noting a negative association with ON symptoms (4). Murray et al. (34) showed that women had poorer body image perception and lower levels of intuitive eating behavior, compared to men, due to body-related pressures leading to negative body image in women. It was also observed that BMI decreased with increasing intuitive eating. In our study, in line with other studies, our findings revealed that ON decreased intuitive eating; intuitive eating was higher in men than in women; and BMI decreased as intuitive eating score increased.

In this study, male participants demonstrated higher intuitive eating scores compared to females. At first glance, this finding appears to diverge from several studies reporting greater intuitive eating levels in women (35,36). However, recent evidence also suggests mixed gender patterns. A comprehensive meta-analysis synthesizing data from 36 independent samples (n=22.939) found that men reported significantly higher intuitive eating levels than women, with a moderate effect size, (d=0.35) (16). This gender difference may be explained by the more frequent and intense socio-cultural pressures on women to

conform to thin ideals, which may discourage reliance on internal hunger and satiety cues (37). Therefore, women's engagement in intuitive eating may be suppressed due to cultural norms and body image concerns. The present finding may reflect how these dynamics manifest in young adults within the cultural context of this study.

On the other hand, according to our regression model, ON and body self-compassion were observed to be factors affecting intuitive eating. These results reveal that ON and body image should not be ignored in intuitive eating interventions. These findings align with theoretical perspectives such as self-determination theory (38). Acceptance and commitment therapy (39), both of which emphasize the importance of autonomy, psychological flexibility, and self-awareness in promoting adaptive eating behaviors. We found a positive correlation between the intuitive eating score and the body self-compassion score.

This study has several strengths. First, this study is one of the few to comprehensively explore the interrelationships among intuitive eating, body self-compassion, and ON in a large sample of university students, providing valuable insights into the psychological and behavioral factors influencing nutrition-related disorders. Secondly, the use of validated scales, such as ORTO-11 and IES-2, alongside a robust sample size, enhances the reliability of the findings and ensures their applicability to similar populations. Thirdly, with a substantial sample size of 500 participants, this study offers robust statistical power and represents a diverse demographic of university students, enhancing the generalizability of the results. Finally, by demonstrating that intuitive eating and body self-compassion are negatively associated with ON and BMI, our findings may offer useful insights for developing future intervention strategies. Unlike existing research, this study not only identifies correlations but also emphasizes their clinical relevance. Integrating these psychological constructs into intervention programs may help mitigate ON risk and promote overall well-being. This innovative approach bridges the gap in existing literature by addressing the interconnected roles of intuitive eating and body self-compassion, paving the way for more holistic intervention strategies in the field of nutritional psychology.

From a public health perspective, these findings emphasize the need for preventive interventions focusing on intuitive eating and body self-compassion to reduce ON risk and improve dietary behaviors. Future research should explore these relationships in longitudinal and interventional studies to assess the long-term impact of intuitive eating and body self-compassion on disordered eating tendencies, and develop targeted strategies for at-risk populations. These findings may inform the development of student wellness programs by universities and health organizations, emphasizing intuitive eating and self-compassion to promote healthier relationships with food.

However, there are some limitations that should be considered in future research. First, dietary records were not collected. Dietary records should be obtained to assess diet quality and the relationship between diet quality and ON. The second limitation is that the cross-sectional design limits the ability to infer causal relationships among the variables studied, necessitating further longitudinal research to confirm these findings. Finally, future studies should include diverse age groups and settings to explore the long-term effects of intuitive eating and self-compassion on ON through longitudinal and interventional designs.

Conclusion

This study highlights the potential role of intuitive eating and body self-compassion as protective factors against ON among university students. The findings suggest that encouraging a more intuitive approach to eating, and promoting self-compassion might help reduce the risk factors associated with ON, particularly among individuals with higher BMI and gender-related differences in eating behaviors. Given the increasing prevalence of disordered eating behaviors, integrating psychological well-being approaches into nutrition-related public health strategies may contribute to healthier eating patterns among young adults.

Ethics

Ethics Committee Approval: This study was obtained from the Gülhane Scientific Research Ethics Committee of Health Sciences University (decision no.: 2024-22, date: 03.01.2024).

Informed Consent: Before data collection, participants were provided with detailed study information and asked to sign a written informed consent form.

Footnotes

Authorship Contributions

Concept: E.M.E., N.B., Design: E.M.E., N.B., Data Collection or Processing: E.M.E., N.B., Analysis or Interpretation: E.M.E., Literature Search: E.M.E., N.B., Writing: E.M.E., N.B.

Conflict of Interest: The authors declared no conflict of interest.

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