

## THE RELATIONSHIP OF ADDICTIVE-LIKE EATING, RELATIONSHIP QUALITY, BODY SATISFACTION, PERSONALITY TENDENCIES, AND HEDONISTIC EATING\*

Sena KAYA<sup>1</sup>, Filiz KUMOVA<sup>2</sup>

### Abstract

The present study aimed to explore the correlational and predictive relationships between addictive-like eating tendencies and hedonistic eating, body satisfaction, romantic relationship quality, and obsessive-compulsive, borderline, and dependent personality disorder tendencies. Possible differentiation in addictive-like eating tendencies by gender and marital status were also analyzed for explanatory purposes. Furthermore, the addictive-like eating and hedonistic eating tendencies of the participants were compared concerning their body mass index. Seven hundred sixty-eight participants aged 18-63 participated in the present study. The results revealed that there were medium positive correlations between addictive-like eating and hedonistic eating, obsessive-compulsive, borderline, and dependent personality disorder tendencies, whereas there was a medium correlation between addictive-like eating and body satisfaction. Furthermore, hedonistic eating, body satisfaction, and borderline personality disorder tendencies were found to be significant predictors of addictive-like eating inclination. It was found that these predictive relationships did not differ by gender or marital status. Moreover, results indicated that both addictive-like eating and hedonistic eating behaviors of the participants whose body mass indexes were equal to or above 25 were significantly higher than those with body mass indexes lower than 25. Based on the results of the present study, it was suggested that the evaluation of individuals exhibiting addictive-like eating behaviors in terms of deterioration in body satisfaction, hedonistic eating tendency, and DPD, OCPD, but especially potential BPD dispositions, would help the clinicians following a comprehensive treatment plan and sustaining more efficiency concerning the psychotherapy processes and outcomes. Moreover, it was recommended to replicate the present study with the participation of a patient group with extremely addictive-like behaviors, as the results might differ depending on the sample.

**Key Words:** Addictive-Like Eating, Hedonistic Eating, Romantic Relationship Quality, Body Satisfaction, Personality Disorder Tendencies.

**JEL Classification:** I10, I12

## BAĞIMLILIK BENZERİ YEMENİN, İLİŞKİ KALİTESİ, BEDEN MEMNUNİYETİ, KİŞİLİK EĞİLİMLERİ, HEDONİSTİK YEMEYLE İLİŞKİSİ

### Öz

Mevcut çalışma bağımlılık benzeri yemenin algılanan romantik ilişki kalitesi, beden memnuniyeti, hedonistik yeme ve obsesif-kompulsif, sınır durum ve bağımlı kişilik bozukluğu eğilimleri ile olan ilişkisinin korelasyon ve yordayıcı ilişkisini araştırmayı amaçlamaktadır. Bağımlılık benzeri yeme eğiliminin cinsiyet ve medeni duruma göre olası farklılaşmaları da uygun analizlerle incelenmiştir. Ayrıca katılımcıların bağımlılık benzeri yeme ve hedonistik yeme eğilimleri vücut kitle indekslerine göre de karşılaştırılmıştır. Bu çalışma 18-63 yaş arasındaki 768 katılımcıyla gerçekleştirilmiştir. Sonuçlar bağımlılık benzeri yeme eğilimi ile hedonistik yeme, Obsesif-Kompulsif, Borderline ve Bağımlı kişilik bozukluğu eğilimleri arasında orta düzey pozitif, bağımlılık benzeri yeme ile beden memnuniyeti arasında ise orta düzey negatif korelasyon olduğunu göstermiştir. Ayrıca hedonistik yeme, beden memnuniyeti ve Sınır-Durum Kişilik Bozukluğu eğiliminin, bağımlılık benzeri yeme eğiliminin anlamlı yordayıcıları olduğu görülmektedir. Bu yordayıcı ilişkilerin cinsiyete veya medeni duruma göre

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<sup>1</sup> Klinik Psikolog, Peras Psikoloji, psikologsenakaya@gmail.com ORCID: 0000-0002-1719-5882

<sup>2</sup> Dr.Öğr Üyesi, Fatih Sultan Mehmet Vakıf Üniversitesi, fkumova@fsm.edu.tr ORCID: 0000-0001-8420-629X

farklılık göstermediği bulunmuştur. Ayrıca analizler sonucunda vücut kütle indeksi 25 ve üzerinde olan katılımcıların hem bağımlılık benzeri yeme hem de hedonistik yeme davranışlarının, vücut kütle indeksi 25'ten düşük olan katılımcılara göre anlamlı derecede yüksek olduğu tespit edilmiştir. Bu çalışma sonuçlarına dayanarak, bağımlılık benzeri yeme davranışı sergileyen bireylerin beden memnuniyetinde bozulma, hedonistik yeme eğilimi, Bağımlı Kişilik Bozukluğu, Obsesif Kompulsif Kişilik Bozukluğu ve özellikle de Borderline Kişilik Bozukluğu eğilimleri açısından değerlendirilmesinin, klinisyenlere kapsamlı bir tedavi planı takip edilmesi ve psikoterapi sürecinin veriminin artırılması açısından faydalı olacağı öngörülmüştür. Bunun yanı sıra, sonuçların örnekleme göre farklılık gösterebileceği göz önünde bulundurularak, bu çalışmanın aşırı düzeyde bağımlılık benzeri yeme davranışı gösteren bir hasta grubu ile de tekrarlanması önerilmiştir.

**Anahtar Kelimeler:** Bağımlılık Benzeri Yeme, Romantik İlişki Kalitesi, Hedonistik Yeme, Beden Memnuniyeti, Kişilik Bozukluğu Eğilimleri

**JEL Sınıflaması:** I10, I12,

## 1. Introduction

### 1.1. Addictive-like Eating

Addiction, with a variety of subtypes such as drugs, alcohol, gambling, etc., is a serious multidimensional problem concerning its tremendous negative effects on both the individual and the social well-being. Consideration of disordered eating behaviors as a subtype of addiction has long been a question of interest (Gleaves & Carter, 2008). There is no clear definition of food addiction yet since it was first defined by Randolph in 1956 (Hauck et al., 2020; Hebebrand et al., 2014), and synonymous use of “food addiction,” “eating addiction,” and “addictive-like eating” is quite frequent in the literature (Gleaves & Carter, 2008; Schulte et al., 2017). Addictive-like eating was evaluated within the binge-eating spectrum in some studies (e.g., Davis, 2013); however, no binge attacks were mentioned in that eating pattern, and people who were not diagnosed with Binge eating disorder (BED) might also meet the criteria for addictive-like eating. Thus, some studies revealed that addictive-like eating shared similar features with addiction, such as impulsivity, similar behavioral patterns, brain regions, and neural pathway activations (e.g., DiFeliceantonio et al., 2018; Gleaves & Carter, 2008; Goldier & Park, 2015; Meule et al., 2012; Romero et al., 2019; Tran et al., 2020).

The main behavioral theme related to addictive-like eating was considered to be the compulsive behavioral pattern, similar to substance-alcohol addictions (APA, 2013; Lüscher et al., 2020). The emergence of regret as a result of addictive-like behavior was also compatible with the pattern observed in addictions (Collins et al., 2021). Another concept associated with addictive-like eating was loss of control. Various studies have addressed loss of control over food or the act of eating as one of the prominent indicators of addictive-like eating (e.g., Collins et al., 2021; Lacroix & Von Ranson, 2020; Van Ostrand, 2015).

Addictive-like eating is considered to be one of the potential explanations of obesity, which is foreseen as an epidemic in the world (Cullen et al., 2017; Ruddock et al., 2017). Moreover, addictive-like eating is a public health issue due to its prevalence in different age groups (Hauck et al., 2020; Laurent & Sibold, 2016) and weight (normal or obese) groups (Pursey et al., 2014; Şanlıer et al., 2016). Furthermore, a couple of studies indicated that in addition to obesity, addictive-like eating was also associated with several psychological problems such as anxiety, depression, eating disorders, post-traumatic stress disorder, impulsivity, and overwhelmed life stress (Burrows et al., 2020; Collins et al., 2021; Meule et al., 2012; Mills et al., 2020; Najem et al., 2020). Moreover, studies exploring addictive-like behaviors in terms of gender yielded conflicting results (Carr et al., 2020; Herman & Polivy, 2010; Rolls et al., 1991; Schulte & Gearhardt, 2018; Şanlıer et al., 2016). Although some studies explored the relationship between eating disorders and marital status (e.g., Berenson et al., 2015; Bussolotti et al., 2002; El-Akabawy et al., 2022; Van den Broucke & Vandereycken, 1988), addictive-like eating/food addiction has not been examined yet concerning marital status to the best of our knowledge.

Considering both the importance of the topic and the mentioned debates and gaps in the literature, the present study aimed to focus on addictive-like eating, which was a relatively understudied phenomenon, and related psychological structures and personality dispositions, as explained below, to contribute to the initiatives for clarifying the structuring of this behavior and the contradictory literature findings.

## **1.2. Body Satisfaction**

Body dissatisfaction is defined as being dissatisfied with either the whole body or various parts of the body (Stice & Shaw, 2002). The number of studies on the relationship between body satisfaction and food addiction was quite few, and most of them were conducted with just the participation of university students, but still, a couple of studies yielded a positive relationship between addictive-like eating and body dissatisfaction (e.g., Meadows et al., 2017; Şanlıer et al., 2016; Wu et al., 2020). Furthermore, in a study on body dissatisfaction with early onset (Bornioli et al., 2019), it was found that body dissatisfaction predicted eating disorders and alcohol-substance-tobacco use in the following years of life. Body dissatisfaction was considered a significant potential risk factor for the onset of eating disorders such as Anorexia Nervosa (AN), especially under circumstances in which giving weight was praised and thinness

was a prerequisite for beauty (Dane & Bhatia, 2023), but it would also lead to other forms of abnormal eating behaviors such as binge eating when impulse inhibition was impaired (Stanford et al., 2018). Body dissatisfaction would be considered a threat to physical, psychological, and social well-being (Dane & Bhatia, 2023), and this threat would even be more significant for women, as several studies demonstrated that body perceptions of women were worse than those of men (e.g., Freire et al., 2020; Şanlıer et al., 2016).

The present study aimed to broaden and deepen the findings of the mentioned few studies by both merely focusing on addictive-like eating and increasing the diversity of the participant group.

### **1.3. Personality Disorder Tendencies**

Identifying personality traits also seemed important when exploring impaired eating behavior and certain psychological disorders. There were examples of studies on AN, Bulimia Nervosa (BN), BED, and obesity in the literature yielding a positive correlation between the mentioned disorders and personality inclinations such as obsessive-compulsive personality traits and introversion (e.g., Davis & Claridge, 1998), the tendency to avoid pain (e.g., Peterson et al., 2010), neuroticism, and impulsivity (e.g., Elfhag & Morey, 2008). Furthermore, various studies demonstrated that eating disorders had high comorbidity rates, changing between 49% and 77% with personality disorders (e.g., Godt, 2002; Maranon et al., 2004).

The leading personality tendency that drew attention within the scope of abnormal eating behaviors was dependent personality (DP). Gore et al. (2012) stated that individuals with dependent personality disorder (DPD) had difficulty making decisions and acting alone in their daily lives; they felt helpless when they were alone, and they strongly needed the presence of another person. Several studies also pointed out the misconception that having an addiction did not necessarily mean having a DPD as well (e.g., Amodeo, 2015; Griffiths, 2017), despite the considerable comorbidity rates of addictions and DPD (e.g., İnceoğlu et al., 2000; Rø et al., 2005). In the Turkish literature, some studies examined the relationship between food addiction/addictive-like eating and some personality traits (e.g., Kıcalı, 2015; Tekin et al., 2018); however, as far as we know, the relationship between addictive-like eating and DPD tendency has not been examined yet. It was decided to include DPD disposition in the present study concerning the mentioned gap in the literature.

Studies in the field of addiction indicated that various personality tendencies, such as impulsivity, reward sensitivity, emotion regulation difficulties, and self-management, were also

associated with addiction (Murphy et al., 2014; Oulette et al., 2017; Wolz et al., 2016). The personality pattern associated with impulsivity, reward sensitivity, and difficulty in emotion regulation was borderline personality (Bornovalova et al., 2005). A couple of studies revealed that patients with borderline personality disorder (BPD) had higher impulsivity and more difficulties in emotion regulation and stress management compared to the ones who were not diagnosed with BPD (Eichen et al., 2017). People with high impulsivity tend to prefer a small short-term reward (such as food or drug stimulants) over a bigger long-term reward (Poulton & Hester, 2020; Tang et al., 2019). Moreover, several studies indicated that borderline personality tendencies were directly related to addictive behaviors (e.g., Kienast et al., 2014). It was concluded that impulsive people might show more addictive-like eating behaviors under circumstances where delicious foods were present (Tang et al., 2019). However, there were still only a few studies that explored the relationship between food addiction and impulsivity (Tekin et al., 2018; Wolz et al., 2016). Considering the scarcity of the related literature findings and the mentioned overlapping features of addictions, impulsivity in general, and BPD, it was decided to explore the relationship between addictive-like eating tendencies and BPD disposition in the present study.

Addictive-like eating is considered to be similar to substance addiction since it might have negative consequences such as weight gain and health problems in the future, and this behavior used to be repeated despite awareness of these negative consequences (Goodman, 1990). This situation seemed to coincide with the loss of control expressed in a couple of studies on food addiction (e.g., Collins et al., 2021; Fortuna, 2012; Ifland et al., 2009; Van Ostrand, 2015). Furthermore, several neuroimaging studies on substance and food addictions revealed similarities concerning loss of control (e.g., Fortuna, 2012; Ifland et al., 2009).

Another demonstrated feature of substance addiction was compulsive behavior (APA, 2013; Lüscher et al., 2020). Compulsive behaviors demonstrated in addiction also seemed quite similar to the repetitive behaviors in obsessive-compulsive disorder as specified in DSM-5. Several studies revealed that obsessive-compulsive disorder coexisted with obsessive-compulsive personality disorder (OCPD) at varying rates (45%-65%) (e.g., Garyfallos et al., 2010; Lochner et al., 2011). The significant features of OCPD were defined as sticking to defined routines, high desire for control, perfectionism, and avoiding ambiguity, rigidity, and resistance in the DSM-5 (APA, 2013). Repetitive, addictive behaviors, which were resistant to change, might be associated with rigid, unchanging attitudes and routines of the OCPD tendency. However, studies exploring the relationship between OCPD tendencies and

addictions indicated contradictory results. For example, the study of Suzuki et al. (2002) showed that alcoholics demonstrated a higher tendency toward OCPD compared to non-alcoholics, whereas, in another study, it was found that gambling addicts had fewer OCPD inclinations than the group that did not have gambling addiction (Medeiros & Grant, 2018).

Research findings regarding the relationship between eating disorders and OCPD traits also revealed contradictory results. A couple of studies indicated a positive relationship between OCPD tendencies and AN, BN, and BED (e.g., Anderluh et al., 2003; Davis, 2013; Goldier & Park, 2015), whereas some other studies demonstrated insignificant relationships (e.g., Galanti et al., 2007). Contradictory research results on addiction and eating disorders concerning OCPD traits yielded the suggestion that it would be important to examine the relationship between addictive-like eating tendencies and OCPD disposition in the present study.

#### **1.4. Hedonistic Eating**

Hedonistic eating is a behavior triggered by hedonic hunger (Şarahman, 2019) that would be defined as a different type of hunger other than homeostatic/physical hunger, which stems from biological needs (Cappelleri et al., 2009; Şarahman, 2019). It is driven by pleasure instinct, and it is related to the delicious taste of the food (Lowe & Butryn, 2007). Having easy access to pleasurable food in the modern world was considered to be associated with obesity (Espel-Hyunh et al., 2018), and it was argued that continuous exposure to delicious, pleasurable food caused a loss of control (Lowe et al., 2016). A series of studies revealed that the tasty food motivated overeating both for animals (e.g., Barbano & Cador, 2005; Lowe & Butryn, 2007) and humans (e.g., Espel-Hyunh et al., 2018; Van Dillen et al., 2016). Moreover, several studies indicated that hedonic hunger was associated with binge eating and loss of control over eating (e.g., Lowe et al., 2016; Witt & Lowe, 2014; Yılmaz et al., 2024), reward sensitivity (e.g., Feig et al., 2018; Manasse et al., 2015), and impulsivity (Nederkoorn et al., 2015). Reward sensitivity, impulsivity, and loss of control regarding overeating triggered by hedonic hunger seemed similar to the picture in addiction (Blundell & Finlayson, 2011; Goodwin et al., 2016) and addictive-like eating tendency (Ivezaj et al., 2019; Laurent and Sibold, 2016; Ruddock et al., 2015). It seemed important to explore the relationship between hedonistic eating and addictive-like eating in the present study due to the mentioned commonalities.

#### **1.5. Perceived Romantic Relationship Quality**

The relationship between disordered eating behavior and dissatisfaction in romantic relationships has been a topic of interest for a couple of researchers (e.g., Pratt et al., 2016;

Tolmacz et al., 2021). Partners might influence each other in terms of weight control and eating behavior (Dailey, 2018). Moreover, it was known that sometimes eating was a method of suppressing feelings about relationship problems (Butler et al., 2010). There were a series of studies that indicated that relational dissatisfaction and marital quality were associated with impairments in eating behavior and eating disorders (e.g., Gagnon-Girouard et al., 2010; Whisman et al., 2012). For example, AN and BN patients themselves and/or their partners experienced confusion and intense stress due to the eating disorder (e.g., Arcelus et al., 2012; Linville et al., 2015); thus they argued more (e.g., Van den Broucke & Vandereycken, 1988). Addictive-like eating is also an impaired eating behavior, and there were quite a few studies addressing food addiction to romantic relationship quality/satisfaction (e.g., Moore et al., 2021). Considering this gap in the literature, it was decided to explore this relationship as well in the present study.

## **2. Aim**

The present study aimed to explore the correlational relationships between addictive-like eating behavior and perceived romantic relationship quality, body satisfaction, hedonistic eating, obsessive-compulsive, borderline, and dependent personality disorder tendencies, and the predictive power of these variables on addiction-like eating. Potential differentiations for the mentioned correlational and predictive relationships by gender and marital status were also examined for explanatory purposes. Furthermore, potential differences in addictive-like eating tendencies and hedonistic eating tendencies regarding the body mass index (BMI) were explored, too. The hypotheses (H) of the present study were as follows:

H<sub>1</sub>- Addictive-like eating will negatively correlate with perceived romantic relationship quality and body satisfaction;

H<sub>2</sub>- Hedonistic eating, borderline, dependent, and obsessive-compulsive personality disorder dispositions will positively correlate with addictive-like eating tendencies;

H<sub>3</sub>- Perceived romantic relationship quality, hedonistic eating, body satisfaction, and dependent, borderline, and obsessive-compulsive personality disorder tendencies will significantly predict addictive-like eating behavior.

## **3. Method**

The present research study was preregistered and carried out based on the permission of Fatih Sultan Mehmet Vakıf University, University Ethics Committee dated 09/09/2021. Data

were collected online in 2022, based on accessibility and voluntariness, via various social media channels (Instagram, Facebook, LinkedIn, etc.).

### **3.1. Participants**

The required sample size for this study was calculated using Cohen's (1992) guidelines with the G\*Power 3.1.9.7 software based on a multiple linear regression model. The model aims to predict one dependent variable using five independent variables (predictors). These predictors include perceived romantic relationship quality, hedonistic eating, body satisfaction, and tendencies related to borderline, dependent, and obsessive-compulsive personality disorders. The power analysis was conducted with a small effect size ( $f^2 = 0.02$ ), 80% power ( $1 - \beta = 0.80$ ), and a significance level of 5% ( $\alpha = 0.05$ ). Based on this calculation, a minimum of 668 participants was determined to ensure sufficient statistical power and reliable results.

Data were collected from 785 participants. Data from 11 participants were eliminated from the study due to the univariate and multivariate outlier analyses. Analyses were conducted on the data of 768 participants.

### **3.2. Materials**

#### **Demographic Information Form**

It was developed by the researchers to obtain socio-demographic information of the participants such as gender, age, marital status, occupation, height and weight, etc.

#### **Addictive-Like Eating Behaviors Scale**

It was developed by Ruddock et al. (2017), and its Turkish adaptation was carried out by Demir et al. (2020). It consisted of 15 items and two subscales, namely appetite urge and low diet control. The total score is available. There was no cut-off point in the scale; high scores for the total score indicated more frequent addictive-like eating behaviors. The higher the score in the appetite urge and low diet control subscales, the higher the appetite and lower the diet control, respectively. The Cronbach Alpha reliability coefficient of this scale in the present study, evaluated as a total score, was .90 and aligned with that of the Turkish adaptation study.

#### **Perceived Romantic Relationship Quality Scale**

The original form of the scale was developed by Fletcher and Simpson (2000), and the Turkish validity-reliability study was conducted by Sağkal and Özdemir (2018). This scale consisted of 6 items, and higher scores indicated higher romantic relationship satisfaction.



Psychometric properties of the Turkish adaptation were tested via two different studies, and the Cronbach Alpha coefficients of this scale were found to be .85 and above. The Cronbach Alpha reliability coefficient of this scale in the present study was .84.

### **Hedonistic Eating Scale**

The scale was developed by Atik et al. (2019) and consisted of 15 items. Higher scores indicated higher hedonistic eating behavior. Cronbach Alpha reliability coefficient of this scale in the present study was .92, which is quite similar to that of the original study, which was 0.97.

### **Body Satisfaction Scale**

The original scale was developed by Avalos et al. (2005), and its Turkish adaptation was conducted by Bakalım and Karçkay in 2016. The Turkish version of the scale consisted of two factors and nine items in total. It was assessed over the total score. Higher scores indicated higher body satisfaction. The Cronbach Alpha reliability coefficient of this scale in the present study was .94, which is quite similar to that of the original study, which was 0.87.

### **Coolidge Axis II Inventory – Plus Turkish Short Form (CATI+ TR KF)**

The original scale was developed by Coolidge (2006). Turkish Short Form was developed by Bilge in 2018. The scale consisted of 10 subscales, each corresponding to an Axis II personality disorder as named in the DSM, and 78 items in total, including two validity items. Each subscale was assessed concerning its total score. Higher scores indicated a higher tendency of personality disorder subject to the relevant subscale. In the present study, DPD, BPD, and OCPD subscales were used in the relevant analyses. The Cronbach Alpha reliability coefficients of the DPD, BPD, and OCPD subscales in the present study were .79, .78, and .73, respectively.

### **3.3. Data Analysis**

Normality assumptions of the data were tested via skewness-kurtosis analysis (within the range of  $\pm 1$ ). Total scores of the Addictive-like Eating Behaviors Scale, Hedonistic Eating, Body Satisfaction, and Perceived Romantic Relationship Quality Scales fit the normal distribution. However, as the total score of the dependent personality disorder subscale of Coolidge Axis II Inventory – Plus Turkish Short Form did not fit the normal distribution, these scores were further analyzed according to their standard z scores to detect univariate outliers. Considering the z-score range of  $-3/+3$ , 11 univariate outliers were detected and removed from the data.

Data were also analyzed for multivariate outliers. Six multivariate outliers were identified by using Mahalanobis distance for a cut of score of 23.4, with  $df= 7$  and  $p < .001$ . These six outliers were excluded from the data.

Data of the remaining 768 participants were analyzed by frequency analysis, Spearman correlation analysis, multiple linear regression, two-way ANOVA, and Mann-Whitney U analysis with  $p < .05$  via SPSS (v. 25).

Collinearity and VIF values were checked for multiple linear regression analysis. It was decided that the analysis results were valid since it was seen that there was no collinearity between the scores of the outcome variable and the predictors, and the VIF value was below 2.5.

### 3.4. Procedure

Informed consent was obtained from all of the participants. Participants filled out the Addictive-like Eating Behaviors Scale, Coolidge Axis II Inventory – Plus Turkish Short Form, Hedonistic Eating, Body Satisfaction, and Perceived Romantic Relationship Quality Scales, and the Demographic Form, respectively.

## 4. Results and Discussion

### 4.1. Results

Seven hundred sixty-eight participants (58.6% female and 41.4% male; 56.6% single and 43.4% married) over the age of 18 ( $M = 29.3$ ,  $SD = 7.3$ ), who had a romantic relationship at least for six months, participated in the present study. The distribution of the participants' occupations was as follows: 66.2 % white collar, 12.4% student, 2.3 % worker, 4.4 % unemployed, and 14.7 % unspecified.

Descriptive statistics of the research variables are presented in Table 1:

**Table 1. Descriptive statistics of research variables**

Research Variables	Min. Value	Max. value	$\bar{x}$	s
Addictive-Like Eating Behaviors Scale	15	74	43.05	10.42
Perceived Romantic Relationship Quality Scale	16	42	34.99	5.85
Hedonistic Eating Scale	15	75	46.38	11.31
Body Satisfaction Scale	9	45	32.80	7.85

Coolidge Axis II Inventory Plus Turkish Short Form Borderline Personality Disorder Subscale	9	33	21.32	4.77
Coolidge Axis II Inventory Plus Turkish Short Form Obsessive-Compulsive Personality Disorder Subscale	9	35	19.44	5.44
Coolidge Axis II Inventory Plus Turkish Short Form Dependent Personality Disorder Subscale	7	25	13.08	4.04

## 4.2. Correlation Analysis

The correlational relationships between the research variables are presented in Table 2.

**Table 2. Correlations between the research variables**

	Addictive-like eating	Romantic rel. quality	Hedonistic eating	Body satisfaction	Borderline P.D.	Obsessive-compulsive P.D.	Dependent P.D.
Addictive-like eating	1						
Romantic rel. quality	-0.054	1					
Hedonistic eating	0.652***	0.008	1				
Body satisfaction	-0.547***	0.256***	-0.293***	1			
Borderline P.D.	0.395***	-0.253***	0.270***	-0.388***	1		
Obsessive-compulsive P.D.	0.345***	-0.162***	0.240***	-0.361***	0.677***	1	
Dependent P.D.	0.349***	-0.191***	0.241***	-0.477***	0.699***	0.642***	1

*N=768, \*p<0.05; \*\*p<0.01; \*\*\*p<0.001*

It was found that there was a positive relationship between addictive-like eating behavior tendency and hedonistic eating, borderline, obsessive-compulsive, and dependent personality disorder inclinations. Furthermore, addictive-like eating behavior tendency negatively correlated with body satisfaction; however, there was no statistically significant relationship between addictive-like eating behavior tendency and the perceived romantic relationship quality (Table 2).

The correlational relations between the research variables were re-examined by gender and marital status as well to find out any possible differentiations. The results were all compatible with those of the overall group, except one: addictive-like eating tendency

negatively correlated with perceived romantic relationship quality in the female participants' group (see supplementary materials).

### 4.3. Multiple Linear Regression Analysis

The results of the Multiple Linear Regression Analysis are presented in Table 3.

**Table 3. Multiple linear regression analysis results regarding the predictive power of independent study variables on addictive-like eating tendency**

D.V.	I.V.	B	Stand. Error of B	$\beta$	%95 C.I. Upper Boundary	%95 C.I. Lower Boundary	Part Correlation Coeff.	t	p
Addictive-Like Eating	Constant	31.734	2.082	-	27.647	35.822	-	15.24	0.00
	Hedonistic Eating	0.477	0.023	0.517	0.431	0.522	0.487	20.65	0.00
	Body Satisfaction	-0.464	0.035	-0.350	-0.533	-0.396	-0.315	-13.36	0.00
	Borderline P.D.	0.229	0.050	0.119	0.131	0.327	0.108	4.59	0.00

$R^2=0.574$   $F(3,764)=345.332$   $p<0.001$ ,  $n=768$ ,  $VIF<2.5$ , stepwise method was used

The results showed that the model was statistically significant ( $F(3,764)=345,332$ ;  $p<0.001$ ) and accounted for approximately 57.5% of the total variance of the addictive-like eating tendency. 57.5% of the total variance of addictive-like eating was explained by hedonistic eating, body satisfaction, and BPD disposition. Hedonistic eating, body satisfaction, and BPD disposition alone explained 24%, 10%, and 1% of the total variance in addictive-like eating tendencies, respectively, in case other variables in the model held constant (Table 3).

Multiple regression analyses were performed concerning gender and marital status, and the results were in line with those of the overall participant group (see Supplementary Materials).

### 4.4. Group Comparisons

Addictive-like eating and Hedonistic Eating tendencies of normal weight/thin ( $BMI < 25$ ) and overweight ( $BMI \geq 25$ ) groups were compared by the Mann-Whitney U test as the BMI of the participants did not distribute normally. The BMI of the participants was calculated by the researchers based on the participants' self-reports of their height and weight (weight (kilo)/ height ( $m^2$ )).

The respective results are presented in Table 4.

**Table 4. Comparison of participants' addictive eating and hedonistic eating scores by body mass index**

Variable	BMI	n	Median	1 <sup>st</sup> quartile	3 <sup>rd</sup> quartile	U	z	p
Addictive-like eating	<= 25	458	43.00	35.00	51.00	42061.00	-9.265	0.000
	>25	304						
Hedonistic eating	<= 25	458	46.00	39.00	53.00	55442.000	-4.766	0.000
	>25	304						

Results revealed that both addictive-like eating and hedonistic eating tendencies of the participant group with BMI  $\geq 25$  were significantly higher than those of the participant group with BMI  $<25$  (Table 4).

Possible differentiations regarding addictive-like eating tendencies by gender and marital status were also examined by two-way analysis of variance (ANOVA). Results indicated that neither the main effects of gender ( $F = 0.235, p > 0.05$ ) and marital status ( $F = 0.000, p > 0.05$ ) nor their interaction ( $F = 0.490, p > 0.05$ ) had a significant effect on addictive-like eating behavior tendencies.

#### 4.5. Discussion

Addictive-like eating has only recently become a topic of interest for researchers and has not yet been explored deeply in the national literature. Based on the idea that addictive-like eating might be one of the potential causes of obesity, it was considered that exploring the factors related to this behavior would be beneficial in terms of both psychotherapy process management and prevention studies. For this purpose, in the present study, addictive-like eating inclination was examined in terms of BPD, DPD, and OCPD tendencies, body satisfaction, hedonistic eating, and romantic relationship quality, and as demonstrated below, was tried to be discussed holistically and comprehensively.

In line with our expectation (H1), results yielded a negative association between addictive-like eating and body satisfaction; however, contradictory to our expectation (H1), there was not a significant relationship between perceived romantic relationship quality and addictive-like eating. Correlational analysis results for gender and marital status groups were in line with those of the overall participant group, except that perceived romantic relationship quality negatively correlated with addictive-like eating in the female participant group. The relevant finding for female participants was compatible with that of the studies examining the

association of satisfaction and/or quality of a romantic relationship with impaired eating or eating disorders (e.g., Markey et al., 2001; Tolmacz et al., 2021). As far as we know, the relationship between addictive-like eating and romantic relationship quality has not been studied yet; thus, this finding would be considered a new contribution to the literature. Considering that the participants of the present study were not diagnosed with any eating disorder and the studies examining couple relationships in the literature were generally conducted on couples with an eating disorder in one of the partners (e.g., Evans and Wertheim, 1998; Whisman et al., 2012), the non-significant result of the correlation analysis for the overall participants might be interpreted as that the romantic relationship quality of the present study participants might be less affected compared to the eating disorder patient group as they experienced less stress. The result regarding body satisfaction was also consistent with the literature findings (e.g., Imperatori et al., 2018; Şanlıer et al., 2016; Wu et al., 2020). Previous studies on this subject were generally carried out with the participation of university students. The generalizability of the related present study findings was higher than that of the previous studies for the diversity of the participants' occupations.

Consistent with our expectation (H 2), it was found that addictive-like eating tendencies positively correlated with hedonistic eating, borderline, obsessive-compulsive, and dependent personality disorder dispositions. These findings were compatible with those of the literature concerning food addiction-hedonistic eating (e.g., Laurent & Sibold, 2016; Loxton & Tipman, 2017), eating disorders-BPD (Aliloo et al., 2018; Murphy et al., 2014; Sansone et al., 2004), both eating disorders and addictions-OCPD (Anderluh et al., 2003; APA, 2013; Suzuki et al., 2002), and addictive-like eating-DPD inclinations relationships (eg, Lent & Swencionis, 2012; Wonderlich et al., 1990). The number of studies examining the relationship between addictive-like eating and DPD dispositions was quite limited, and as far as we know, no studies were exploring the relationship between addictive-like eating tendencies and borderline and obsessive-compulsive personality disorder inclinations. Considering these mentioned gaps in the literature, those relevant findings of the present study seemed unique and contributing. Moreover, the results indicated that those mentioned relationships did not differ either by gender or marital status. There were no studies that directly explored those relationships in the literature, to the best of our knowledge. Future research was recommended to get a clear perspective of the topic.

Furthermore, results revealed that approximately 57.5% of the total variance in addictive-like eating tendency was explained by hedonistic eating, body satisfaction, and BPD

disposition. These findings were partially consistent with our expectations (H 3). Results regarding the predictive power of these mentioned factors on addictive-like eating tendencies by gender and marital status were in line with those of the overall sample (see supplementary Materials). These findings were supported by the previous studies directly in terms of hedonic hunger/hedonistic eating (e.g., Davis & Loxton, 2014; Laurent & Sibold, 2016; Loxton & Tipman, 2017) and body dissatisfaction (Bornioli et al., 2019; Şanlıer et al., 2016; Wu et al., 2020) and indirectly regarding BPD tendency in terms of its relationship with impulsivity (e.g., Tang et al., 2019; Wolz et al., 2016; Wonderlich et al., 1990).

Incompatible with our expectation (H 3), results showed that OCPD and DPD dispositions were not significant predictors of addictive-like eating tendencies. There were studies both revealing the positive relationship between eating disorders and addictions and OCPD patterns (e.g., Lüscher et al., 2020; Jiménez-Murcia et al., 2007; Suzuki et al., 2002), as well as the ones yielding a non-significant or opposite result (e.g., Lüscher et al., 2020; Galanti et al., 2007; Medeiros & Grant, 2018). However, as mentioned before, the present study was the first one, to the best of our knowledge, that explored this relationship concerning addictive-like eating.

Furthermore, although there were few studies indicating the positive relationship between dependent personality traits and food addiction (Lent & Swencionis, 2012) or the comparatively high prevalence of dependent personality disorder in eating disorders (Wonderlich et al., 1990), the aforementioned studies were mainly carried out by the participation of the related patient groups, not the normal population as it was the case in the present study. The present study did not aim to diagnose psychopathology but to focus on a behavioral tendency, and the mentioned sample difference in quality might have caused the incompatible results related to DPD tendency. It was considered that the findings of the present study on OCPD and DPD tendencies might still contribute to the literature in terms of providing new data and inspiring future research on that topic. Future research was recommended to get a better understanding of the predictive relationships between addictive-like eating and OCPD and DPD dispositions.

Moreover, results revealed that both addictive-like eating behavior and hedonistic eating tendencies of the participant group with a BMI of 25 or above were higher than those of the group with a BMI of below 25. These results were in line with those of a couple of previous studies (e.g. Joyner et al., 2015; Kaur & Jensen, 2021; Şanlıer et al., 2016). It would be an

overgeneralization to argue that addictive-like eating was the sole reason of being overweight/obese (Pursey et al., 2014), but still, the results suggested that addictive-like eating might be one of the primary factors related to obesity and should be considered in obesity prevention programs. Furthermore, the results indicated that addictive-like eating tendencies did not differ by either gender or marital status. Findings in the literature on this subject were also contradictory (e.g., Carr et al., 2020; Schulte & Gearhardt, 2018; Şanlıer et al., 2016). Future research was recommended to explore the possible differentiations in addictive-like eating tendencies by different sociodemographic factors.

## 5. Suggestions and Conclusion

This study seemed important and innovative as, although there were some studies on addictive-like eating and the mentioned concepts in the literature, as far as we know, there was no study examining these concepts together. Furthermore, studies on addictive-like eating were quite limited for the Turkish sample. Moreover, previous studies, both on impaired eating and addiction-like eating, were generally conducted only on women. In the present study, addictive-like eating was explored in terms of both genders, and the number of male and female participants was close. It was considered that examining demographic variables such as marital status, gender, and body mass index within the scope of addictive-like eating made the present study multidimensional and comprehensive. The present study seemed to provide a theoretical contribution to the literature and inspiration for further research due to its stated features.

Another possible contribution of the present study was the assessment process of the patient groups that might be encountered in the clinical practice. Based on the results of the present study, it was suggested that the evaluation of individuals exhibiting addictive-like eating behaviors in terms of deterioration in body satisfaction, hedonistic eating tendency, and DPD, OCPD, but especially potential BPD dispositions, would help the clinicians following a comprehensive treatment plan and sustaining more efficiency for the psychotherapy processes and outcomes.

One of the limitations of the present study was that only adults participated in the present study. Future research on the addictive-like eating tendency of children and adolescents might be beneficial in terms of clarifying the related dynamics and forming more comprehensive protective programs for behavioral change against obesity. Another limitation of the present study was that the participants were selected based on accessibility and voluntariness. This selection method limited the generalizability of our research findings. This limitation was tried



to be overcome by increasing the variety of social media channels that were used to collect data, enabling the participation of people from different occupations. Furthermore, BMI calculations were based on the participants's self-reports that would possibly be affected by the social bias.

The present study, as mentioned before, did not aim to diagnose addictive-like eating/food addiction; it rather focused on tendencies in a normal participant group. It was recommended to replicate the present study with the participation of a patient group with extremely addictive-like behaviors, as the results might differ depending on the sample. Future research would also use more accurate BMI evaluations other than self-report to overcome the social bias problem. Moreover, future studies would also include a life stress or depression scale in their studies to explore its relationship with addictive-like eating.

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