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Behaviors towards sustainable nutrition in the grip of social media addiction and hedonic hunger: A cross-sectional study

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Abstract

The increasing prevalence of social media addiction has prompted concerns regarding its potential impact on hedonic eating tendencies and sustainability-related practices. This study aimed to investigate the bidirectional relationship between social media addiction, hedonic hunger, and behaviors towards sustainable nutrition among adults in Türkiye. This cross-sectional study conducted 700 (73.3% of female, mean age 29.99±10.31 years) adults between 8 October-20 November 2024 in Türkiye. An online questionnaire including demographic characteristics, Power of Food Scale (PFS), Bergen Social Media Addiction Scale (BSMAS), and Behaviors Scale towards Sustainable Nutrition (BSSN) was performed. The findings revealed a significant sex difference in BSMAS scores, with women exhibiting higher scores than men. Furthermore, a weak correlation was found between social media addiction and elevated hedonic hunger. Notably, despite the absence of a correlation between social media addiction and behaviors towards sustainable nutrition, this study observed a weak positive correlation between hedonic hunger and behaviors towards sustainable nutrition. The key predictors of behaviors towards sustainable nutrition were female sex, sustainability awareness, university education, increased hedonic hunger score, and older age, collectively accounting for 18.3% of the variance. This study highlights the complex interrelationships among social media addiction, hedonic hunger, and behaviors towards sustainable nutrition. The extensive use of social media can contribute to hedonic hunger and impulsive food choice. However, the cyclical relationship between social media addiction and hedonic hunger may have the potential to promote normative ideas about behaviors towards sustainable nutrition.

Keywords: Social media addiction, hedonic hunger, sustainable nutrition, sustainability, sustainable eating behaviors

Introduction

Hunger and food consumption are regulated by two distinct systems referred to as "homeostatic" and "hedonic" hunger. Homeostatic hunger is defined as the state of hunger resulting from physiological depletion of energy stores [1]. In contrast, hedonic hunger refers to the desire to consume palatable foods beyond physiological needs, often during periods of relative energy abundance [2]. Modern living conditions are characterized by an abundance of unlimited, inexpensive, highly palatable, and energy-dense foods, which drive individuals to consume food not only to meet metabolic requirements, but also to enhance mood, reduce stress levels, derive pleasure, or suppress excessive impulses [3]. Although the body has no physiological

need for food intake driven by hedonic hunger, the consumed foods are often highly processed products that are rich in energy, salt, sugar, and fat [4].

Numerous environmental factors influence hedonic hunger, one of which is social media, an indispensable part of daily life due to advancements in information and communication technologies [5]. According to the Digital 2024 Global Overview Report, 5.35 billion individuals were reported to be internet users, and over 5 billion people actively used social media at the beginning of 2024. The same report indicates that 89% of Internet users worldwide engage with social media applications, with adults in Türkiye spending an average of two hours and 44 minutes per day on these platforms [6]. Exposure to food advertisements,

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nutrition-related posts by influencers, mukbang videos featuring individuals consuming large portions of food, and various food-related contents on social media can diminish eating awareness and limit the ability to respond to physiological hunger and satiety signals [7]. In general, exposure to palatable foods on social media can increase the desire to eat and trigger hedonic hunger [8]. Furthermore, individuals with elevated hedonic hunger exhibit increased activity in the visual processing regions of the brain in response to words or images depicting palatable food. This contributes to an increased likelihood of unhealthy food consumption [9].

The cyclical relationship between social media addiction and hedonic hunger may increase the tendency toward high-energy, processed, and unhealthy foods, thereby hindering adherence to sustainable eating behaviors. The term "sustainable eating" is used to describe a dietary model that has the following characteristics: it reduces environmental costs, is culturally acceptable, easily accessible, and environmentally friendly; and it promotes health for current and future generations [10]. This dietary approach emphasizes reducing the consumption of energy-dense, processed, and packaged foods; adopting plant-based diets instead of animal-based foods; and ensuring that energy intake is consistent with individual needs [11]. However, social media addiction and hedonic hunger may lead to a higher consumption of processed foods and excessive dietary energy intake, contributing to increased environmental footprints. Additionally, these factors may promote over-purchase of food, resulting in waste.

Understanding the dynamics of food consumption shaped by social media and hedonic hunger is critical for various stakeholders, including individuals, influencers, healthcare professionals, policymakers, and industry. Identifying the impact of social media and hedonic hunger on sustainable nutrition can guide the development of effective interventions, public health campaigns, and informed decision-making processes, ultimately helping young adults to make healthier food choices within the digital environment of social media platforms. A review of the existing literature reveals a significant correlation between social media addiction and hedonic hunger [5,12]. However, no studies have identified this relationship with behaviors towards sustainable nutrition. This study aimed to determine the relationship between social media addiction, hedonic hunger, and sustainable nutrition among adults in Türkiye.

Material and Methods

Study Population

This study was descriptive and cross-sectional, conducted 700 adults aged 18–65 years between 8 October – 20 November 2024 in Türkiye. The sample size was calculated using G*Power 3.1.9.4. power analysis programme. In line with a similar study, it was determined that at least 300 individuals should be included with a 95% confidence level ($\alpha=0.05$) and 95% power, according to sample size calculations [13]. Individuals under the age of 18 years and over the age of 65 years and participants who did not approve the informed consent form were not included in our

study. Sociodemographic characteristics, social media addiction, hedonic hunger, and behaviors towards sustainable nutrition were determined by an e-survey via the Google Form platform. Ethical approval of the study was prepared according to the ethical standards of the Declaration of Helsinki and approved by the ethics committee of İstanbul Bilgi University (no: 2024-40160-170).

Power of Food Scale

The Power of Food Scale (PFS) was developed to measure hedonic hunger. The scale assesses the desire individuals have for food as well as the pleasure they anticipate deriving from it prior to consumption. PFS was first developed by Lowe and Butryn (2007) [14]. Ulker et al. (2022) conducted a Turkish validity and reliability study [15]. The scale consists of 15 questions and uses a 5-point Likert-type evaluation system (1: I completely disagree, 5: I completely agree). The PFS is composed of three distinct subscales: food availability, food presence, and food taste. The food availability subscale evaluates general thoughts about foods (items 1, 2, 5, 10, 11, and 13). The food presence subscale assesses attraction to food that is directly available to the individual (items 3, 4, 6, and 7). Finally, the food taste subscale evaluates the pleasure derived from food when first tasted (items 8, 9, 12, 14, and 15). PFS total and subscale scores are obtained by summing the item scores and dividing the sum by the number of items. Higher scores indicate higher levels of hedonic hunger for food.

Behaviors Scale towards Sustainable Nutrition

The Behavior Scale towards Sustainable Nutrition (BSSN) evaluates the effects of individuals' nutritional preferences and habits on environmental sustainability. The scale was developed by Garipoğlu et al. (2023) to measure the extent to which individuals consider sustainability in food consumption [16]. BSSN consists of 29 items and uses a 5-point Likert-type rating system (1: I completely disagree, 5: I completely agree). The BSSN comprises four distinct subscales: food choice (items 1, 2, 3, 4, 5, and 6), reducing food waste (items 7, 8, 9, 10, 11, 12, 13, 14, and 15), seasonal and local eating (items 16, 17, 18, 19, 20, 21, 22, and 23), and food purchasing (items 24, 25, 26, 27, 28, and 29). BSSN total and subscale scores are obtained by summing the item scores and dividing the sum by the number of items. Higher scores indicate that individuals attach a greater degree of importance to sustainable nutrition.

Bergen Social Media Addiction Scale

The Bergen Social Media Addiction Scale (BSMAS) evaluates addiction to social media. This scale was developed by Andreassen et al. (2016) to determine the negative effects of social media use and addiction levels [17]. The Turkish validity and reliability study of the scale was conducted by Demirci (2019) [18]. BSMAS consists of six questions in total and is evaluated on a 5-point Likert type (1: I completely disagree, 5: I completely agree). On this scale, a score of 3 or above for each question can be regarded as indicative of high social media addiction. In this study, individuals with a BSMAS score of 18 or above were defined as addicted.

Statistical Analysis

The data were analyzed using the SPSS 24.0 package program. The threshold for statistical significance was set at $p<0.05$ for all analyses. The suitability of the data for normal distribution was evaluated using the Kolmogorov-Smirnov test. Descriptive statistics for continuous variables were presented as mean and standard deviation, whereas categorical variables were summarized with frequency and percentage distributions. Consequently, independent sample T-tests were employed for comparisons between two groups, and Pearson's correlation coefficients were utilised for relationship analyses. Furthermore, a linear regression analysis was performed to ascertain the predictors of behaviors towards sustainable nutrition.

Results

The key findings of the study were presented in Figure 1, which offers an overview of the primary outcomes. Furthermore, a detailed account of the demographic characteristics is provided in Table 1. A total of 700 individuals participated in this study, of whom 73.3% were female. The mean age of the participants was 29.99 ± 10.31 years. The majority of the participants were single (63.9%) and had obtained a university degree (66.9%). Additionally, 76.9% of the participants resided with their families.

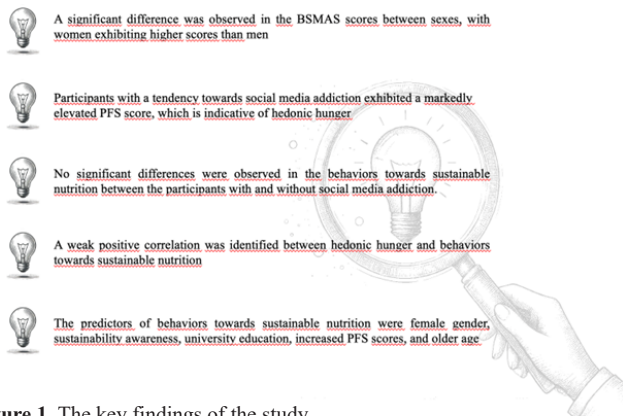


Figure 1. The key findings of the study

Table 2 presents a comparison of the mean scores on the BSMAS, PFS and BSSN scales, stratified by gender. The results indicated that 27.3% of men and 43.7% of women exhibited symptoms of social media addiction ($p<0.001$). The BSMAS, PFS, and BSSN scores were higher in females, and there was a statistically significant difference between the two genders ($p=0.001$, $p<0.001$, respectively). Additionally, the majority of males (71.1%) had not heard of the term sustainability, while the majority of females (64.7%) reported having heard the term ($p<0.001$).

Table 3 presents a comparison of the mean scores on the BSMAS, PFS, and BSSN scales according to the presence of social media addiction. The mean age of non-addicted individuals was 31.66 ± 11.14 , which was significantly higher than that of addicted participants ($p<0.001$). The BSMAS and PFS scores were found to be higher in the addicted individuals ($p<0.001$).

Table 4 demonstrates the correlations between the BSMAS, PFS and BSSN scales. A weak positive correlation was observed between BSMAS and PFS ($r=0.271$, $p<0.001$). Similarly, the PFS sub-scales, including Food Availability ($r=0.210$, $p<0.001$), Food Presence ($r=0.276$, $p<0.001$), and Food Taste ($r=0.246$, $p<0.001$), demonstrated weak positive correlations with the BSMAS. No significant correlation was found between BSMAS and BSSN scores or their respective sub-scales. However, a weak positive correlation was observed between PFS scores and BSSN ($r=0.159$, $p<0.001$).

Table 5 presents the results of a linear regression analysis, which identifies predictors of the BSSN scores. Age was identified as a consistent positive predictor across all models, with older participants demonstrating higher scores. Furthermore, female gender was identified as a significant predictor of BSSN scores. Additionally, higher education levels and awareness of sustainability were found to contribute positively to BSSN scores. Individuals who did not exhibit symptoms of social media addiction demonstrated slightly higher BSSN scores. The PFS score was identified as a robust behavioral predictor, indicating that individuals with greater scores are more likely to engage in behaviors towards sustainable nutrition. Collectively, these variables explained up to 18.3% of the variance in BSSN scores.

Table 1. Demographic characteristics of participants (n=700)

Parameters	n (%)
Age (mean±SD)	29.99±10.31
Gender	
Male	187 (26.7)
Female	513 (73.3)
Marital status	
Single/divorced	447 (63.9)
Married	253 (36.1)
Education status	
Literate	24 (3.4)
Primary school	9 (1.3)
High school	199 (28.4)
University	468 (66.9)
Accommodation status	
With family	538 (76.9)
In a nursing home/nursing home	1 (0.1)
With friends	35 (5.0)
Single	82 (11.7)
At home	41 (5.9)
Other	3 (0.4)
Regular physical exercise (yes)	198 (28.3)
Cigarette use (yes)	187 (26.7)
Alcohol use (yes)	186 (26.6)
Main meal (mean±SD)	2.28±0.52
Snack (mean±SD)	2.02±1.10

Table 2. Comparison of mean scores of BSMAS, PFS and BSSN scales according to gender (n=700)

	Male (n=187) n (%)	Female (n=513) n (%)	p value
Social media addiction			
Addicted	51 (27.3)	224 (43.7)	<0.001**
Non-addicted	136 (72.7)	289 (56.4)	
BSMAS score	14.66±5.25	16.24±5.55	0.001*
PFS score	2.94±0.96	3.14±0.88	0.011*
Food availability score	2.66±1.02	2.83±1.04	0.055
Food presence score	3.02±1.08	3.12±0.98	0.228
Food taste score	3.09±1.06	3.39±0.94	0.001*
Hearing about sustainability			
Yes	54 (28.9)	332 (64.7)	<0.001**
No	133 (71.1)	181 (35.3)	
BSSN score	89.10±21.78	100.24±18.90	<0.001**
Food choice	2.49±0.91	2.97±0.82	<0.001**
Reducing food waste	3.38±0.91	3.66±0.77	<0.001**
Seasonal and local eating	3.15±0.95	3.57±0.84	<0.001**
Food purchasing	3.08±0.86	3.48±0.78	<0.001**

*p<0.05, **p<0.001; BSMAS: Bergen Social Media Addiction Scale, PFS: Power of Food Scale, BSSN: Behavioral Scale towards Sustainable Nutrition

Table 3. Comparison of mean scores of BSMAS, PFS and BSSN scales according to social media addiction (n=700)

	Addicted (n=275)	Non-addicted (n=425)	p value
Age	27.41±8.27	31.66±11.14	<0.001**
BSMAS score	21.45±2.95	12.17±3.26	<0.001**
PFS score	3.33±0.83	2.92±0.92	<0.001**
Food availability score	3.00±1.02	2.65±1.02	<0.001**
Food presence score	3.37±0.93	2.91±1.02	<0.001**
Food taste score	3.56±0.90	3.15±1.00	<0.001**
BSSN score	95.71±19.18	98.28±20.95	0.102
Food choice	2.80±0.88	2.87±0.87	0.267
Reducing food waste	3.54±0.79	3.62±0.84	0.184
Seasonal and local eating	3.38±0.84	3.50±0.92	0.078
Food purchasing	3.34±0.78	3.40±0.85	0.308

**p<0.001; BSMAS: Bergen Social Media Addiction Scale, PFS: Power of Food Scale, BSSN: Behavioral Scale towards Sustainable Nutrition

Table 4. Correlations between BSMAS, PFS and BSSN scales (n=700)

	BSMAS	PFS	Food availability	Food presence	Food taste	BSSN	Food choice	Reducing food waste	Seasonal/local eating	Food purchasing
BSMAS score	-									
PFS score	r=0.271**	-								
Food availability	r=0.210**	r=0.888**	-							
Food presence	r=0.276**	r=0.902**	r=0.726**	-						
Food taste	r=0.246**	r=0.909**	r=0.691**	r=0.728**	-					
BSSN score	r=-0.042	r=0.159**	r=0.139**	r=0.095*	r=0.187**	-				
Food choice	r=0.018	r=0.082*	r=0.096*	r=0.021	r=0.099*	r=0.745**	-			
Reducing food waste	r=-0.059	r=0.160**	r=0.149**	r=0.116*	r=0.162**	r=0.833**	r=0.421**	-		
Seasonal/local eating	r=-0.059	r=0.170**	r=0.138**	r=0.104*	r=0.207**	r=0.867**	r=0.565**	r=0.605**	-	
Food purchasing	r=-0.019	r=0.029*	r=0.046	r=0.045	r=0.122**	r=0.823**	r=0.552**	r=0.606**	r=0.615**	-

The Pearson’s correlation was used; *p<0.05; **p<0.001; *BSMAS: Bergen Social Media Addiction Scale, PFS: Power of Food Scale, BSSN: Behavioral Scale towards Sustainable Nutrition

Table 5. Linear regression analysis of associated factors with the Behavioral Scale for Sustainable Nutrition (n=700)

	Unstandardized coefficients			Standardized coefficients			Sig	F	R	Rsquare effect size
	B	SE	Beta	t						
1 (constant)	83.918	2.301		36.466		<0.001**	37.62		0.226	0.051
Age	0.445	0.073	0.226	6.134		<0.001**				
2 (constant)	74.608	2.576		28.963		<0.001**	45.73		0.341	0.116
Age	0.470	0.070	0.239	6.695		<0.001**				
Gender (female)	11.690	1.635	0.255	7.152		<0.001**				
3 (constant)	73.476	2.569		28.596		<0.001**	35.81		0.366	0.134
Age	0.376	0.074	0.191	5.082		<0.001**				
Gender (female)	11.536	1.620	0.252	7.122		<0.001**				
Education level (university)	6.096	1.616	0.141	3.773		<0.001**				
4 (constant)	69.398	2.743		25.303		<0.001**	31.36		0.391	0.153
Age	0.456	0.076	0.232	6.011		<0.001**				
Gender (female)	9.412	1.690	0.205	5.569		<0.001**				
Education level (university)	5.795	1.601	0.134	3.620		<0.001**				
Hearing about sustainability (yes)	6.192	1.561	0.152	3.966		<0.001**				
5 (constant)	67.740	2.840		23.852		<0.001**	26.16		0.398	0.159
Age	0.424	0.077	0.216	5.502		<0.001**				
Gender (female)	9.824	1.696	0.214	5.792		<0.001**				
Education level (university)	6.105	1.603	0.142	3.809		<0.001**				
Hearing about sustainability (yes)	6.424	1.561	0.158	4.116		<0.001**				
Social Media Addiction (non-addicted)	3.261	1.501	0.079	2.172		0.030*				
6 (constant)	61.004	5.870		10.392		<0.001**	22.11		0.401	0.161
Age	0.437	0.078	0.222	5.623		<0.001**				
Gender (female)	9.770	1.696	0.213	5.762		<0.001**				
Education level (university)	6.078	1.602	0.141	3.794		<0.001**				
Hearing about sustainability (yes)	6.543	1.563	0.160	4.188		<0.001**				
Social Media Addiction (non-addicted)	5.980	2.560	0.144	2.336		0.020*				
BSMAS score	0.298	0.227	0.081	1.311		0.190				
7 (constant)	53.216	6.068		8.770		<0.001**	22.13		0.428	0.183
Age	0.451	0.077	0.229	5.883		<0.001**				
Gender (female)	9.423	1.676	0.206	5.621		<0.001**				
Education level (university)	5.472	1.588	0.127	3.446		0.001*				
Hearing about sustainability (yes)	6.250	1.544	0.153	4.047		<0.001**				
Social media addiction (non-addicted)	5.783	2.528	0.139	2.288		0.022*				
BSMAS score	0.141	0.227	0.038	0.620		0.536				
PFS score	3.492	0.805	0.156	4.335		<0.001**				

*p<0.05, **p<0.001; ^apredictors (constant): age, sex; ^bpredictors (constant): age, sex and education level; ^cpredictors (constant): age, sex, education level and hearing about sustainability; ^dpredictors (constant): age, sex, education level, hearing about sustainability and social media addiction; ^epredictors (constant): age, sex, education level, hearing about sustainability, social media addiction and BSMAS score; ^fpredictors (constant): age, sex, education level, hearing about sustainability, social media addiction, BSMAS score and PFS score; dependent variable, BSMAS: Bergen Social Media Addiction Scale, PFS: Power of Food Scale, BSSN: Behavioral Scale towards Sustainable Nutrition

Discussion

This study is the first to investigate the bidirectional relationship between social media addiction, hedonic hunger, and behaviors towards sustainable nutrition. The phenomenon of internet addiction has emerged as a significant public health concern, warranting global attention. As reported by the digital marketing agency Digital 2024, the number of internet users reached 5.35 billion, with more than 5 billion people actively engaging on social media platforms at the beginning of 2024 [6]. Huang et al. (2021) reported a notable increase in the time spent on such online activities, particularly during the Coronavirus Disease 2019 (COVID-19) pandemic [19]. A meta-analysis estimated that the average prevalence of social media addiction across 32 countries was 24% [20]. Our findings indicated that the prevalence of social media addiction was higher in Türkiye, with a rate of 39.3%. Similarly, a study conducted on Turkish adolescents demonstrated that the prevalence of moderate to high social media addiction was 37.9% [21].

Men were found to be more likely to exhibit problematic behaviors regarding Internet use than women [22]. However, our previous study indicated that there was no significant difference in the prevalence of internet addiction between males and females [23]. The findings from a comprehensive nationwide survey of Norwegians demonstrated that women exhibited a greater tendency towards addictive behavior with regard to social media than men [17]. Similarly, the present study revealed a significant sex difference in the BSMAS scores, with women exhibiting higher scores than men. The distribution of male and female participants in our study was not entirely balanced, which may introduce bias into the findings. Nevertheless, the findings of a further study conducted in Türkiye were in alignment with our findings [21]. Future research on social media addiction should adopt a more gender-balanced approach to minimize the potential for bias.

Exposure to various contents on social media, including nutrition-related posts and mukbang videos created by influencers, may result in a reduction in eating awareness and an inability to respond effectively to physiological hunger and satiety signals [7]. This may, in turn, lead to an increase in pleasure-driven eating tendencies. Such hedonic behaviors have recently been the subject of considerable discussion, with research efforts primarily focused on women. Our study demonstrated that the PFS score, which reflects hedonic hunger, was significantly higher in women than in men. However, it is crucial to acknowledge that men may also be prone to hedonic eating behaviors. From a neurological perspective, impulsive food choices have been linked to activation of brain regions associated with reward processing. Given the aforementioned context, the extensive use of social media may lead to an increased likelihood of impulsive responses regarding food choice, with increased expectations of rewards [8,12]. In accordance with the findings of previous research, this study revealed that individuals with social media addiction exhibited significantly higher hedonic hunger score.

The term "sustainable eating" was used to describe a dietary model characterized by minimal environmental costs and food waste, which promoted the health of both current and future generations. In this context, the cyclical relationship between social media addiction and hedonic hunger may serve to undermine the adoption of sustainable behaviors by increasing interest in processed and unhealthy foods. Nevertheless, social media platforms can also serve to disseminate normative ideas about healthy and sustainable eating. This is exemplified by the case of "clean eating" promoters who actively promote sustainable eating through social media [8]. The notion that social media addiction could significantly affect eating behaviors was supported by the findings of a study conducted by Yurtdaş-Depboylu et al. (2022). Furthermore, the results of this study indicated that the frequency of reading nutrition-related posts on social media could increase the tendency towards orthorexic behavior [21]. However, our study did not identify any notable differences in behaviors towards sustainable nutrition between participants with and without social media addiction.

A positive correlation was identified between the following of unhealthy food and beverage brands on social media and an increased prevalence of obesity in the United States [24]. It is well known that energy-dense, nutrient-poor foods are prevalent on social media platforms, such as YouTube and Instagram [25]. Studies have reported that viewers tend to consume more of the advertised products when the adverts are disclosed [26]. Therefore, pervasive use of social media has been linked to impulsive behaviors and food cravings, which may contribute to the development of hedonic hunger characterized by reward-oriented consumption. In accordance with the results of previous studies, our findings indicated a weak correlation between social media addiction and elevated hedonic hunger or its associated subdimensions. However, the concepts of social media addiction and hedonic hunger have not previously been associated with behaviors towards sustainable nutrition. Interestingly, despite the lack of correlation between social media addiction and sustainable behaviors, this study found a weak positive correlation between hedonic hunger and behaviors towards sustainable nutrition. This was also observed across all subscales of the BSSN scale. This unexpected finding may be attributed to the fact that participants with higher health consciousness engage in a more comprehensive decision-making process informed by their existing health knowledge and beliefs when evaluating food characteristics [27].

Food production and consumption have a considerable impact on the environment, with factors such as greenhouse gas emissions, the use of water resources, and the application of pesticides [11]. In this context, the principal objective of sustainable nutrition is to facilitate a healthy lifestyle for both current and future generations, while maintaining ecological balance [28]. Promoting sustainable nutrition awareness enables individuals to make informed and sustainable choices. Unfortunately, 44.8% of the participants in our study demonstrated a lack of awareness of sustainable nutrition. Moreover, the lack of awareness was 71.1%

among male participants, with significant differences between the sexes. Similarly, Engin and Sevim (2022) reported that 50.7% of university students demonstrated a lack of awareness regarding sustainable nutrition [29]. Notably, the researchers identified that approximately 33.2% of the study participants reported having learned about the concept of sustainable nutrition through social media.

Common environmental issues are associated with several subdimensions, including food choice, food waste, seasonal and local eating, and food purchasing [16]. At this point, consumer's behaviors play a critical role in achieving sustainability goals [11]. These behaviors can be significantly influenced by personal, environmental, social, and cultural factors [30]. It is therefore crucial to identify the principal predictors of behaviors towards sustainable nutrition. We indicated that the key predictors of these behaviors were female gender, sustainability awareness, university education, increased hedonic hunger score and older age. The aforementioned variables collectively accounted for 18.3% of the total variance. This study suggested that the intensity of social media use was not a significant determinant of these behaviors. Future research should examine variables such as content awareness and information sources in addition to the intensity of social media use. Additionally, societal and cultural practices in the Turkish population, including the significance attributed to communal dining, traditional culinary habits, and a strong preference for local and seasonal ingredients, may support behaviors towards sustainable nutrition. Therefore, certain factors including social, psychological, and cultural should be comprehensively addressed through a multidisciplinary approach to better understand their impact on behaviors towards sustainable nutrition.

It is also imperative to consider the necessity of interventions on social media policies, digital literacy, and public regulations to promote healthy and sustainable eating behaviors. The widespread use of social media platforms such as YouTube, Instagram, and X on a global scale has facilitated access to information. In this context, social media platforms should bear the responsibility for promoting health and sustainability by adjusting their algorithms to prioritize content that advocates healthy and sustainable eating practices. Furthermore, digital literacy programs have the potential to empower individuals to critically evaluate advertisements and social media posts, which may trigger pleasure-driven food consumption or encourage unsustainable food choices [31]. In this context, the provision of digital literacy education on the recognition of manipulative marketing strategies and making informed dietary decisions may encourage more conscious consumption patterns. Moreover, the implementation of public regulations and policies targeting food marketing is paramount. The introduction of more stringent regulations with the aim of curtailing the promotion of unhealthy and unsustainable food products, particularly for vulnerable demographics such as children and adolescents, and the promotion of sustainable food options may play a transformative

role in promoting sustainable nutritional preferences at the community level [32].

This study had several limitations. First, the cross-sectional design did not allow for the establishment of a causal relationship between social media addiction, hedonic hunger, and behaviors towards sustainable nutrition. Second, the study was based on self-reported data, which may have introduced response bias. Third, the sample consisted mainly of participants from specific demographic groups, which limited the generalizability of the findings. Finally, the study did not investigate the content consumed or the platforms used by participants, despite examining the intensity of social media use. This may omit a more comprehensive understanding of the impact of social media on sustainable behavior.

Conversely, the main strength of this study is that it is the first to examine the relationship between social media addiction, hedonic hunger, and behaviors towards sustainable nutrition in Türkiye. Second, the study employed well-validated instruments including the BSMAS, PFS, and BSSN, thus ensuring the reliability and validity of the measured constructs. Third, the inclusion of a large sample provides sufficient statistical power to detect meaningful associations, thereby increasing the robustness of the study. Fourth, the integration of current and relevant variables such as social media use and sustainable nutrition provides valuable insights into public health concerns. Finally, this study contributes to the existing literature on the predictors of behaviors towards sustainable nutrition, thereby providing a framework for future multidisciplinary research and intervention development.

Conclusion

This study examined the complex interrelationships between social media addiction, hedonic hunger, and behaviors towards sustainable nutrition. Although social media addiction was associated with elevated hedonic hunger, it did not exert a direct influence on behaviors towards sustainable nutrition. Notably, a weak positive correlation between hedonic hunger and behaviors towards sustainable nutrition indicates that individuals may direct their hedonic tendencies towards more conscious food choices when coupled with a heightened level of health consciousness. Furthermore, demographic factors such as gender, sustainability awareness, education level, and age were identified as significant predictors of sustainable behaviors, thereby underscoring the importance of demographic factors. These findings highlight the dual role of social media as both a catalyst for impulsive eating and disseminator of sustainability-oriented norms. It would be beneficial for future research to adopt longitudinal designs to explore causal pathways and gain a deeper understanding of the influence of social media sources and content on behaviors towards sustainable nutrition.

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Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

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Ethical Approval

Ethical approval of the study was prepared according to the ethical standards of the Declaration of Helsinki and approved by the ethics committee of İstanbul Bilgi University (no: 2024-40160-170).

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