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The Relationship Between Digital Addiction and Leisure Management: An Example of University Students

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Abstract

In this study, it is aimed to examine individuals' digital addiction and leisure management according to their demographic characteristics and to determine the relationship between these variables. The sample of the study consisted of 408 university students. The "Free Time Management Scale" and the "Digital Addiction Scale" were used as data collection tools, and independent t-test, ANOVA, and correlation analyses were employed. According to the results of the independent t-test, significant differences were found in favor of male participants in the "Scheduling" sub-dimension of Leisure Management Scale and in the "Gaming" sub-dimension of Digital Addiction Scale. ANOVA results revealed that, according to weekly electronic device usage duration, there was a significant difference in the "Goal Setting and Method" sub-dimension of Leisure Management Scale in favor of participants who used devices for 5 hours or less per week, and in the "Social Media" sub-dimension of Digital Addiction Scale in favor of participants who used devices for 16 hours or more per week. Based on participants' daily leisure duration, a significant difference was found in the "Scheduling" sub-dimension of Leisure Management Scale in favor of individuals with 1 hour or less of daily leisure, and in the "Gaming" sub-dimension of Digital Addiction Scale in favor of individuals with 5 hours or more of daily leisure. Correlation analysis revealed relationships between sub-dimensions of both scales. Findings indicate a need to increase university students' awareness of digital addiction and leisure time management.

Keywords: Digital addiction, leisure management, recreation, university students

Introduction

In today's digitalized world, surrounded by interruptions from multiple internal and external stimuli, internet usage is widespread in almost every aspect of life, from work and education to shopping, social interaction, and entertainment, becoming both a daily practice and a form of leisure (Vizcaíno et al., 2021). As of 2024, the number of internet users worldwide has reached 5.5 billion, which accounts for approximately 68% of the global population (Statista, 2025). This rapid increase has reshaped the dynamics of how individuals use their time, and particularly how they value their leisure time.

Social media platforms, one of the most common uses of the internet, offer users personalized experiences by blending real-time and on-demand content, allowing them to both consume and create content. While these platforms allow individuals to connect with others, share content, interact, and engage in two-way communication, video-based platforms like YouTube and Netflix offer a more passive, one-way interaction structure based on content consumption (Gao, 2023). This interaction also applies to platforms such as Disney+, Max, Amazon Prime, BluTV, PuhuTV, and similar services. In this context, digital media has become a tool that transforms not only social interaction but also the

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attention economy and user behavior. Indeed, companies like Meta aim to further increase user engagement by integrating chatbots into Facebook and Instagram (Von Thun and Hanley, 2024).

Social media applications and mobile platforms utilize dopamine-focused reward systems and interaction-based recommendation algorithms to keep users constantly online. These systems reinforce compulsive digital behaviors by causing users to frequently check content, which can have negative effects on an individual's mental health over time (Adanyin, 2024; Su et al., 2021). Despite the internet offering numerous opportunities, such as access to information, these algorithmic recommendations can lead to difficulties in time management and the development of digital addiction behaviors by weakening users' self-control (Brand, 2022).

At this point, the question is, "Is internet use becoming an addiction?" The question has become one of the fundamental discussion areas in behavioral sciences. Addiction is a multifaceted phenomenon that refers not only to substance use but also to excessive and uncontrolled behavioral tendencies at the behavioral level (Gao, 2023). Block (2008) outlined four key criteria when defining problematic internet use: (1) excessive use leading to a loss of time or neglect of basic impulses, (2) withdrawal symptoms such as anger, tension, or depressive reactions when computer access is unavailable, (3) development of tolerance, meaning the need for longer use or better equipment, and (4) the emergence of negative consequences such as impaired social relationships, low academic achievement, lying, and fatigue.

In this context, "problematic internet use" or "internet addiction" is defined as a concept encompassing excessive and uncontrolled digital behaviors that negatively impact an individual's daily life (Ali et al., 2024). Excessive internet use is associated with numerous negative effects, such as disrupting academic responsibilities, weakening social relationships, and decreasing an individual's overall functioning. These types of behaviors can manifest in various forms, such as constant internet browsing, online gaming addiction, and social media addiction (Hussaini and Akachukwu, 2025).

Problematic internet use (PIU), which has become a global social problem, is defined by an individual's loss of control over their digital activities, and this lack of control leads to functional losses in academic, social, and professional areas (Spada, 2014). Young (1998) argued that the internet can become an object of addiction, just like drugs or alcohol, and stated that this is a risk factor that reduces individuals' quality of life. However, the findings of Kuss et al (2013) indicate that low emotional stability, low extraversion, and low agreeableness are personality traits associated with internet addiction.

In this context, university students in particular stand out as a demographic group that heavily uses the internet. Guinchiglia and colleagues (2018) emphasize that social media and smartphone use are extremely prevalent among university students. Van de Meer, Jansen, and Torenbeek (2010) state that students do not have sufficient awareness of their own responsibility for self-study and time management. However, time management plays a critical role in an individual's development, academic success, cognitive awareness, and life satisfaction. Leisure management, as a stress reliever, plays an important role in supporting an individual's mental, physical, and emotional renewal (El Hadad, et al., 2024). Time management encompasses not only an individual's activity preferences but also their relationship to planning, prioritizing, and organizational skills. Bertsch et al. (2017) define leisure management as the process of more effectively evaluating time in goal-oriented activities, while Wang et al. (2011) explain this process in four dimensions: setting goals and priorities, applying management techniques, organizational and programming skills, and developing attitudes toward leisure.

University students have more free time compared to other age groups and a higher degree of autonomy in how they spend this time. However, after the structured education system in high school and secondary education, many students experience difficulties with time management when transitioning to university (Wang et al., 2011; Rosen et al., 2017). The vast majority of students spend their free time on entertainment-focused activities such as social media, gaming, shopping, music, and movies; only a limited group utilizes this time for knowledge reinforcement or academic development.

According to Xu et al. (2020), one of the main reasons for this is that students are leaving the oppressive management of high school and viewing university as a more "free" space. Additionally, the perception circulating among senior students that "university is easier than high school" also reduces students' motivation to plan their free time. For all these reasons, universities need to establish theoretically-based

research centers in the field of leisure management to enable students to effectively utilize their free time. Because the success of the application is largely possible thru theoretical guidance, and it is difficult to achieve sustainable development without a guiding theoretical framework (Xu, Wang, and Yang, 2020). In this context, the aim of the study is to examine digital addiction and leisure time management skills based on individuals' different demographic variables, as well as to determine the relationship between digital addiction and leisure time management. In this context, the following hypotheses have been generated:

H1: There is a difference in digital addiction and leisure time management among participants based on their gender.

H2: There is a difference in digital addiction and leisure time management among participants based on their weekly electronic device usage duration.

H3: There is a difference in digital addiction and leisure time management among participants based on their daily free time.

H4: There is a relationship between digital addiction and leisure time management.

Methods

Research Design

The study used a correlational survey model. In the relational scanning model, questions such as the degree of change between variables or the level of the examined situation are clarified by relational scanning patterns (Gürbüz and Şahin, 2016).

Ethics Approval

Ethical approval for this study was obtained from the Scientific Research Ethics Committee of Social and Human Sciences at Necmettin Erbakan University (Decision No: 2025/610, dated June 27, 2025, Session 13). Necessary institutional permissions were obtained, and informed consent was secured from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

Population and Sample

A sample size calculation was conducted to determine the number of participants representing the population. Based on a 95% confidence level and a 5% margin of error, it was determined that a minimum of 384 participants would be sufficient for the study. Accordingly, the research was conducted with a total of 408 university students. The data were collected using a convenience sampling method.

Table 1. Distribution of Participants' Demographic Information

		N	%
Gender	Female	260	63.7
	Male	148	36.3
	Total	408	100
Weekly Electronic Device Usage Time	5 hours or less	136	33.3
	6-10 hours	129	31.6
	11-15 hours	69	16.9
	16 hours and above	74	18.1
	Total	408	100
Daily Free Time Durations	Less than 1 hour	73	17.9
	2-4 hours	250	61.3
	5 hours and more	85	20.8
	Total	408	100

In this context, as seen in Table 1, it was determined that 63.7% of the participants in the study were women, 33.3% used electronic devices for 5 hours or less per week, 36.3% had normal weekly leisure time sufficiency, 61.3% had daily leisure time between 2-4 hours, and 51.7% used digital tools for communication purposes.

Data Collection Tools

Data were collected by the researcher between June 1, 2025 and October 1, 2025. Data were collected through a questionnaire consisting of a Personal Information Form, the Leisure Management Scale, and the Digital Addiction Scale.

Personal Information Form: The "Personal Information Form" was used to obtain information from individuals regarding their gender, weekly electronic device usage time, adequacy of weekly leisure time, daily leisure time, purposes of digital tool use, etc.

Leisure Management Scale: The scale was developed by Wang et al. (2011) and adapted into Turkish by Akgül and Karaküçük (2015). The scale is a 5-point Likert type, consisting of 15 items and 4 sub-dimensions. The sub-dimensions are, respectively: "Goal Setting and Method," "Leisure Attitude," “Scheduling” and "Evaluation." In this study, the reliability coefficient of the scale was determined to be 0.77.

Digital Addiction Scale: The scale was developed by Arslan et al. (2015). It is stated that the literature was utilized when preparing the scale questions, particularly the master's theses of Beyazıtlı (2012) and Kaya (2013). The scale is a 5-point Likert type and consists of 29 items and 3 sub-dimensions. The subdimensions are, in order: Gaming, Social Media, and Negative Impact on Daily Life. In this study, the reliability coefficient of the scale was determined to be 0.91.

Data Analysis

For data analysis, the SPSS 20.0 program was used. Percentage and frequency analyzes were used to determine the distributions of individuals' demographic information. The skewness and kurtosis values of the data were examined, and after it was understood that the data showed a normal distribution(+1.5/-1.5), independent T-tests, ANOVA, and correlation analyzes were used. Additionally, the Tukey HSD test was used to identify groups that showed significant differences.

Results

Table 2. Distribution of scale scores

Scale / Sub-dimension	Items	Mean	SD	Skewness	Kurtosis
Leisure Management Scale	15				
• Goal Setting and Method	6	3,37	,89	-,192	-,200
• Evaluation	3	3,55	,80	-,277	-,069
• Leisure Attitude	3	4,00	,84	-,752	,483
• Scheduling	3	2,85	,99	,053	-,610
Digital Addiction Scale	29				
• Gaming –	11	2,37	,92	,518	-,271
• Social Media	12	3,20	,83	-,107	-,408
• Negative Impact on Daily Life	6	2,49	,99	,409	-,427

Table 2 shows the distributions of the scale scores. It was determined that among the subdimensions of the Leisure Time Management Scale, the highest average score was in the "Leisure Attitude" dimension, and the lowest average score was in the "Scheduling" dimension. Again, it was determined that the highest average score on the Digital Addiction Scale was in the "Social Media" dimension, while the lowest average score was in the "Gaming" dimension.

Table 3. Results of scale scores by gender

Sub-dimension	Gender	Mean	SD	t	p
Goal Setting and Method	Female	3.37	.86	-.079	.937
	Male	4.55	.94		
Evaluation	Female	3.58	.79	1.033	.302
	Male	3.50	.82		
Leisure Attitude	Female	4.00	.88	.088	.930
	Male	4.00	.77		
Scheduling	Female	2.76	.97	-2.500	.013*
	Male	3.01	1.02		
Gaming	Female	2.24	.87	-3.927	.000*
	Male	2.61	.96		
Social Media	Female	3.24	.82	1.024	.307
	Male	3.15	.85		
Negative Impact on Daily Life	Female	2.46	.96	-.735	.463
	Male	2.54	1.05		

N: 408, Female: 260, Male: 148, * p<0.05

Table 3 shows the analysis results for the study participants based on their gender. Independent t-test results; it was found that there was a significant difference in favor of males in the "Programming" dimension of LMS (p<0.05), and again in the "Gaming" dimension of DAS (p<0.05). Since no significant differences were found except in the scheduling and gaming sub-dimensions according to the results, hypothesis one was rejected.

Table 4. Results of scale scores based on participants' weekly electronic device usage duration

Scale / Sub-dimension	Electronic Device Usage Duration	Mean	SD	f	p	Tukey
Leisure Management Scale						
Goal Setting and Method	5 Hours and Less	3.62	.86	6.043	.000*	1-2 1-3 1-4
	6-10 Hours	3.32	.88			
	11-15 Hours	3.19	.86			
	16 Hours and More	3.18	.90			
Evaluation	5 Hours and Less	3.63	.81	.999	.393	
	6-10 Hours	3.52	.79			
	11-15 Hours	3.55	.76			
	16 Hours and More	3.44	.85			
Leisure Attitude	5 Hours and Less	4.01	.83	.831	.477	
	6-10 Hours	3.92	.85			
	11-15 Hours	4.02	.75			
	16 Hours and More	4.11	.91			
Scheduling	5 Hours and Less	2.75	1.03	1.190	.313	
	6-10 Hours	2.93	.90			
	11-15 Hours	2.97	1.04			
	16 Hours and More	2.77	1.03			
Digital Addiction Scale						
Gaming	5 Hours and Less	2.22	.88	2.084	.102	
	6-10 Hours	2.44	.92			
	11-15 Hours	2.52	.99			
	16 Hours and More	2.39	.92			
Social Media	5 Hours and Less	2.92	.80	15.223	.000*	1-2 1-4
	6-10 Hours	3.23	.85			
	11-15 Hours	3.20	.71			
	16 Hours and More	3.69	.72			
Negative Impact on Daily Life	5 Hours and Less	2.41	1.03	1.248	.292	
	6-10 Hours	2.62	.94			
	11-15 Hours	2.39	.91			
	16 Hours and More	2.51	1.08			

N: 408, * p<0.05

Table 4 shows the analysis results of the study participants based on their weekly electronic device usage duration. ANOVA results showed a significant difference between the "Goal Setting and Method" dimension of LMS and the "Social Media" dimension of DAS ($p<0.05$). The results of the Tukey HSD test showed a significant difference in the "Goal Setting and Method" dimension in favor of individuals in the 5 hours and under group, and in the "Social Media" dimension in favor of individuals in the 16 hours and over group. Since no significant differences were found except in the goal setting and method and social media sub-dimensions according to the results, hypothesis two was rejected.

Table 5. Results of scale scores according to participants' daily free time durations

Scale / Sub-dimension	Daily Free Time	Mean	SD	f	p	Tukey
Leisure Management Scale						
• Goal Setting and Method	Less than 1 hour	3.41	.80	.411	.663	
	2-4 hours	3.34	.87			
	5 hours and more	3.43	1.03			
• Evaluation	Less than 1 hour	3.52	.87	.066	.937	
	2-4 hours	3.55	.77			
	5 hours and more	3.57	.84			
• Leisure Attitude	Less than 1 hour	4.00	.85	.129	.879	
	2-4 hours	4.01	.86			
	5 hours and more	3.96	.79			
• Scheduling	Less than 1 hour	3.06	.87	3.940	.020*	1-2
	2-4 hours	2.74	1.00			
	5 hours and more	2.98	1.04			
Digital Addiction Scale						
• Gaming	Less than 1 hour	2.45	.96	5.256	.006*	2-3
	2-4 hours	2.26	.89			
	5 hours and more	2.63	.94			
• Social Media	Less than 1 hour	3.28	.87	.688	.503	
	2-4 hours	3.17	.77			
	5 hours and more	3.25	.95			
• Negative Impact on Daily Life	Less than 1 hour	2.55	1.14	1.059	.348	
	2-4 hours	2.43	.94			
	5 hours and more	2.60	1.00			

N: 408, * $p<0.05$

Table 5 shows the analysis results based on the daily free time of the individuals participating in the study. ANOVA results showed a significant difference between the "Scheduling" dimension of the LMS and the "Gaming" dimension of the DAS ($p<0.05$). The results of the Tukey HSD test showed a significant difference in the "Scheduling" subscale in favor of individuals in the 1 hour and less group, and in the "Gaming" subscale in favor of individuals in the 5 hours and more group. Since no significant differences were found except in the scheduling and gaming sub-dimensions according to the results, hypothesis one was rejected.

Table 6. Results of das and LMS scores

	G1	SM2	NIDL3	GSM4	E5	LA6	S7
G1	1						
SM2	.298**	1					
NIDL3	.484**	.455**	1				
GSM4	-.010	-.266**	-.105*	1			
E5	-.004	-.211**	-.133**	.644**	1		
LA6	-.120*	.101*	-.026	.157**	.270**	1	
S7	.191**	.035	.224**	-.091	-.079	-.162**	1

G1: Gaming, SM2: Social Media,NIDL3: Negative Impact on Daily Life, GSM4: Goal Setting and method, E5: Evaluation, LA6: Leisure Attitude, S7: Scheduling

Table 6 shows the analysis results of the participants based on their DAS and LMS scale scores. Analysis results showed a negative and low-level correlation between the "Gaming" dimension of DAS and the "Leisure Attitude" dimension of LMS, a positive and low-level correlation between the "Gaming" dimension of DAS and the "Scheduling" dimension of LMS, a negative and low-level correlation

between the "Social Media" dimension of DAS and the "Goal Setting and Method" and "Evaluation" dimensions of LMS, a positive and low-level correlation between the "Social Media" dimension of DAS and the "Leisure Attitude" dimension of DAS, a negative and low-level correlation between the "Negative Impact on Daily Life" dimension of DAS and the "Goal Setting and Method" and "Evaluation" dimensions of LMS, and a positive and low-level correlation between the "Negative Impact on Daily Life" dimension of DAS and the "Scheduling" dimension of LMS.

Discussion

The relationship between digital addiction and leisure time management, and whether there are differences in digital addiction and leisure time management among individuals based on their demographic characteristics, were examined. Based on this, it was determined that there was a significant difference in favor of male participants in the "Scheduling" dimension of the leisure management scale by gender. When examining the research conducted in the literature, the results of the studies by Demirel et al. (2022), Turhal et al. (2020), Serdar et al. (2017), Koç and Demirel (2020), Akgül et al. (2016), Işıkgöz et al. (2021), and Çakır et al. (2018) show similarities with the results of this study. However, the results of the studies by Çakır (2017), Akay et al. (2023), Gökmen and Şentürk (2022), Soylu and Akın (2021), and Siyahtaş et al. (2025) do not align with the results of this study. Again, it was determined that men's scores were higher than women's scores in the "Gaming" dimension of the digital addiction scale. When examining the studies in the literature, it was found that in the research conducted by Arslan and colleagues (2015) to examine the digital addiction levels of high school and university students, a significant difference was detected in the "Gaming" and "Social Media" dimensions of the digital addiction scale. In a study by Demirel and colleagues (2022) examining the impact of digital addiction and leisure time management on daily life among university students, no significant difference was found in digital addiction levels between genders.

The average scores of individuals who use electronic devices for 5 hours or less per week are higher in the "Goal Setting and Method" subdimension of the leisure management scale, based on weekly electronic device usage duration. This situation can be interpreted as individuals who use electronic devices for a specific purpose and method in a short amount of time during their leisure time having higher leisure time management skills. Individuals who use electronic devices for 16 hours or more per week have higher social media sub-dimension scores. This situation can be interpreted as social media use being an important variable in how individuals spend their free time.

It was determined that participants who allocated 1 hour or less per day to the "Scheduling" sub-dimension based on their daily free time had higher sub-dimension scores. In parallel with our research findings, Gökmen and Şentürk (2022) stated in their study examining the relationship between university students' leisure time participation and leisure time management that participants with less than 1 hour of free time per day had higher leisure time management skills than other participants. Again, according to daily free time, the average scores of participants with 5 hours or more of free time per day in the "Gaming" subscale of the digital addiction scale are higher. This situation can be explained by the fact that individuals spend a significant portion of their daily free time playing games.

According to the relationship between digital addiction and leisure time management, it was determined that there was a negative relationship between the "Gaming" dimension of the digital addiction scale and the "Leisure Attitude" dimension of the leisure time management scale, and a positive and low-level relationship with the "Scheduling" dimension. This situation can be interpreted as participants' leisure attitude levels decreasing and programming levels increasing as their game addiction increases. While a negative and low-level relationship was found between the "Social Media" dimension of the Digital Addiction Scale and the "Goal Setting and Method" and "Evaluation" dimensions of LMS, a positive and low-level relationship was determined with the "Leisure Attitude" dimension. It can be said that as the participants' levels of social media addiction increased, their levels of free time management skills, including goal setting and method and evaluation, decreased. A negative and low-level relationship was found between the "Negative Impact on Daily Life" dimension of the Digital Addiction Scale and the "Goal Setting and Method" and "Evaluation" dimensions of the Leisure Management Scale, while a positive relationship was found with the "Scheduling" dimension.

Conclusion

As a result, it was determined that men have higher levels of both digital addiction and leisure time management skills compared to women. Participants who used electronic devices for 5 hours or less per week had higher scores for goal setting and methods in their leisure time management, while individuals who used electronic devices for 16 hours or more per week had higher social media scores. Again, it was found that participants with free time of 1 hour or less per day had higher scores in free time management, while individuals with free time of 5 hours or more per day had higher average game scores. A relationship was found between the subscales of the Digital Addiction Scale and the subscales of the Leisure Time Management Scale. Suggestions:

1. Units should be established in universities to provide counseling to students on this issue.

2. The study should be repeated with a larger sample group.

3. Repeating the study using a mixed methods approach may lead to more accurate results.

4. Educational programs should be encouraged to combat digital addiction and promote the importance of leisure time management.

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Author Contributions

Conceptualization: DHD. Methodology: DHD, ES. Investigation: DHD. Data Curation: DHD, ES. Formal Analysis: DHD. Writing – Original Draft: DHD, ES. Writing – Review & Editing: DHD.

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Conflict of Interest

The authors declare that they have no conflicts of interest.

Ethics Statement

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