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ORIGINAL ARTICLE

Examining the Relationship between Digital Obesity, Digital Addiction, Desire for Self-Control, and Academic Achievement among University Students

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Main Points

- Digital obesity is introduced as a new construct distinct from digital addiction.
- Digital obesity strongly predicts digital addiction among university students.
- Age and grade point average are negatively related to digital addiction.
- Self-control desire reduces digital addiction risk.
- Findings provide insights for prevention and intervention programs.

Abstract

This study aimed to examine the interrelated roles of digital obesity, digital addiction, desire for self-control, and academic achievement among university students. A cross-sectional design was employed with 500 undergraduate students recruited through convenience sampling. Data were collected using the Personal Information Form, Digital Obesity Scale, Digital Addiction Scale, and Desire for Self-Control Scale. Descriptive analyses were followed by Pearson correlation and multiple linear regression analyses. Results revealed a strong positive correlation between digital obesity and digital addiction ($r = 0.81$, $p < .01$). Moreover, digital obesity was negatively associated with grade point average ($r = -0.33$, $p < .01$) and with desire for self-control ($r = -0.13$, $p < .01$). Digital addiction also showed negative correlations with grade point average ($r = -0.33$, $p < .01$) and desire for self-control ($r = -0.22$, $p < .01$). The regression model explained 68.4% of the variance in digital addiction ($R^2 = 0.684$, $F = 178.224$, $p < .001$), with digital obesity emerging as the strongest predictor ($\beta = 0.765$, $p < .001$). Daily internet usage had a significant positive effect ($\beta = 0.057$, $p = .048$), whereas desire for self-control negatively predicted addiction ($\beta = -0.097$, $p < .001$). The findings underscore digital obesity as a central risk factor fostering addictive behaviors, while self-control motivation operates as a protective mechanism. Importantly, the integration of digital obesity, self-control motivation, and academic performance highlights the broader academic and psychological implications of digital risks. Interventions for university students should therefore focus not only on reducing screen time but also on enhancing digital literacy, strengthening self-control skills, and supporting academic success.
Keywords: Academic performance, digital addiction, digital obesity, delf-control, university students

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Introduction

With the growing integration of digital technologies into daily life, individuals increasingly spend time online. While offering clear benefits in access to information, communication, and efficiency, this engagement also brings cognitive, emotional, and behavioral challenges. University students, balancing academic demands and social interactions, are especially vulnerable. Their heavy reliance on digital tools for study, communication, and leisure heightens the risk of problematic use and negative outcomes. In this context, two emerging concepts, digital obesity and digital addiction, have gained attention for their explanatory value (Błachnio et al., 2023; Firth et al., 2024; Karakose et al., 2022; Özbay et al., 2025a).

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Digital obesity refers to the state of cognitive, emotional, and physical overload that occurs when individuals are exposed to excessive and unbalanced digital content beyond their actual needs (Özbay et al., 2025a). Similar to physical obesity, in which excessive and unregulated caloric intake leads to health problems, digital obesity is associated with the overconsumption of "digital calories." These can manifest as continuous distraction, mental fatigue, sleep disturbances, reduced attention span, and psychological stress (Leonhard, 2016; Newport, 2019). Importantly, this condition cannot be explained solely by screen time. Instead, factors such as the quality of digital content, media multitasking, information overload, and disruptions in face-to-face social interactions serve as critical contributors (Eppler & Mengis, 2004; Schmitt et al., 2018).

Unlike digital addiction, which is characterized by compulsive and repetitive behaviors, digital obesity emphasizes the cumulative impact of passive exposure to large volumes of digital stimuli. In other words, an individual may not exhibit addictive patterns yet still experience the negative consequences of digital overconsumption (High et al., 2023). This makes digital obesity a broader construct that encompasses both the quantity and the quality of digital engagement.

The literature links digital obesity to several theoretical frameworks, including information overload theory, self-regulation theory, and the Interaction of Person – Affect – Cognition – Execution (I-PACE) model (Brand et al., 2019). These frameworks collectively explain how continuous exposure to digital information can overwhelm individuals' cognitive capacities, disrupt self-regulation mechanisms, and impair psychological well-being. Studies highlight that digital obesity is strongly associated with outcomes such as reduced life satisfaction, diminished academic performance, and increased psychological distress among university students (Baumeister et al., 2007; Karakose et al., 2022; Mehmood et al., 2021).

Furthermore, digital obesity appears to act as a predisposing factor for digital addiction (Firth et al., 2024; Schmitt et al., 2018; Özbay et al., 2025a). Excessive and unbalanced digital consumption undermines self-regulation, reduces individuals' ability to control impulses, and thus increases the risk of addictive behaviors (High et al., 2023). By reinforcing such tendencies, digital obesity not only sustains but also escalates digital addiction. Consequently, examining digital obesity alongside digital addiction is not merely a conceptual preference but a methodological requirement for understanding the behavioral risks of the digital age (Brand et al., 2019; Özbay et al., 2025a).

Digital addiction, on the other hand, is a form of behavioral addiction characterized by uncontrolled, impulsive, and repetitive engagement with digital devices, applications, or platforms (Panova & Carbonell, 2018). Unlike digital obesity, digital addiction involves compulsive usage patterns that interfere with daily functioning. Subdimensions of digital addiction include inability to control usage duration, relapse after attempts to quit, disruption of daily life routines, negative effects on mood, and inability to terminate usage (Kesici & Tunç, 2018).

Digital addiction has been documented across multiple domains, including internet use, social media, online gaming, and smartphone dependency. Research consistently demonstrates that it negatively affects academic achievement, social relationships, and psychological well-being (Çınar Özbay et al., 2024; Li et al., 2015). The prevalence of internet addiction among university students has been reported at 6% – 10% in general samples, but rates exceeding 30% have also been documented (Afrin et al., 2023; Aldhahir et al., 2023; Gautam et al., 2024). Such variation reflects both cultural differences and the increasing normalization of digital dependency among young adults.

Importantly, higher levels of digital addiction are closely linked to weaknesses in self-regulation skills and difficulties in self-control (Andreassen et al., 2017; Błachnio et al., 2023). In this way, digital obesity can be regarded as a predisposing condition, while digital addiction constitutes the behavioral outcome. Together, they form a reciprocal cycle in which excessive digital exposure undermines self-regulation, thereby reinforcing compulsive usage.

Several individual and contextual variables significantly influence the development of digital addiction. These include demographic characteristics (such as age, gender, and academic year), behavioral patterns (including daily internet usage time and type of digital activities), and academic factors (such as grade point average (GPA)). Research shows that excessive daily internet use markedly increases addiction risk. For example, students who spend more than two hours online per day are nearly twice as likely to develop internet addiction compared to those with lower usage (Gautam et al., 2024; Salici, 2020). Academic performance also plays a role, with higher levels of digital addiction predicting lower GPAs (Afrin et al., 2023; Javaeed et al., 2020; Li et al., 2020; Özbay et al., 2025b).

Demographic factors such as age and academic year further shape addiction levels. Some findings suggest that as students progress in higher education, they become more adept at regulating internet use, thereby reducing addiction symptoms compared to earlier academic years (Durmuş et al., 2018). These findings highlight the importance of considering both individual differences (e.g., self-regulation skills, age, achievement) and environmental contexts (e.g., academic demands, internet availability) when analyzing digital addiction.

An especially relevant variable in this context is the desire for self-control, defined as a motivational tendency reflecting dissatisfaction with one's current self-control capacity and the aspiration to improve it (Şimşir & Koç, 2022). This construct differs from actual self-control ability by emphasizing the individual's motivational drive to strengthen self-regulation.

Individuals with a strong desire for self-control are more likely to resist short-term temptations, avoid impulsive behaviors, and prioritize long-term goals and values. Consequently, they are less vulnerable to digital distractions and more selective in their content consumption. Empirical studies show that higher desire for self-control is associated with lower levels of digital anxiety and burnout (Avcı & Yıldız Durak, 2025; Uziel & Baumeister, 2017). This protective function underscores the importance of motivational factors in mitigating digital risks.

Although there is a growing body of literature on problematic internet use, online gaming addiction, and social media dependency

(Baumeister et al., 2007; Uziel & Baumeister, 2017), research that holistically examines digital obesity, digital addiction, and desire for self-control together is extremely limited. Given that digital obesity is a relatively new concept, its interaction with psychological constructs such as self-control and academic performance remains underexplored. To the best of knowledge, no study has investigated the interplay of these variables specifically among university students. This represents a significant gap in the literature and highlights the need for comprehensive research.

The present study aims to address this gap by examining the relationships among digital obesity, digital addiction, and desire for self-control in university students, while also incorporating demographic and behavioral factors such as age, academic year, GPA, and daily internet use. By doing so, the study seeks to contribute to a deeper understanding of the self-regulation mechanisms underlying digital risks and to inform the design of intervention strategies that promote healthier digital habits.

Hypotheses

H1. Digital obesity will positively predict digital addiction among university students.

H2. Desire for self-control will negatively predict digital addiction among university students.

H3. Academic achievement (GPA) will negatively predict digital addiction among university students.

H4. Daily internet usage time will positively predict digital addiction among university students.

H5. Sociodemographic characteristics (age, grade level, and gender) will be associated with digital addiction among university students.

H6. Digital obesity will be negatively associated with desire for self-control among university students.

Material and Methods

Study Design

This study is a cross-sectional, descriptive, and correlational research conducted to examine the relationship among digital obesity, digital addiction, and desire for self-control in university students. The study was designed in accordance with the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) reporting guidelines (Von Elm et al., 2014) (Figure 1).

Study Setting and Participants

The study was conducted in June 2025 at a large public university in Türkiye. The study population consisted of 4646 undergraduate students, and the sample size was calculated using the formula for known populations. A power analysis indicated that, with a 95% CI and a 5% margin of error, at least 355 students were required to detect significant differences. However, due to a high response rate during data collection, a total of 500 students were included in the study. Inclusion criteria required participants to be enrolled in an undergraduate program at a university in Türkiye, be 18 years or older, have access to digital devices such as a computer, smartphone, or tablet, and voluntarily complete the online data collection form. Participants who submitted incomplete forms were excluded from the study. This approach ensured that the sample reached a sufficient size while also obtaining reliable data within the framework of voluntary participation.

Data Collection Tools

Sociodemographic Information Form

Developed by the researchers, this form included questions regarding participants' age, gender, level of education, GPA, and daily internet usage time.

Digital Obesity Scale

Developed by Özbay et al. (2025), the Digital Obesity Scale (DOS) was designed to assess individuals' behaviors and tendencies regarding digital content use (Özbay et al., 2025a). The scale consists of 27 items evaluated on a five-point Likert-type scale (1 = Strongly Disagree, 5 = Strongly Agree). It comprises four subdimensions: health problems, personal use and behavioral habits, digital content consumption, and social interactions. In the original development study, the internal consistency coefficient was reported as 0.91. In the present study, the Cronbach's alpha reliability coefficient was 0.96, indicating very high internal consistency. The total score ranges from 27 to 135, with subdimension scores calculated similarly. Higher scores reflect increased

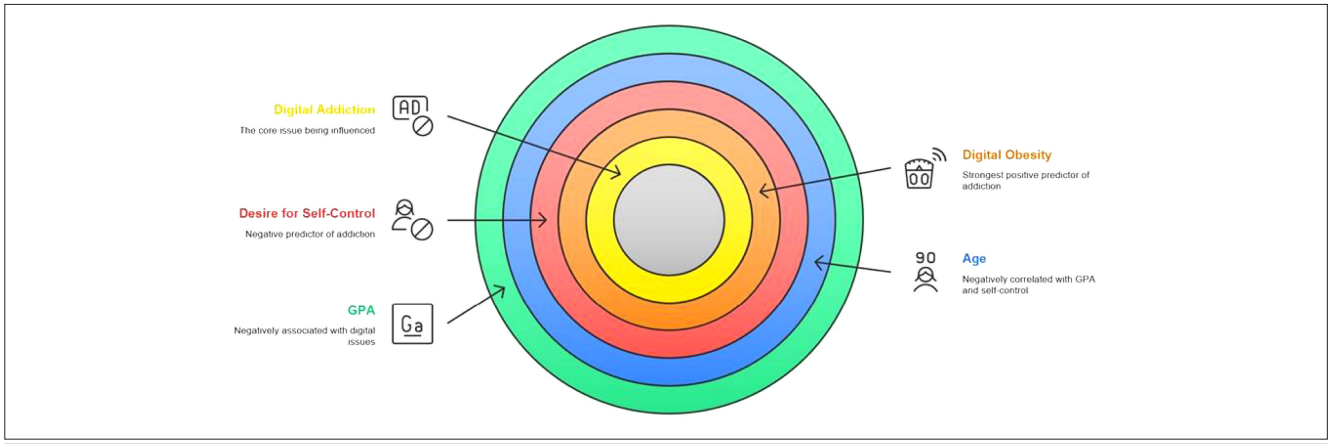

Figure 1. Framework Models of the Study.

levels of digital obesity among university students and more pronounced negative consequences associated with digital content use.

Digital Addiction Scale

Developed for university students by Kesici and Tunç (2018), the Digital Addiction Scale (DAS) assesses individuals' tendencies toward digital technology addiction (Kesici & Tunç, 2018). The scale consists of 19 items grouped under five subdimensions: excessive use, relapse, life flow disruption, mood modification, and inability to stop. The internal consistency coefficient of the original study was reported as 0.87, while in the present study, Cronbach's alpha was found to be 0.98. The scale uses a five-point Likert-type system, with response options ranging from "Strongly Disagree = 1" to "Strongly Agree = 5." Total scores range from 19 to 95, where higher scores indicate higher levels of digital addiction, while lower scores indicate more limited tendencies toward addiction. Thus, the scale provides a comprehensive evaluation of both individual digital usage behaviors and their reflections on different aspects of life.

Desire for Self-Control Scale

This scale was developed by Uziel and Baumeister (2017) to evaluate individuals' desire for greater control over present and future situations and their tendencies toward self-regulation in daily life, with its Turkish adaptation conducted by Şimşir and Koç (2022) (Uziel & Baumeister, 2017; Şimşir & Koç, 2022). The instrument is unidimensional and consists of eight items rated on a five-point Likert-type scale, ranging from "Strongly Disagree" to "Strongly Agree." Higher scores indicate a stronger motivational tendency to improve one's self-control capacity and to pursue greater self-regulation in daily behaviors. In the original development study, internal consistency was reported as 0.87. In the present study, Cronbach's alpha was 0.92, confirming that the Turkish form of the scale is a highly reliable instrument.

Data Collection Process

The study data were collected from undergraduate students enrolled in various faculties and departments at a public university in Türkiye using an online survey method. The data collection tool was prepared via the Google Forms platform and distributed to participants through institutional email addresses and academic-purpose WhatsApp groups. Students who accessed the survey link were first presented with an Informed Consent Form, where they indicated voluntary participation by selecting either "I agree to participate" or "I do not agree to participate."

Participation in the study was entirely voluntary. Informed consent was obtained from all participants, confidentiality and anonymity principles were strictly maintained, and students were explicitly informed that they could withdraw from the study at any stage without penalty. The data collection process was carried out in June 2025.

To ensure data quality and validity, several control measures were applied. The Google Forms survey was set to allow only one submission per participant through IP restriction and single-response settings. Additionally, participants were required to provide their institutional email address to prevent duplicate entries. Incomplete submissions were automatically excluded from the dataset. These measures minimized the risk of multiple responses and strengthened the reliability of the collected data.

Data Analysis

All statistical analyses were conducted using IBM SPSS Statistics version 26 (IBM SPSS Corp.; Armonk, NY, USA). Descriptive statistics (mean, standard deviation, frequency, and percentage) were used to describe the sociodemographic and behavioral characteristics of the participants (age, gender, grade level, GPA, and daily internet usage time). The assumption of normality was assessed by examining skewness and kurtosis values, which were within the acceptable range of ± 1.5. Pearson correlation coefficients were calculated to examine the relationships among the study variables, including age, GPA, daily internet usage time, digital obesity, desire for self-control, and digital addiction. In addition, multiple linear regression analysis was conducted to investigate the predictive effects of participant characteristics, technology use, and psychosocial variables on digital addiction. The final model included age, grade level, GPA, daily internet usage time, digital obesity, and desire for self-control as predictors.

Prior to regression analysis, the assumptions of multiple regression were tested: multicollinearity was examined using variance inflation factors (VIF < 5), linearity and homoscedasticity were checked through residual and scatter plots, and independence of errors was confirmed with the Durbin – Watson statistic (values near 2). These results indicated that the assumptions of regression analysis were met. In addition, gender was examined as a potential confounding variable. Since gender did not show a significant predictive effect on digital addiction, it was not included in the final regression model. A significance level of $p \leq .05$ was adopted for all statistical tests.

Ethical Considerations

Ethical approval for this study was obtained from the Scientific Research and Publication Ethics Committee of Artvin Çoruh University (Approval no: E-18457941-050.99-181917). The research process adhered to the ethical principles outlined in the Declaration of Helsinki.

Participants were fully informed about the purpose, scope, and procedures of the study. It was clearly emphasized that participation was entirely voluntary, that they could withdraw at any time without any consequences, and that confidentiality and anonymity would be rigorously protected. Informed consent was obtained electronically, as participants provided approval via the online survey form.

Results

The mean age of the participating students was 21.33 ± 1.47 years. Their average academic GPA was 2.75 ± 0.38, and the mean daily internet usage time was 5.89 ± 1.88 hours. Male students accounted for 52.4% of the participants. Regarding class level distribution, 20.4% of the students were in the first year, 30.4% in the second year, 27.8% in the third year, and 21.4% in the fourth year (Table 1).

According to the Pearson correlation analysis results presented in Table 2, significant relationships were found among the variables. Age was negatively correlated with GPA ($r = -0.12$, $p < .01$)

Table 1.
Demographic Variables of the Participating Students (n = 500)

Variable	*n*	%
Gender		
Female	238	47.60
Male	262	52.40
Grade		
Grade 1	102	20.40
Grade 2	152	30.40
Grade 3	139	27.80
Grade 4	107	21.40
	Mean ± SD	
Age	21.33 ± 1.47	
Academic GPA (4.0 scale)	2.75 ± 0.38	
Daily internet usage time	5.89 ± 1.88	

Table 2.
Pearson Correlation Coefficients among Study Variables (n = 500)

Variable	1	2	3	4	5
1. Age	–	–	–	–	–
2. GPA	−0.12**	–	–	–	–
3. Digital obesity	0.19**	−0.33**	–	–	–
4. Desire for self-control	−0.15**	0.15**	−0.13**	–	–
5. Digital addiction	0.19**	−0.33**	0.81**	−0.22**	–

**indicates $p < .01$.

and Desire for Self-Control ($r = -0.15$, $p < .01$), while positively correlated with Digital Obesity ($r = 0.19$, $p < .01$) and Digital Addiction ($r = 0.19$, $p < .01$). The GPA was negatively associated with Digital Obesity ($r = -0.33$, $p < .01$) and Digital Addiction ($r = -0.33$, $p < .01$), but positively associated with Desire for Self-Control ($r = 0.15$, $p < .01$).

In addition, a strong positive correlation was observed between Digital Obesity and Digital Addiction ($r = 0.81$, $p < .01$). Moreover, Digital Obesity was negatively correlated with Desire for Self-Control ($r = -0.13$, $p < .01$). Desire for Self-Control was also negatively associated with Digital Addiction ($r = -0.22$, $p < .01$), indicating that higher levels of self-control are linked to lower tendencies toward digital addiction.

The effects of participant characteristics, technology use, and psychosocial variables on digital addiction were examined using multiple linear regression analysis, and the results are presented in Table 3. The model included age, grade level, GPA, daily internet usage time, digital obesity, and desire for self-control. The model was found to be statistically significant and explained 68.4% of the variance in digital addiction scores ($R^2 = 0.684$; $F = 178.224$; $p < .001$). The findings indicated that digital obesity was the strongest positive predictor ($t = 26.729$; $p < .001$). Daily internet usage time also showed a positive and statistically significant association ($t = 1.985$; $p = .048$). In contrast, desire for self-control was negatively and significantly associated with digital addiction ($t = -3.594$; $p < .001$). The effects of age, grade level, and GPA were not found to be statistically significant.

Discussion

This study provides a comprehensive examination of the relationships between digital obesity, digital addiction, desire for self-control, and academic achievement among university students. With the accelerating pace of digitalization, concerns over students' well-being and performance in higher education are increasingly shaped by their interactions with technology. By

Table 3.
Multiple Linear Regression Predicting Digital Addiction

	Coefficients[a]						
	Unstandardized Coefficients		Standardized Coefficients	t	p	95% CI	
Predictor Variable	B	**SE**	**Beta**			**Lower Level**	**Upper Level**
Constant	−10.569	13.026		−.811	.418	−36.162	15.023
Age	.424	.560	.027	.758	.449	−.675	1.524
Grade level	−.159	.982	−.006	−.162	.871	−2.089	1.770
GPA	−2.036	1.619	−.034	−1.258	.209	−5.218	1.145
Daily internet usage time	.704	.355	.057	1.985	.048	.007	1.402
Digital obesity	.776	.029	.765	26.729	.000	.719	.833
Desire for self-control	−.390	.109	−.097	−3.594	.000	−.604	−.177
F (p)	178.224 (<0.001) 0.684 0.681						
R^2							
adjR^2							

R2, 0.684; p < .001; aDependent variable: Digital Addiction Scale (Total).

integrating these constructs into a single empirical framework, this research offers valuable insights into the interplay of risk and protective factors in the digital age.

The findings demonstrate that digital obesity is a decisive risk factor fostering addiction, that daily internet usage increases vulnerability, and that desire for self-control functions as a protective motivational resource. Academic achievement, while included as a demographic and contextual factor rather than a primary construct, nevertheless exhibited significant associations with both risk and protective variables. Together, these results strengthen theoretical understanding and offer practical guidance for designing interventions to support digital well-being and academic success among students.

Interrelations between Digital Obesity and Digital Addiction

One of the most important findings of this study is the strong positive relationship between digital obesity and digital addiction. Digital obesity refers to a state of cognitive, emotional, and behavioral overload resulting from uncontrolled consumption of digital content (Özbay et al., 2025a). Unlike digital addiction, which emphasizes compulsive use, digital obesity highlights the cumulative burden of continuous, often passive exposure to excessive digital stimuli (High et al., 2023).

The results confirmed that students with higher digital obesity scores were significantly more likely to report digital addiction symptoms. This supports previous research demonstrating that excessive and unbalanced digital consumption undermines self-regulation mechanisms, impairs attentional control, and fosters dependency (Firth et al., 2024; Schmitt et al., 2018). Furthermore, regression analysis indicated that digital obesity was the strongest predictor of addiction, explaining a substantial portion of variance. This finding underscores the need to conceptualize digital obesity not merely as an antecedent but as a central mechanism that intensifies and sustains addictive behaviors.

In addition, the distinction between digital obesity and digital addiction has important preventive implications. Because digital obesity may represent a stage of excessive use before the onset of compulsive addictive behaviors, it offers a critical window for early intervention. Addressing digital obesity through awareness programs, digital literacy initiatives, and self-regulation training may help reduce the likelihood of progression to full-scale addiction.

The implications are both theoretical and practical. Theoretically, these findings lend empirical support to the I-PACE model (Brand et al., 2019), which posits that addictive behaviors emerge from interactions between individual predispositions and environmental exposures. Practically, they suggest that interventions targeting addiction must also address broader patterns of excessive digital engagement, including passive consumption and information overload.

The Protective Role of Desire for Self-Control in Digital Addiction

Another central finding of this study is the negative relationship between desire for self-control and digital addiction. Desire for self-control is defined as a motivational drive reflecting individuals' dissatisfaction with their current level of self-control and their aspiration to improve it (Şimşir & Koç, 2022). Students with stronger motivation to enhance their self-regulation were less likely to display addictive tendencies.

This aligns with prior studies demonstrating that individuals with higher self-control capacity are better able to resist digital distractions and experience lower levels of digital burnout and anxiety (Avcı & Yıldız Durak, 2025; Hofmann et al., 2012). Importantly, the results indicate that desire for self-control not only mitigates addictive behaviors but also correlates positively with academic performance. Thus, it appears to function as a dual protective factor: reducing vulnerability to digital risks while simultaneously enhancing academic achievement.

These findings have important implications for interventions. While much attention has been devoted to reducing screen time or limiting online access, our results suggest that strengthening students' motivational resources for self-control may be equally, if not more, effective. Programs that enhance self-regulatory motivation through training in goal setting, mindfulness, or cognitive-behavioral strategies may provide sustainable protection against digital addiction.

Age-Related Developmental Trajectories of Digital Behaviors

The correlation analysis revealed that as age increased, students' digital obesity and addiction scores also rose, while GPA and desire for self-control declined. This suggests that prolonged digital exposure during emerging adulthood may elevate risks over time. Previous studies have similarly shown that older university students tend to spend more time on digital platforms, reinforcing addictive behaviors (Gautam et al., 2024; Kuss & Griffiths, 2017; Salici, 2020).

However, regression analyses indicated that the direct effect of age on addiction was not statistically significant. Instead, age appears to influence addiction indirectly through its associations with digital obesity and declining self-control motivation. This nuanced finding highlights that age should not be seen merely as a chronological factor but rather as a developmental indicator of how students' digital habits evolve.

Some studies report contrasting results, suggesting that as students progress through higher education, they may adopt more conscious usage patterns, leading to reduced addiction (Durmuş et al., 2018; Han et al., 2025). Such inconsistencies may be explained by contextual factors, including academic pressures, field of study, and coping strategies. The decline in desire for self-control with age observed in this study is particularly concerning, as it suggests that protective mechanisms weaken over time, leaving students more vulnerable to digital risks.

The Contextual Role of Academic Achievement

A key issue raised by the reviewers concerned the positioning of academic achievement (GPA) within the manuscript. In the introduction, GPA was described as one of several contextual factors influencing digital behaviors (along with age, academic year, and daily internet use). In the discussion, however, GPA was initially framed alongside digital obesity, digital addiction, and self-control as a central construct.

To ensure consistency, it is important to clarify that academic achievement was not a primary variable of interest but rather a

contextual and demographic factor. Nevertheless, the observed associations were significant and theoretically meaningful. The GPA was negatively correlated with both digital obesity and digital addiction, suggesting that excessive and uncontrolled digital consumption impairs academic performance. This finding echoes previous studies linking internet addiction to lower GPA among students (Afrin et al., 2023; Javaeed et al., 2020).

At the same time, GPA was positively correlated with desire for self-control, indicating that higher-achieving students demonstrate stronger motivation to improve self-regulation. This suggests that self-control motivation may be both a contributor to and a consequence of academic success, reinforcing a virtuous cycle. Thus, while GPA served as a secondary variable, its associations illuminate important pathways linking digital behaviors and academic outcomes.

Daily Internet Usage as a Predictor of Digital Addiction

Daily internet usage emerged as a significant positive predictor of addiction. Students who spent more time online were more likely to report addictive symptoms, consistent with findings that prolonged screen time undermines control over online activities (Kuss & Griffiths, 2017) and exacerbates mental health problems (Twenge & Campbell, 2018). Importantly, while duration alone cannot explain addiction, when combined with digital obesity it substantially magnifies risks.

This result emphasizes that interventions should not only aim to reduce screen time but also address the quality of digital engagement. Excessive passive consumption, scrolling, multitasking, or exposure to irrelevant content may be more harmful than focused academic use.

Limitations and Directions/Suggestions for Future Research

This study has several limitations that should be acknowledged. First, the cross-sectional design restricts the ability to infer causality; the findings reflect correlational associations rather than causal relationships. Longitudinal and experimental studies would be more suitable for identifying the temporal and dynamic interactions between digital obesity and digital addiction.

Second, the sample consisted exclusively of university students, which limits the generalizability of the findings to broader age groups and different occupational or cultural contexts. Future research should therefore include more heterogeneous samples across diverse sociodemographic backgrounds to enhance cross-cultural and intergenerational validity. Third, the reliance on self-report instruments raises the risk of biases such as social desirability, recall errors, and inaccurate self-assessment. To mitigate this, future studies are encouraged to integrate objective measures such as digital usage tracking, behavioral observations, or mixed-methods approaches. Fourth, this study addressed digital addiction in a general manner, without differentiating between specific subtypes such as internet use, social media, online gaming, or smartphone usage. This lack of distinction may limit the specificity and applicability of the findings. Future studies should examine subtypes of digital addiction separately to provide more nuanced insights and targeted recommendations.

In terms of practical implications, interventions targeting digital obesity and digital addiction in young adults should be prioritized. Psychoeducational programs, digital literacy training, and structured awareness campaigns aimed at strengthening self-regulation and self-control capacities could provide protective benefits. Institutional strategies within universities such as implementing digital detox programs, integrating time management and stress management workshops, and offering counseling or guidance services are recommended to promote digital well-being (Akdeniz Kudubeş et al., 2025). In addition, future research should explore the role of potential mediators and moderators (e.g., psychological resilience, coping strategies, social support, and academic stress) to better explain the mechanisms underlying the link between digital obesity and digital addiction. Such efforts would not only deepen theoretical understanding but also contribute to designing evidence-based prevention and intervention models.

Strengths of the Study

This study has several noteworthy strengths. First, the relatively large sample size (n = 500) enhances the statistical power and reliability of the findings. Second, the use of validated and reliable instruments, including the DOS, DAS, and Desire for Self-Control Scale, provides strong measurement validity. Third, the regression model explained a high proportion of variance in digital addiction (68.4%), indicating robust explanatory power. Finally, the theoretical contribution of the study lies in integrating digital obesity, digital addiction, desire for self-control, and academic achievement into a single empirical framework, offering novel insights into the behavioral risks of the digital age.

This study examined the relationships between digital obesity, digital addiction, desire for self-control, and academic achievement among university students. Findings demonstrated that digital obesity was the strongest predictor of digital addiction, daily internet usage increased addiction risk, and desire for self-control acted as a protective factor. Additionally, it was found that as age increased, students reported higher levels of digital obesity and digital addiction but lower levels of academic achievement and desire for self-control. These results underscore that digital addiction should be addressed not only in terms of screen time but also through cognitive and psychological factors.

This study has several strengths, including a relatively large sample size, the use of validated and reliable instruments, and the novel integration of digital obesity into the addiction literature, offering new theoretical contributions. However, certain limitations should be noted, such as the cross-sectional design, reliance on self-report measures, and the focus on university students, which restricts generalizability.

Overall, the findings suggest that intervention and prevention programs for university students should not only aim to reduce screen time but also focus on lowering digital obesity and enhancing self-control skills. Such approaches could contribute to safeguarding both academic success and psychological well-being. In addition, future studies should employ longitudinal and cross-cultural designs, include more diverse populations, and examine potential mediators and moderators to provide a more comprehensive understanding of the mechanisms linking digital obesity and digital addiction.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: Ethical committee approval was received from the Ethics Committee of Artvin Çoruh University (Approval no: E-18457941-050.99-181917; Date: 11 June 2025).

Informed Consent: Informed consent was obtained from the participants who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

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