RESEARCH ARTICLE

The impact of impulsivity and social anxiety on pathological gambling and technology addiction: A cross-sectional study

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ABSTRACT

Objective: With the introduction of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders and changing life conditions, behavioral addictions have gained more prominence in academia. Behavioral addictions exhibit common and unique features, both in comparison to non-behavioral addictions and among different types of behavioral addictions. Pathological gambling or gambling disorder is included in the DSM-5 and can be considered the prototype of behavioral addiction. Therefore, in this study we aim to highlight the similarities and differences between pathological gambling and technology addictions in the context of impulsivity and social anxiety.

Method: In our study, 564 university students were included. Each student completed the South Oaks Gambling Screen, Technology Addiction Scale, Liebowitz Social Anxiety Scale, and the short form of the Barratt Impulsiveness Scale.

Results: The rate of pathological gambling was found to be 10.3% (n=58). According to the hierarchical regression analysis, impulsivity predicts both pathological gambling and technology addictions, while social anxiety predicts only technology addictions (including instant messaging addiction, online game addiction, and website addiction).

Conclusion: Behavioral addictions share characteristics with other behavioral addictions, as well as with non-behavioral addictions. However, there are unique factors in the development of each addiction that should be considered since identifying these factors can contribute to the development of personalized therapies. Therefore, there is a need for studies that focus on pathological gambling while comparing different behavioral addictions across various contexts. In this regard, the present study offers a modest example.

Keywords: Addictive behavior, gambling, impulsivity, social anxiety, technology addiction

INTRODUCTION

The concept of behavioral addiction is relatively novel in the field of psychiatry. It has gained increasing attention since the 2000s, leading to the inclusion of gambling disorder—also referred to as pathological gambling—in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (1, 2). However, behavioral addictions extend beyond pathological gambling, encompassing issues such as dysfunctional food consumption, compulsive sexual behavior, excessive exercise, and shopping abuse. These can

manifest as food addiction, sex addiction, exercise addiction, and shopping addiction, respectively. Additionally, behaviors associated with the problematic use of specific devices and information and communication technologies, such as excessive internet use, or uncontrolled or excessive use of mobile phones or video games, can result in addiction-related disorders (3–5).

The core characteristic of behavioral addictions is an inability to resist impulses, drives, or temptations that, when excessively pursued, may lead to negative consequences. Despite awareness of these adverse outcomes, the behavior provides short-term rewards, reinforcing continued engagement (6). Griffiths (7) outlined six fundamental elements commonly observed in individuals with behavioral addiction: salience (the activity becomes highly valued, taking priority over other activities), mood modification (emotional responses occur due to the behavior, such as an adrenaline rush or relief from depressive states), tolerance (increasing engagement is needed to achieve the desired mood modification), withdrawal symptoms (unpleasant feelings or physiological reactions arise when reducing the frequency of or stopping the activity), conflict (the behavior interferes with other activities or relationships), and relapse (there is a relatively high likelihood of returning to the initial behavior).

Pathological gambling is the behavioral addiction with the most extensive evidence in the literature and was therefore the first behavioral addiction to be included in the Diagnostic and Statistical Manual of Mental Disorders (DSM). Research on gambling has indicated that being male, belonging to an ethnic minority, having disrupted family and peer relationships, and having a family member with pathological gambling disorder are risk factors for developing gambling-related problems, which often begin at an early age. Gamblers also frequently experience mental health issues such as anxiety and depression, exhibit lower levels of conformity and self-discipline, and often experience suicidal thoughts and attempts. Problem gamblers tend to hold misconceptions, have a poor understanding of event independence, and overestimate their gambling skills. They also demonstrate poor coping abilities, a tendency toward high-risk behavior, and reduced resilience in the face of adversity (3). Among all these factors, impulsivity stands out as the most critical and is considered a core feature of pathological gambling (8).

As technology advances, the prevalence of addictive behaviors linked to technological tools has grown. The World Health Organization (WHO) (9) has officially recognized technology addiction as a global issue. Griffiths (10) stated that technology addictions involve non-chemical, behavioral dependencies centered on human-machine interactions. These can manifest as passive activities, such as watching television, or active ones, such as using mobile phones. These technologies possess features that attract and reinforce behaviors, fostering addictive tendencies. Griffiths (11) also noted that within the broader category of technology addictions, there are various subtypes. Examples include internet addiction disorder, internet gaming disorder, mobile phone addiction, and social media addiction (5, 9, 12). Studies have indicated both a correlation and a regression relationship between impulsivity and technology addictions. Social anxiety has also been identified as a contributing factor influencing internet addiction (13–15).

Some researchers view behavioral addictions as a type of impulse control disorder, while other studies challenge this perspective by highlighting different psychological factors that contribute to each type of addiction (16). The existing literature on this topic continues to evolve. University students are particularly vulnerable and deserve closer examination due to various influencing factors, such as separation from their families, the ongoing development of coping mechanisms, relocation to new cities, and experiences of loneliness (17). As a modest contribution to the literature, this study aimed to examine the effects of impulsivity and social anxiety on pathological gambling and technology addiction scores in a single sample of university students. We hypothesized that impulsivity is a common factor influencing both pathological gambling and technology addictions, while social anxiety is associated with technology addictions but not with pathological gambling.

METHODS

Design

This descriptive, cross-sectional study aimed to identify certain psychological aspects of behavioral addictions (gambling and technology) among undergraduate students. The study was conducted in accordance with the Declaration of Helsinki. The study protocol was reviewed and approved by the Başakşehir Çam and Sakura City Hospital Clinical Research Ethics Committee (approval number: 2024-84, date: 10.07.2024).

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Table 1: Sociodemographic characteristics and scale variables

Variable	n	%	Mean	SD	Min–Max	α
Age group (years)						
18–20	224	39.7				
21–23	256	45.4				
24–26	55	9.7				
>26	29	5.2				
Sex						
Female	232	41.1				
Male	332	58.9				
Average expenditure (₺)						
<9000	373	76.2				
>9000	191	33.8				
Gambling						
SOGS	564		2.47	3.31	0–17	
SOGS (cut-off ≥8)	58	10.3				
Technology addiction						
SNAS	564		16.2	5.44	6–30	
IMAS	564		15.8	5.33	6–30	
OGAS	564		14.2	6.98	6–30	
WAS	564		15.8	6.40	6–30	
Total	564		62.0	19.0	24–120	
Social anxiety						
LSAS - fear	563		42.7	11.7	24–91	
LSAS - avoidance	563		41.1	11.2	24–88	
LSAS - total	563		83.8	21.8	48–177	
Impulsivity						
BIS-11 - non-planning	564		10.9	4.45	5–25	
BIS-11 - motor	564		16.5	3.41	7–25	
BIS-11 - attention	564		13.6	4.45	5–25	
BIS-11 - total	564		40.9	9.12	18–68	

SOGS: South Oaks Gambling Screen; SNAS: Social Network Addiction Scale; IMAS: Instant Messaging Addiction Scale; OGAS: Online Game Addiction Scale; WAS: Website Addiction Scale; LSAS: Liebowitz Social Anxiety Scale; BIS-11: Barratt Impulsiveness Scale; SD: Standard deviation; Min: Minimum; Max: Maximum; ₺: Turkish Lira.

Sampling and Participants

We focused on university students in Turkiye and used social media to recruit participants for the study. Data were collected in August 2024 using Google Forms. The survey link was distributed via Instagram and WhatsApp. There were no regional or university restrictions in recruiting participants. A total of 604 university students completed the forms online; however, 40 were excluded due to incomplete data. The exclusion criteria were: not providing consent to participate in the study, not being a university student, or submitting incomplete responses.

Measurements

South Oaks Gambling Screen (SOGS)

Developed by Lesieur and Blume in 1987 (18), this scale assesses pathological gambling behavior. It comprises 26 questions and is structured as a single-dimensional scale. Scores from 20 items are used to calculate the total score. Scores range from 0 to 20. Duvarcı and Varan (2021) (19) adapted the scale for Turkish culture in 2021. The cut-off point for the 19-item Turkish form of the SOGS, which yielded the lowest false negative and false positive rates, and thus the highest sensitivity and specificity, was determined to be a score of 8.

Table 2: Correlation analysis

		1	2	3	4	5	6	7	8	9	10
Gambling	SOGS	–									
Technology addiction	TAS total	0.184***	–								
	WAS	0.107*	0.792***	–							
	OGAS	0.241***	0.754***	0.395***	–						
	IMAS	0.101*	0.806***	0.536***	0.474***	–					
	SNAS	0.114**	0.800***	0.563***	0.425***	0.596***	–				
Social anxiety	LSAS fear	-0.104*	0.168***	0.160***	0.091*	0.148***	0.146***	–			
	LSAS avoidance	-0.073	0.184***	0.135**	0.131**	0.177***	0.148***	0.815***	–		
Impulsivity	BIS-11 non-planning	0.135**	0.179***	0.161***	0.075	0.137**	0.193***	0.020	0.012	–	
	BIS-11 motor	0.048	0.261***	0.218***	0.097*	0.265***	0.273***	0.001	0.016	0.052	–
	BIS-11 attention	0.141***	0.343***	0.273***	0.160***	0.324***	0.341***	0.078	0.109*	0.496***	0.353***

SOGS: South Oaks Gambling Screen; TAS Total: Technology Addiction Scale - Total; WAS: Websites Addiction Scale; OGAS: Online Game Addiction Scale; IMAS: Instant Messaging Addiction Scale; SNAS: Social Network Addiction Scale; LSAS: Liebowitz Social Anxiety Scale; BIS: Barratt Impulsiveness Scale. *p<0.05; **p<0.01; ***p<0.001.

Technology Addiction Scale (TAS)

Created by Aydın (2017) (20), this scale is based on the addiction criteria in Young's (1996) (21) Internet Addiction Test and Griffiths' (2000) (11) model, which includes six criteria. The TAS consists of 24 items on a five-point Likert scale and does not include any reverse-scored items. It comprises four subscales: the Social Network Addiction Scale (SNAS), Instant Messaging Addiction Scale (IMAS), Online Game Addiction Scale (OGAS), and Website Addiction Scale (WAS). Notably, a cut-off value has not yet been established for this scale.

Liebowitz Social Anxiety Scale (LSAS)

Developed by Liebowitz (1987) (22), the scale was later translated into Turkish by Soykan et al. (2003) (23). It includes 24 items, with participants rating both their levels of fear and avoidance in performance and social interaction situations. Fear is rated on a four-point scale from 0 (none) to 3 (severe), and avoidance is rated from 0 (never) to 3 (usually).

Barratt Impulsiveness Scale (BIS-11)

Originally developed by Barratt in 1995, a short form was later created (24). The BIS-11 short form (BIS-11-SF) comprises 15 items, each rated on a four-point scale (1 to 4). It includes three subscales: non-planning impulsiveness, motor impulsiveness, and attentional impulsiveness. A Turkish version of the scale was developed in 2013, with internal consistency reliability coefficients (Cronbach's alpha) reported as 0.82 for the overall scale, 0.80 for non-planning impulsiveness, 0.70 for motor impulsiveness, and 0.64 for attentional impulsiveness (25).

Statistical Analysis

The study data were analyzed using Jamovi version 2.3.28.0. For descriptive statistics, continuous quantitative variables were summarized using means and standard deviations, while frequencies and percentages were reported for qualitative variables. The Kolmogorov-Smirnov test was used to assess whether the continuous variables followed a normal distribution. Additionally, Pearson correlation analysis was conducted to examine relationships between variables, and hierarchical multiple regression analysis was performed to test the effects of social anxiety and impulsivity on pathological gambling and technology addictions. Standard regression analyses were also applied to all subscales.

Table 3: Regression analysis with total scores

Predicting pathological gambling					Predicting technology addiction				
Step	R^2	Variable	Beta	p	Step	R^2	Variable	Beta	p
1	0.141	Constant		<0.001	1	0.010	Constant		<0.001
		Sex[a]	0.644	<0.001			Sex[a]	0.169	0.052
		Avg. expenses[b]	0.315	<0.001			Avg. expenses[b]	0.092	0.307
2	0.180	Constant		0.401	2	0.180	Constant		<0.001
		Sex[a]	0.682	<0.001			Sex[a]	0.333	<0.001
		Avg. expenses[b]	0.303	<0.001			Avg. expenses[b]	0.083	0.317
		Impulsivity	0.195	<0.001			Impulsivity	0.358	<0.001
		Social anxiety	-0.038	0.329			Social anxiety	0.196	<0.001

a1: Female; 2: Male; b1: Low; 2: High.

RESULTS

In our study, 58.9% of the participants were male (n=332) and 41.1% were female (n=232). Age information was collected in four categories: 18-20 years, 21-23 years, 24-26 years, and above 26 years. Overall, 39.7% of the participants were in the 18-20 age range, and 45.4% were in the 21-23 age range. Average monthly expenditure information was collected using a dichotomous question to assess the impact of gambling behavior, and these data are presented in Table 1.

According to the SOGS, individuals with a score of 8 or above are considered likely to have a gambling addiction. In our study, this rate was 10.3% (n=58). The rate of technology addiction was not calculated, as there are no established cut-off scores for the TAS.

Correlation Analysis
Table 2 presents the Pearson correlations between different types of behavioral addictions (gambling, social media, messaging, gaming, and web use) and psychological parameters (social anxiety and impulsivity). Gambling was weakly correlated with the fear subscale of social anxiety, as well as with the attention and non-planning subscales of impulsivity. In contrast, technology addiction types, particularly social media, messaging, and web use, showed a moderate correlation with the attention subscale of impulsivity and a weak correlation with social anxiety and the other impulsivity subscales.

Regression Analysis
We conducted hierarchical linear regression analyses to examine the effects of impulsivity and social anxiety on pathological gambling and technology addictions. Two sets of regression models were used to evaluate both overall and specific addiction domains. In the first set of analyses, the dependent variables were pathological gambling and total technology addiction scores, analyzed separately. In Step 1, gender and monthly expenses were included as control variables. This model explained 14.1% of the variance in pathological gambling (R^2=0.141) and 1.0% of the variance in technology addiction (R^2=0.010). In Step 2, total impulsivity and total social anxiety scores were added as psychological predictors. This step significantly improved the model for both outcomes: for pathological gambling (R^2=0.180, ΔR^2=0.039, p<0.001) and for technology addiction (R^2=0.180, ΔR^2=0.170, p<0.001). Among the predictors, impulsivity significantly predicted both pathological gambling (β=0.195, p<0.001) and technology addiction (β=0.358, p<0.001). Social anxiety had a significant effect on technology addiction (β=0.196, p<0.001) but did not significantly affect pathological gambling (β=-0.038, p=0.329) (Table 3).

To gain a clearer understanding of the predictors, a second set of regression analyses was performed, using impulsivity subdimensions (attentional, motor, non-planning) and social anxiety subdimensions (social fear, social avoidance) as independent variables. The dependent variables for this model included pathological gambling and four specific domains of technology addiction: website addiction, online game addiction, instant messaging addiction, and social network addiction. The regression analyses indicated that pathological gambling was significantly predicted by both attentional impulsivity (β=0.131, p=0.007) and non-planning impulsivity (β=0.101, p=0.024). Regarding specific domains of technology addiction, website addiction was associated with higher levels of attentional impulsivity (β=0.182, p<0.001) and motor impulsivity (β=0.153, p<0.001), and increased

Table 4: Regression analysis for pathological gambling and technology addiction

Dependent variable	R^2	Predictor		Beta	p
Gambling disorder	0.182				0.401
			Sex[a]	0.686	<0.001**
			Avg. expenses[b]	0.305	<0.001**
		Impulsivity	Non-planning	0.101	0.024*
			Attentional	0.131	0.007**
			Motor	0.008	0.834
		Social anxiety	Fear	-0.093	0.157
			Avoidance	0.051	0.440
Social Network Addiction Scale (SNAS)	0.164		Constant		0.007
			Sex[a]	0.086	0.296
			Avg. expenses[b]	0.051	0.539
		Impulsivity	Non-planning	0.065	0.149
			Attentional	0.233	<0.001**
			Motor	0.186	<0.001**
		Social anxiety	Fear	0.098	0.143
			Avoidance	0.049	0.468
Instant Messaging Addiction Scale (IMAS)	0.164		Constant		0.004
			Sex[a]	0.167	0.043*
			Avg. expenses[b]	0.078	0.353
		Impulsivity	Non-planning	0.007	0.863
			Attentional	0.252	<0.001**
			Motor	0.176	<0.001**
		Social anxiety	Fear	0.040	0.548
			Avoidance	0.132	0.051
Online Game Addiction Scale (OGAS)	0.142		Constant		<0.001
			Sex[a]	0.632	<0.001
			Avg. expenses[b]	0.108	0.205
		Impulsivity	Non-planning	0.022	0.622
			Attentional	0.148	0.003**
			Motor	0.057	0.175
		Social anxiety	Fear	-0.014	0.830
			Avoidance	0.180	0.009**
Website Addiction Scale (WAS)	0.117		Constant		0.052
			Sex[a]	0.112	0.185
			Avg. expenses[b]	0.005	0.949
		Impulsivity	Non-planning	0.060	0.198
			Attentional	0.182	<0.001**
			Motor	0.153	<0.001**
		Social anxiety	Fear	0.163	0.018*
			Avoidance	-0.010	0.881

*p<0.05; **p<0.01; a1: Female; 2: Male; b1: Low; 2: High.

social fear (β=0.163, p=0.018). In the analysis of online game addiction, both social avoidance (β=0.180, p=0.009) and attentional impulsivity (β=0.148, p=0.003) emerged as significant predictors. Likewise, higher levels of attentional impulsivity (β=0.252, p<0.001) and motor impulsivity (β=0.176, p<0.001) predicted instant messaging addiction. Finally, social network addiction was significantly predicted by both attentional (β=0.233, p<0.001) and motor impulsivity (β=0.186, p<0.001) (Table 4).

DISCUSSION

Only a few studies have focused on comparing and contrasting behavioral addictions (16, 26, 27). However, changing living conditions and advancing technology necessitate a more comprehensive approach to research in this field. Since pathological gambling was the first behavioral addiction to be included in the DSM, it can serve as a reference point for evaluating other behavioral addictions (6).

In our research, 10.3% of the participating university students were identified as having pathological gambling (measured by SOGS ≥8). A meta-analysis of studies conducted between 1999 and 2005 using the SOGS method estimated the prevalence of pathological gambling among college students at 7.9% (28). Another meta-analysis of 18 studies conducted from 2005 to 2013 estimated that 10.23% of college students suffer from pathological gambling (29), while a 2018 meta-analysis reported that 10.23% of college students exhibit problematic gambling behaviors, and 6.13% meet the criteria for pathological gambling (30). The pathological gambling rate found in our study is consistent with these findings in the literature. However, since the TAS does not have a specific cut-off value, we did not calculate the prevalence of technology addictions.

Impulsivity is a common factor in behavioral addictions, characterized by hasty, risky, and inappropriate behaviors that lead to negative outcomes (31–33). In our study, we analyzed the relationship between impulsivity subdimensions (motor, non-planning, and attentional impulsiveness) and different types of addiction. The results indicated that pathological gambling is predicted by both attentional and non-planning impulsiveness. This may be because impulsivity is a core mechanism in the development of pathological gambling, which was previously categorized as an impulse control disorder in the DSM-IV (34). Various studies have shown different relationships between impulsivity subtypes and pathological gambling disorders. For instance, Yan et al. (2016) (35) found no significant positive associations between gambling scores and motor, attentional, or non-planning impulsiveness scores in logistic regression analysis. In contrast, Barrault and Bonnaire (2015) (36) reported significant differences in motor and non-planning impulsivity among gamblers, depending on the intensity of their gambling behavior. Donatella Marazziti et al. (2014) (37) found that both motor and non-planning impulsivity were significantly higher in patients with problem gambling than in control subjects. Furthermore, Frisone et al. (2020) (38) conducted a study during the Coronavirus Disease 2019 (COVID-19) pandemic and found significant associations between gambling scores and both attentional and non-planning impulsiveness. Overall, while some results align with our research, others differ regarding the specific impulsivity subtypes. Motor impulsiveness refers to acting without thinking or responding spontaneously. Attentional impulsiveness is characterized by difficulty in focusing on the task at hand. Non-planning impulsivity involves focusing on the present moment without considering future consequences (39). Our results highlight the cognitive component of impulsivity in pathologic gambling, rather than the behavioral component. Accordingly, medical and psychological support aimed at enhancing increase and present-moment awareness in individuals with pathologic gambling is becoming increasingly important.

A meta-analysis determined that the behavioral trait of impulsivity significantly and positively contributes to technology addiction behaviors and tendencies (40). Another meta-analysis, examining studies published up to 2019 on impulsivity and smartphone addiction, also found a strong positive correlation between impulsivity and smartphone addiction among student populations (41). However, we identified some variations in how different subtypes of impulsivity relate to specific addictions. Our results indicated that attentional and motor impulsivity are particularly prominent across the various forms of technology addiction (except in the case of online game addiction, which is predicted solely by attentional impulsivity) (42). Findings from a 2024 study conducted with university students revealed that motor impulsivity was associated with problematic internet use, problematic social media use, and problematic online gaming. Another study showed that individuals in the problematic smartphone use group had higher scores in attentional, motor, and non-planning impulsivity compared to the control group (43). When examining the relationships between various impulsivity subtypes and behavioral addictions such as pathological gambling and technology addiction, a complex and nuanced picture emerges, both from the literature and from our findings. Although we cannot draw definitive conclusions about the specific roles of these impulsivity subtypes based on the current data, it is clear that impulsivity is a significant predictor of all the behavioral addictions examined in our study.

In the regression model assessing the effects of psychological factors on pathological gambling and technology addictions, the explanatory power of impulsivity and social anxiety was found to be considerably higher for technology addiction ($\Delta R^2=0.033$ vs. $\Delta R^2=0.163$). Given the extensive body of literature on the impact of impulsivity on pathological gambling, this variance is somewhat unexpected. However, Zhou et al. (2016) (44) provided data that support our findings. In their study, BIS-11 scores were significantly higher in the internet addiction group than in the pathological gambling group. In another study (45), although BIS-11 scores were also higher among individuals with internet addiction compared to those with pathological gambling, the difference was not statistically significant. This finding, however, is supported by only a few studies, making it difficult to generalize. The unexpected results we observed, although supported by limited research, may stem from differences in the prevalence and social acceptance of the two types of addiction. Our study employed a dimensional approach, evaluating the data on a spectrum rather than categorically. Therefore, our findings should not be interpreted as assessments of pathological conditions. Conducting comparative studies that analyze both pathological gambling and technology addiction using categorical methods could help address this limitation.

According to our second hypothesis, social anxiety is associated with technology addictions but not with pathological gambling. The regression analysis supported this hypothesis. The number of studies examining the relationship between social anxiety and pathological gambling in the literature is limited. Nevertheless, one study examining the prevalence of anxiety disorders among individuals with pathological gambling disorders found a significantly higher proportion of social anxiety in this population (46). Another study investigating the severity of gambling problems and psychiatric disorders among Hispanic and White adults revealed that social phobia was associated with problem or pathological gambling in the Hispanic sample (47). Our regression analysis, however, showed that social anxiety has no significant effect on pathological gambling, although a small positive correlation was observed between them. These results suggest that the weak correlation found in the few available previous studies are not strong enough to be predictive.

In contrast, the relationship between social anxiety and technology addiction has been widely studied. For instance, a meta-analysis found that social anxiety

is correlated with problematic internet use (48), while more recent meta-analyses have shown that social anxiety plays a predictive role in the development of problematic internet use and mobile phone addiction in both adolescents and adults (49, 50). The results of our regression analysis show a relationship between social anxiety and online game and website addictions, but not with social network or instant messaging addictions. Social media and messaging platforms require social interaction, whereas individuals with high social anxiety scores likely prefer online games and websites, which are more private. The predictive power of social anxiety for online game and website addictions indicates that, in addition to positive reinforcement, negative reinforcement also plays a role in technology addiction. This finding is particularly important for the behavioral treatment of technology-related addictions. Treating these addictions involves more than simply enhancing the ability to delay gratification. This study has some limitations. First, the data were collected using cross-sectional and self-report measures. Therefore, our findings should be compared with those of similar studies before any generalizations are made. Second, participant age was recorded using ordinal groupings. The narrow and partially homogeneous age range for the data collection group may have reduced the impact of this limitation; however, collecting data from such a limited age range makes it difficult to generalize our results. Third, the data were obtained from a non-clinical sample; therefore, the inferences made in our study need to be confirmed in clinical populations. Finally, as previously noted, the fact that the data on behavioral addiction types were evaluated as continuous rather than categorical, and that no diagnostic distinction was made, limited the inferences that could be drawn from the study.

CONCLUSION

In conclusion, considering both the literature and the findings of our study, impulsivity is associated with both pathologic gambling and technology addictions. The results highlight the importance of the cognitive component of impulsivity in the treatment of pathologic gambling. Clinicians should assess for social anxiety in individuals struggling with online gaming and website addiction, and appropriate treatment should be provided when necessary. Furthermore, more comprehensive and detailed studies are needed to better understand the mechanisms involved in the development and maintenance of behavioral addictions.

Ethical Approval: The Basaksehir Cam and Sakura City Hospital Clinical Research Ethics Committee granted approval for this study (date: 10.07.2024, number: 2024-84).

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