SPORTIVE
e-ISSN: 2667-632X

Cilt:7 Sayı:1, 2024
Doi: 10.53025/sportive.1449080

Analysis of the Relationship between Internet Addiction and Digital Game Playing: A Study on University Students Engaged and Not Engaged in Sports

* Muhammet Talha HAN **Elanur SİNER

ORİJİNAL ARAŞTIRMA

Abstract

The research aimed to investigate the relationship between internet addiction and digital gaming, as well as the associations of these relationships with demographic factors. A total of 405 university students participated voluntarily in the study, comprising 220 females and 185 males, with an average age of 22.48 years. Among the participants, 224 were engaged in sporting activities, with an average weekly duration of 7 hours, while 181 did not participate in any sporting activities. Of those engaged in sporting activities, 88 participated in team sports, and 136 participated in individual sports. The study utilized the "Personal Information Form," "Internet Addiction Scale," and "Digital Gaming Scale," and the obtained results were evaluated at a significance level of $p < 0.050$. Data were collected through an online survey administered to undergraduate students after obtaining ethical approval from the institutional review board. The reliability of the study was assessed according to Cronbach's Alpha criteria, indicating high reliability of the measurement tools used. Furthermore, it was observed that internet addiction and digital gaming scales fell within normative limits, indicating a normal distribution of the dataset. Parametric tests were applied considering the normal distribution of the data. Independent samples t-tests were conducted for discrete variables, and Pearson correlation analyses were performed for continuous variables, with p-values evaluated at a significance level of 0.050. The effect sizes of independent variables on dependent variables were assessed using Cohen's d. The results revealed a positive relationship between internet addiction and digital gaming, indicating an increase in digital gaming tendency with the escalation of internet addiction. It was also noted that participation in sports activities, particularly team sports, was associated with higher interest in digital gaming, suggesting the positive impact of sports on psychosocial health. Although gender did not significantly influence internet addiction, males demonstrated a higher inclination towards digital gaming. Ownership of personal computers was found to increase tendencies towards digital gaming, while age exhibited a negative relationship with these factors. The effects of participation in sports activities, types of sports activities, ownership of personal computers, and residence type on internet addiction and digital gaming were assessed using Cohen's d values, indicating weak to moderate effect sizes. Gender and the type of device used demonstrated weak, moderate, and high-level effects on internet addiction and digital gaming. In conclusion, these findings underscore the variability of internet addiction and digital gaming tendencies based on various sociodemographic factors. To maintain a healthy balance between digital gaming and internet usage, it is essential to establish a specific "screen time limit" within daily activities and strive not to exceed this limit. When setting this limit, individual needs, daily responsibilities, and social interactions should be considered to maintain a balanced digital lifestyle. Moreover, it is recommended to develop educational programs on digital literacy and internet usage for children, adolescents, and families, aiming to foster healthy digital habits and prevent internet addiction.

Key words: Sports, Sport Activity, Sport Psychology, Addiction, Internet Addiction, Game, Digital Game

İnternet Bağımlılığı ile Dijital Oyun Oynama İlişkisinin Analizi: Spor Yapan ve Yapmayan Üniversite Öğrencilerinde

Özet

Araştırma internet bağımlılığı ile dijital oyun oynama arasındaki ilişkileri ve bu ilişkilerin demografik faktörler ile ilişkilerini incelemeyi amaçlamıştır. Bu amaç doğrultusunda 220 kadın ve 185 erkek olmak üzere toplam 405 üniversite öğrencisi çalışmaya gönüllü olarak katılmıştır. Katılımcıların yaş ortalaması 22,48 olarak belirlenmiştir. Katılımcıların 224'ü sportif aktivitelerde yer alırken 181'inin sportif aktivitelerde yer almadığı görülmektedir. Sportif aktivitelerde yer alan bireylerin haftalık sportif aktivite süreleri ortalaması 7 saattir. Bu bireylerin 88'i takım aktivitelerinde 136'sı ise bireysel aktivitelerde yer almaktadır. Araştırmada, "Kişisel Bilgi Formu", "İnternet Bağımlılığı Ölçeği", "Dijital Oyun Oynama Ölçeği" kullanıldı ve elde edilen sonuçlar p;,050 anlamlılık düzeyine göre değerlendirildi. Çalışmada veriler etik kurul onayı alındıktan sonra lisans öğrencilerine online anket uygulaması ile toplanmıştır. Çalışmanın güvenirliği, Cronbach's Alpha kriterleri doğrultusunda yüksek olarak değerlendirilmiştir. Bu durum, kullanılan ölçüm araçlarının tutarlı ve güvenilir olduğunu göstermektedir. Ayrıca, internet bağımlılığı ve dijital oyun oynama ölçeklerinin normatif sınırlar içinde bulunması, veri setinin normal bir dağılım sergilediği görülmektedir. Veri setinin normal bir dağılım sergilediği göz önüne alınarak, bu veri seti için parametrik testler uygulanmıştır. Süreksiz değişkenler için "Bağımsız Örneklemler T-testi" ve sürekli değişkenler için "Pearson Korelasyon" analizleri gerçekleştirilmiş ve elde edilen sonuçlar, p değerleri 0,050 anlamlılık düzeyine göre değerlendirilmiştir. Bağımsız değişkenlerin bağımlı değişkenler üzerindeki etki büyüklükleri "Cohen's d" ile değerlendirilmiştir. İnternet bağımlılığı ile dijital oyun oynama arasında pozitif bir ilişki olduğunu ve internet bağımlılığının artmasıyla dijital oyun oynama eğiliminin yükseldiğini göstermiştir. Spor aktivitesine katılımın, özellikle takım sporlarıyla uğraşan bireylerde dijital oyun ilgisinin daha yüksek olduğu ve sporun psikososyal sağlık üzerinde olumlu etkilerinin bulunduğu gözlemlenmiştir. Cinsiyetin internet bağımlılığı üzerinde belirgin bir etkisi olmamakla birlikte, dijital oyun oynama konusunda erkeklerin daha fazla eğilim gösterdiği belirlenmiştir. Kişisel bilgisayar sahipliğinin dijital oyun oynama eğilimlerini artırdığı, yaşın ise bu faktörlerle negatif bir ilişki içinde olduğu gözlemlenmiştir. Sportif aktiviteye katılım, sportif aktivite türleri, kişisel bilgisayar sahip olma ve ikamet türünün internet bağımlılığı ile dijital oyun oynama üzerindeki etkileri, Cohen's d değerleriyle incelendiğinde etki boyutunun zayıf ve orta düzeyde olduğu görülmektedir. Cinsiyet ve kullanılan cihaz türünün, internet bağımlılığı ile dijital oyun oynama üzerindeki etkileri, Cohen's d değerleriyle incelendiğinde etki boyutunun zayıf, orta ve yüksek düzeyde olduğu görülmektedir. Sonuç olarak, bu bulgular, internet bağımlılığının ve dijital oyun oynama eğiliminin çeşitli sosyodemografik faktörlere bağlı olarak değişebileceğini ortaya koymaktadır. Dijital oyun oynama ve internet bağımlılığı ile ilgili sağlıklı bir denge kurabilmek adına günlük aktiviteler arasında belirli bir "ekran zamanı sınırı" belirleyerek, bu süreyi aşmamaya özen göstermek önemlidir. Bu sınırı belirlerken, bireysel ihtiyaçlarınızı, günlük sorumluluklarınızı ve sosyal etkileşimleri göz önünde bulundurarak dengeli bir dijital yaşam sürdürmeye çalışılabilir. Çocuklar, gençler ve aileler için dijital okuryazarlık ve internet kullanımıyla ilgili eğitim programlarının geliştirilmesi önerilebilir. Bu programlar, sağlıklı dijital alışkanlıkların oluşturulmasına ve internet bağımlılığının önlenmesine yönelik olabilir.

Anahtar kelimeler: Spor, Sportif Aktivite, Spor Psikolojisi, Bağımlılık, İnternet Bağımlılığı, Oyun, Dijital Oyun

*Arş. Gör., Karabük Üniversitesi, Hasan Doğan BESYO, Karabük-TÜRKİYE, e-posta: muhammettalhahan@karabuk.edu.tr

**Öğr. Gör., Bitlis Eren Üniversitesi, Sosyal Bilimler MYO, Bitlis-TÜRKİYE, e-posta: esiner@beu.edu.tr

Introduction

The Internet, a process that historically dates to the 1960s, has emerged, forming the foundation of continuously evolving communication networks by connecting numerous computer networks. These widely used networks globally facilitate interaction among millions of people, ease information exchange, and serve as a vast platform allowing individuals to express their emotional sharing and thoughts (Şen, 2015). The Internet is not only a medium for sharing information but also a global platform with unique terminology, tools, and specific rules, representing the world through its network structure. While the Internet has played a significant role in facilitating interpersonal communication and other innovations in various aspects of our lives, its misuse has also led to adverse effects (Gökdaş & Çavuş, 2006).

With the advancement of technology, Internet usage has become an integral part of life, simplifying daily activities. However, improper internet use can lead to psychological and physical issues, one of which is internet addiction, as identified in the literature. Research indicates a relationship between internet addiction, depression, and self-esteem, with variations based on gender and age factors (Yaygır, 2018; Karasu et al., 2017). Addiction, in a broad sense, involves a continuous desire and attachment to something. According to the World Health Organization's diagnosis, addiction occurs when a substance or behavior gains excessive dominance over others, affecting an individual psychologically, behaviorally, and mentally (Gürsu, 2018).

In today's world, technology is widely utilized, influencing every aspect of our lives. The onset of the digital age has made technological tools such as computers, tablets, and smartphones indispensable (Durualp & Aral, 2010). Technological habits play a significant role in individual and societal development (Bauman, 2012). The concept of gaming has transformed with technological changes, giving rise to digital games accessible through hardware like computers, mobile phones, or gaming consoles, providing a visual and interactive experience (Çetin, 2013). Digital game addiction is a problem observed across all age groups, from childhood to adulthood (Gentile, 2009; Rideout, 2010).

Digital games are influenced by factors such as the individual's desire for relaxation, the pursuit of entertainment, social maladjustment, the desire for challenges, and the aspiration to accomplish things not possible in real life. Additionally, factors like the desire to win in games, reaching new levels, the effort to obtain rewards, and the presence of digital games in daily conversations contribute to shaping attitudes toward digital game playing (Demir & Bozkurt, 2019).

Due to the continuously increasing popularity of digital game playing, awareness of addiction has grown, leading to a significant increase in studies conducted over the last decade. In this context,

in 2018, the Ministry of Health in our country organized a "Digital Game Addiction Workshop" to address the existing problem and plan necessary interventions for its resolution. Interventions for the medical treatment of digital game addiction are crucial. However, preventive measures and certain diagnoses on societal, legal, individual, and familial levels are also essential to prevent the problem from spreading further. Nevertheless, since every individual's needs are different, adopting an individualized approach in the fight against addiction is important. When combined with professional help, therapeutic support, and appropriate strategies, sporting activities can provide effective support in combating internet and digital game addiction. This research aims to examine the relationship between internet addiction and digital game playing levels among individuals studying in different departments of universities in terms of sporting activities and various variables. In this regard, engaging in sports as an alternative activity may reduce an individual's dependence on the internet and digital games. Regular exercise can play a significant role in strengthening both mental and physical health, contributing to the fight against addiction.

A effective strategy against internet and digital gaming addiction can be provided through engaging in sports activities. The benefits offered by these activities have positive effects on both physical health and mental balance. Regular exercise, in particular, can assist in various ways in the fight against addiction. Sports support physical health by preventing obesity and other health issues, contributing to an individual's overall well-being. Regular exercise helps reduce stress and anxiety, releasing endorphins to improve mood and strengthen mental health. Engaging in sports activities can naturally balance dopamine levels, associated with addiction, by increasing the release of dopamine and other happiness hormones. Moreover, sports activities enhance cognitive functions, strengthening focus and potentially increasing cognitive flexibility. Team sports or group activities can boost social connections, reinforcing an individual's social support system and aiding in distancing from the digital world. Sports contribute to time management and discipline development, allowing individuals to utilize their leisure time more effectively. In summary, adopting sports activities provides a holistic approach to combating internet and digital gaming addiction, addressing both physical and mental aspects of well-being.

In pursuit of this objective, the study aimed to address the following questions:

s1. Is there a relationship between university students' internet addiction and their levels of engagement in digital gaming?

s2. Are there gender differences in university students' levels of internet addiction and digital gaming engagement?

s3. Are there differences in levels of internet addiction and digital gaming engagement among university students based on their residential arrangements?

s4. Is there a difference in levels of internet addiction and digital gaming engagement among university students based on the ownership of personal computers?

s5. Are there differences in levels of internet addiction and digital gaming engagement among university students based on their participation in sports activities?

s6. Is there a relationship between university students' age and their levels of internet addiction and digital gaming engagement?

s7. Is there a relationship between university students' personal monthly income and their levels of internet addiction and digital gaming engagement?

s8. Is there a relationship between university students' levels of internet addiction and digital gaming engagement and their weekly duration of participation in sports activities?

Method

Research Design

The study employed a correlational survey model aimed at determining the presence of co-variation between at least two variables or among multiple variables. In this model, the focus is on identifying whether variables change together and, if so, how this change occurs (Karasar, 2023).

Population and Sample

The population of the study consists of university students enrolled in the 2023-2024 academic year. In this study, a voluntary participation factor was considered, and the convenient sampling method was employed. Convenient sampling involves selecting easily accessible samples from applicable units due to difficulties such as time, labor, and financial constraints (Büyüköztürk et al., 2020). It is known that there are 6,401,149 university students within the scope of the Higher Education Information System. Yazıcıoğlu and Erdoğan (2004) calculated sample sizes for different population sizes for sampling errors of ± 0.03, ± 0.05, and ± 0.10 at a significance level of $\alpha = 0.05$. Within this framework, a sample size of 384 was found to be sufficient to represent the population in a universe of 100 million people for a sampling error of ± 0.05. The research sample comprises a total of 405 university students, including 220 females and 185 males, who volunteered to participate in the study, are over 18 years old, and are university students.

Data Collection Instruments

In this research, a questionnaire with three sections was used as the data collection tool. The first section includes a Personal Information Form, the second section includes the Internet Addiction Scale, and the third section includes the Digital Gaming Scale.

Personal Information Form: It consists of 9 items to determine demographic characteristics (gender, age, personal monthly income, personal computer, residence type, participation in sports activities, type of sports activity, weekly sports activity duration, and tools used for internet connection and gaming).

Internet Addiction Scale: Developed by Hahn and Jerusalem (2001) and adapted to Turkish by Şahin and Korkmaz (2011), the scale consists of 19 items and 3 subscales (loss of control, desire to stay online longer, and negativity in social relationships). The reliability coefficients of the scale are Cronbach's alpha 0.858, Sperman Brown 0.767, and Guttmann Split-Half 0.765. The reliability coefficient for the loss of control subscale is 0.904, for the desire to stay online longer subscale is 0.887, and for the negativity in social relationships subscale is 0.926.

Digital Gaming Scale: Developed by Tekkurşun-Demir and Mutlu-Bozkurt (2018), the scale consists of 18 items and 3 subscales (cognitive, emotional, and behavioral). In this context, the explained variance ratio for Cognitive is 42.68, and Cronbach Alpha is 0.90. The explained variance ratio for Emotional is 16.83, and Cronbach Alpha is 0.81. The explained variance ratio for Behavioral is 5.59, and Cronbach Alpha is 0.91. The total variance ratio explained by the scale is 65.11%, and Cronbach Alpha is 0.82.

Research Publication Ethics

The ethical approval for this study was obtained through the decision of the Ethics Committee of the Faculty (E-70400699- 050.02.04-2300158950, dated 22.05.2023), Atatürk University Rectorate, Faculty of Sports Sciences, 2023/5.

Validity and Reliability

To determine the reliability levels of the scales used in the study, internal consistency coefficients (Cronbach Alpha) were calculated, and the values are presented in Table 1.

Table 1. Reliability Coefficients of Internet Addiction and Digital Gaming Scales

	Cronbach's Alpha	**N of Items**
Internet Addiction	.934	19
Loss of Control	.868	7

Increased Desire to Stay Online	.880	4
Negative Impact on Social Relationships	.896	8
Digital Game Playing	.907	18
Cognitive	.541	5
Emotional	.787	5
Behavioral	.890	8

According to George and Mallery (2003), Cronbach's alpha values below 0.50 are considered unacceptable; values between 0.50 and 0.60 are considered to indicate weak reliability, while values between 0.60 and 0.70 represent acceptable reliability levels. Values between 0.70 and 0.90 are considered to indicate good reliability, and values greater than 0.90 indicate excellent reliability. Considering the values presented in Table 1, it can be asserted that the reliability of the study is high.

Data Collection

Following ethical approval from the ethics committee, data for the study were collected from undergraduate students through an online survey application. Participants were provided with written instructions regarding the purpose of the study and how to fill out the questionnaire.

Data Analysis

Before conducting statistical analyses, the normal distribution of the obtained data was tested. Data analyses were conducted using the SPSS 25.0 program.

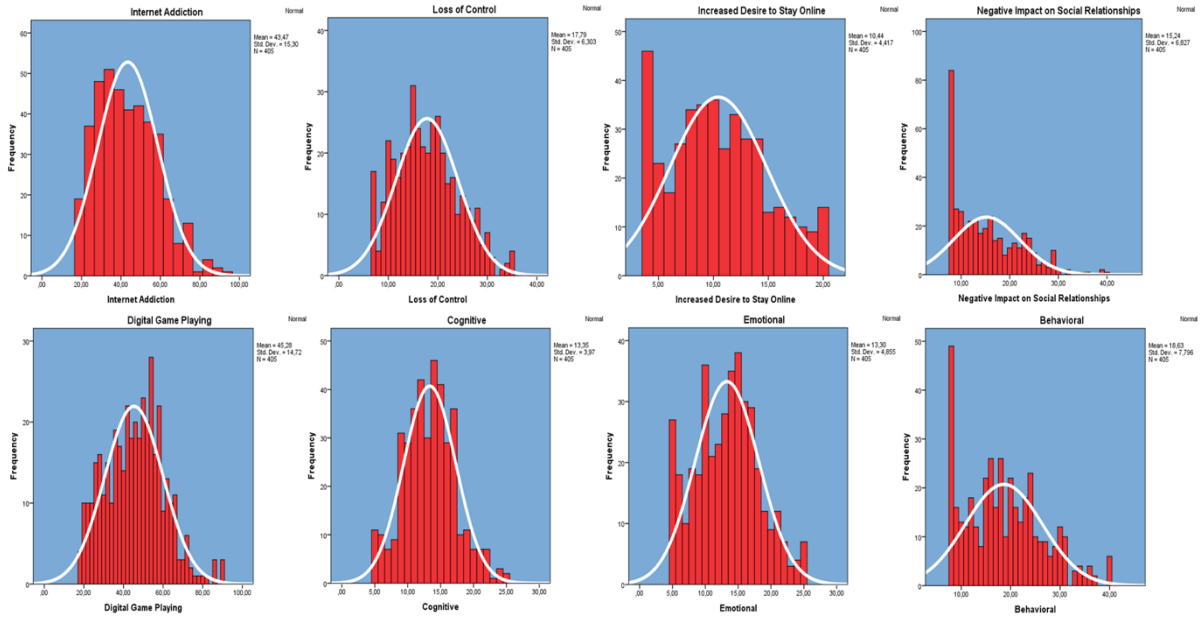
Table 2. Frequency Distribution of Internet Addiction and Digital Gaming Scales

	Internet Addiction	***Loss of Control***	***Increased Desire to Stay Online***	***Negative Impact on Social Relationships***
N	405	405	405	405
Mean	43.46	17.78	10.44	15.23
Median	42.00	17.00	10.00	14.00
Mode	31.00	15.00	4.00	8.00
Ss.	15.30	6.30	4.41	6.82
Skewness	***.535***	***.386***	***.342***	***.908***
Kurtosis	***-.132***	***-.368***	***-.673***	***.324***
	Digital Game Playing	***Cognitive***	***Emotional***	***Behavioral***
N	405	405	405	405
Mean	45.27	13.34	13.30	18.63
Median	46.00	13.00	14.00	18.00
Mode	54.00	14.00	15.00	8.00
Ss.	14.71	3.97	4.85	7.79
Skewness	***.235***	***.207***	***.158***	***.499***
Kurtosis	***-.185***	***.036***	***-.486***	***-.331***

Table 2 presents descriptive statistics, as well as kurtosis and skewness values for the scales. It is observed that the skewness and kurtosis values for Internet Addiction and Digital Gaming Scales are close to each other and fall within the specified limits in the literature (-1 +1; -1.5 +1.5; -2.0 +2.0). This observation suggests that the dataset exhibits a normal distribution, aligning with the normative

boundaries specified by Büyüköztürk (2020), Tabachnik and Fidell (2015), and George and Mallery (2010).

Graph 1. Frequency Distribution of Internet Addiction and Digital Gaming Scales



In Graph 1, representations of the frequency distribution of Internet Addiction and Digital Gaming Scales are presented. Considering the normal distribution of the dataset, parametric tests were applied. "Independent Samples T-test" for discrete variables and "Pearson Correlation" analyses for continuous variables were conducted, and the obtained results were evaluated based on a significance level of 0.050. Effect sizes of independent variables on dependent variables were evaluated using 'Cohen's d.' Statistical significance indicates whether a result is due to random variation in the data. However, not every significant result necessarily reflects a large effect. In fact, even phenomena that are imperceptible in daily life can be statistically significant. The significance level depends on sample size, data quality, and the statistical power of the procedures. In epidemiological studies or large-scale assessments, very small effects can achieve statistical significance if there are large data sets. When effects have a relevant magnitude, effect sizes are used to characterize the strength of an observation. The most popular effect size measure is undoubtedly Cohen's d (Cohen, 1988).

Table 3. Distribution of Demographic Variables

		n	%
Gender	Female	220	54.3
	Male	185	45.7
Sports Activity	Yes	224	55.3
	No	181	44.7
Type of Sports Activity	Team	88	21.7
	Individual	136	33.6
Personal Computer	Yes	160	39.5

	No	245	60.5	
Residence Type	Family Environment	267	65.9	
	Non-family Environment	138	34.1	
Device Used	Smartphone	345	85.2	
	Computer	60	14.8	
		n	**x̄**	**Ss.**
Age		405	22.48	4.04
Personal Monthly Income		283	5109.57	6137.95
Weekly Duration of Sports Activity		224	7	5.31

The demographic profile of the research participants in Table 3 is as follows: When examining the gender distribution, it was determined that 54.3% of the participants are female, while 45.7% are male. The participation rate in sports activities is 55.3%, with 44.7% of the participants not engaging in such activities. Regarding the distribution by types of sports, 21.7% of participants prefer team sports, while 33.6% prefer individual sports.

Regarding the use of personal computers, 39.5% of participants use this device, while 60.5% do not. When looking at the distribution by residence type, 65.9% of participants live in a family environment, while 34.1% live in an environment outside the family. Examining the distribution by devices used, 85.2% of participants use smartphones, while 14.8% prefer computers.

The average age of the participants is determined to be 22.48, with a standard deviation of 4.04. Additionally, the average personal monthly income of the participants is 5109.57 currency units, with a standard deviation of 6137.95. When examining the duration of weekly sports activities, the average duration for participants is 7 hours, with a standard deviation of 5.31.

Results

Table 4. Relationship Between Internet Addiction and Digital Gaming Scales (Pearson Correlation)

		Digital Game Playing	***Cognitive***	***Emotional***	***Behavioral***
Internet Addiction	**r**	***.299****	***.141****	***.200****	***.368****
	p	***.000***	***.005***	***.000***	***.000***
	n	405	405	405	405
Loss of Control	**r**	***.208****	.095	***.150****	***.251****
	p	***.000***	.057	***.003***	***.000***
	n	405	405	405	405
Increased Desire to Stay Online	**r**	***.183****	.069	.097	***.250****
	p	***.000***	.163	.051	***.000***
	n	405	405	405	405
Negative Impact on Social Relationships	**r**	***.360****	***.183****	***.247****	***.432****
	p	***.000***	***.000***	***.000***	***.000***
	n	405	405	405	405

**p<0.01 *p<0.05

The relationship between Internet Addiction and Digital Gaming was evaluated using correlation analysis. According to the analysis results, the correlation coefficient between Digital Gaming and Internet Addiction was found to be r=0.299**. This correlation was determined to be statistically significant (p=0.000), indicating a positive relationship between Internet Addiction and Digital Gaming.

The correlation coefficients between Internet Addiction and cognitive factors, emotional factors, and behavioral factors were found to be r=0.141** (p=0.005), r=0.200** (p=0.000), and r=0.368** (p=0.000), respectively. These results indicate significant and positive relationships between Internet Addiction and emotional and behavioral dimensions.

Table 5. Differences Between Internet Addiction and Digital Gaming in terms of Participation in Sports Activities

	Sports Activity	**n**	**x̄**	**Ss.**	**T-Testi**		**Cohen's d**
					t	**p**	
Internet Addiction	Yes	224	42.14	14.27	-1.947	.052	0.193
	No	181	45.11	16.37			
Loss of Control	Yes	224	17.17	5.73	***-2.190***	***.029****	0.216
	No	181	18.54	6.88			
Increased Desire to Stay Online	Yes	224	10.01	4.24	***-2.182***	***.030****	0.218
	No	181	10.97	4.57			
Negative Impact on Social Relationships	Yes	224	14.95	6.61	-.932	.352	0.093
	No	181	15.59	7.08			
Digital Game Playing	Yes	224	46.94	14.31	***2.553***	***.011****	0.255
	No	181	43.21	14.99			
Cognitive	Yes	224	13.64	3.88	1.705	.089	0.169
	No	181	12.97	4.05			
Emotional	Yes	224	13.83	4.73	***2.476***	***.014****	0.246
	No	181	12.64	4.93			
Behavioral	Yes	224	19.46	7.76	***2.404***	***.017****	0.240
	No	181	17.60	7.73			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988). **p<0.01 *p<0.05

The difference between participation in sports activities and Internet Addiction and Digital Gaming was assessed using the t-test analysis in Table 5. Regarding Internet Addiction, no significant difference was found between groups that engage in sports and those that do not (t=-1.947, p=0.052). However, significant differences were observed in the factors of loss of control and desire to stay online between those who participate in sports and those who do not (respectively, t=-2.190, p=0.029; t=-2.182, p=0.030). No significant difference was found in the Negative Impact on Social Relationships factor (t=-0.932, p=0.352).

In terms of digital gaming, a significant difference has been observed between groups engaging in sports and those not engaging in sports (t=2.553, p=0.011). However, in cognitive factors, no significant differences have been identified between groups participating in sports and those not participating in sports (t=1.705, p=0.089). On the other hand, meaningful distinctions have been

found between individuals engaging in sports and those not engaging in sports in emotional and behavioral factors (t=2.476, p=0.014; t=2.404, p=0.017, respectively). These findings indicate variations in these factors based on the participation status in sports activities.

When examining the effects of participation in sports activities on internet addiction and digital gaming, based on Cohen's d values (respectively: d = 0.193; d = 0.216; d = 0.218; d = 0.093; d = 0.255; d = 0.169; d = 0.246; d = 0.240), it is observed that the effect size is weak to moderate.

Table 6. Differences Between Internet Addiction and Digital Gaming in terms of Types of Sports Activities

	Type of Sports Activity	**n**	**x̄**	**Ss.**	**T-Testi**		**Cohen's d**
					t	**p**	
Internet Addiction	Team	88	42.98	14.27	.712	.477	0.097
	Individual	136	41.59	14.30			
Loss of Control	Team	88	17.12	5.51	-.103	.918	0.014
	Individual	136	17.20	5.88			
Increased Desire to Stay Online	Team	88	10.19	4.19	.509	.611	0.071
	Individual	136	9.89	4.29			
Negative Impact on Social Relationships	Team	88	15.67	7.02	1.304	.194	0.177
	Individual	136	14.49	6.32			
Digital Game Playing	Team	88	49.31	13.32	***2.053***	***.041****	0.278
	Individual	136	45.41	14.75			
Cognitive	Team	88	14.18	3.61	1,702	,090	0.230
	Individual	136	13.30	4.02			
Emotional	Team	88	14.57	4.51	1,931	,055	0.261
	Individual	136	13.35	4.82			
Behavioral	Team	88	20.55	7.51	1,718	,087	0.234
	Individual	136	18.75	7.86			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988). **p<0.01 *p<0.05

The difference between types of sports activities and Internet Addiction and Digital Gaming was assessed using the t-test analysis in Table 6. No significant difference was found between groups that prefer team sports and individual sports in terms of Internet Addiction and factors of loss of control, desire to stay online, and negative impact on social relationships (respectively, t=0.712, p=0.477; t=-0.103, p=0.918; t=0.509, p=0.611; t=1.304, p=0.194).

For Digital Gaming, a significant difference was found between groups that prefer team sports and individual sports (t=2.053, p=0.041). However, no significant differences were identified between the two groups in terms of cognitive, emotional, and behavioral factors (respectively, t=1.702, p=0.090; t=1.931, p=0.055; t=1.718, p=0.087). These results suggest that the type of sports activity may have a significant impact on Digital Gaming, but it may not create a substantial difference in other factors.

When the effects of sports activity type on internet addiction and playing digital games are examined with Cohen's d values (respectively, d = 0.097; d = 0.014; d = 0.071; d = 0.177; d = 0.278; d = 0.230; d = 0.261; d = 0.234), it is observed that the effect size is weak to moderate.

Table 7. Relationships Between Weekly Sports Activity Duration and Internet Addiction and Digital Gaming

		Internet Addiction	***Loss of Control***	***Increased Desire to Stay Online***	***Negative Impact on Social Relationships***
Weekly Duration of Sports Activity	**r**	-.103	-.085	-.066	-.107
	p	.123	.203	.326	.111
	n	224	224	224	224
		Digital Game Playing	***Cognitive***	***Emotional***	***Behavioral***
	r	.034	.002	.044	.036
	p	.609	.979	.517	.593
	n	224	224	224	224

**p<0.01 *p<0.05

According to the Pearson Correlation Analysis results evaluating the relationship between Weekly Sports Activity Duration and Internet Addiction, Loss of Control, Desire to Stay Online, and Negative Impact on Social Relationships factors (Table 7), weak correlations were found between weekly sports activity duration and these factors. The correlation coefficient between Internet Addiction and weekly sports activity duration is r=-0.103, and this relationship is not statistically significant (p=0.123). The relationships between Loss of Control, Desire to Stay Online, Negative Impact on Social Relationships factors, and weekly sports activity duration have correlation coefficients of r=-0.085 (p=0.203), r=-0.066 (p=0.326), and r=-0.107 (p=0.111) respectively. These results indicate that there is no significant relationship between weekly sports activity duration and Internet Addiction, Loss of Control, Desire to Stay Online, and Negative Impact on Social Relationships factors.

In the evaluation of the relationship between Digital Gaming, Cognitive, Emotional, and Behavioral factors, and weekly sports activity duration using Pearson Correlation Analysis (Table 7), weak correlations were observed between weekly sports activity duration and these factors. The correlation coefficient between Digital Gaming and weekly sports activity duration is r=0.034, and this relationship is not statistically significant (p=0.609). The relationships between Cognitive, Emotional, Behavioral factors, and weekly sports activity duration have correlation coefficients of r=0.002 (p=0.979), r=0.044 (p=0.517), and r=0.036 (p=0.593), respectively. These results indicate that there is no significant relationship between weekly sports activity duration and Digital Gaming, Cognitive, Emotional, and Behavioral factors.

Table 8. Gender Differences in Internet Addiction and Digital Gaming

	Gender	n	x̄	Ss.	T-Testi		Cohen's d
					t	p	
Internet Addiction	Female	220	43.57	15.09	.155	.877	0.015
	Male	185	43.34	15.57			
Loss of Control	Female	220	18.28	6.47	1.741	.082	0.174
	Male	185	17.19	6.05			
Increased Desire to Stay Online	Female	220	10.65	4.34	1.034	.302	0.105
	Male	185	10.19	4.44			
Negative Impact on Social Relationships	Female	220	14.64	6.48	-1.931	.054	0.192
	Male	185	15.95	7.16			
Digital Game Playing	Female	220	40.38	13.77	***-7.827***	***.000****	0.781
	Male	185	51.10	13.68			
Cognitive	Female	220	12.24	3.72	***-6.402***	***.000****	0.637
	Male	185	14.65	3.85			
Emotional	Female	220	11.85	4.58	***-6.883***	***.000****	0.688
	Male	185	15.01	4.61			
Behavioral	Female	220	16.28	7.22	***-6.998***	***.000****	0.697
	Male	185	21.42	7.53			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988). **p<0.01 *p<0.05

The difference between Internet Addiction and Digital Gaming among genders was evaluated using the t-test analysis in Table 8. No statistically significant difference was found between females and males in Internet Addiction and the factors of loss of control, desire to stay online, and negative impact on social relationships (respectively, t=0.155, p=0.877; t=1.741, p=0.082; t=1.034, p=0.302; t=-1.931, p=0.054).

For Digital Gaming and cognitive, emotional, and behavioral factors, significant differences were observed between females and males (respectively, t=-7.827, p=0.000; t=-6.402, p=0.000; t=-6.883, p=0.000; t=-6.998, p=0.000). These findings indicate differences in these factors between gende groups.

When the effects of gender on internet addiction and playing digital games are examined with Cohen's d values (respectively, d = 0.015; d = 0.174; d = 0.105; d = 0.192; d = 0.781; d = 0.637; d = 0.688, d = 0.697), it is observed that the effect size is weak, moderate, and high.

Table 9. Differences Between Internet Addiction and Digital Gaming in terms of Ownership of Personal Computers

	Personal Computer	n	x̄	Ss.	T-Testi		Cohen's d
					t	p	
Internet Addiction	Yes	160	43.49	15.66	.026	.979	0.003
	No	245	43.45	15.08			
Loss of Control	Yes	160	17.52	6.18	-.677	.499	0.068
	No	245	17.95	6.38			
Increased Desire to Stay Online	Yes	160	10.42	4.38	-.062	.950	0.007
	No	245	10.45	4.44			
Negative Impact on Social Relationships	Yes	160	15.54	7.26	.724	.469	0.072
	No	245	15.04	6.53			
Digital Game Playing	Yes	160	48.41	15.65	***3.510***	***.000****	0.352
	No	245	43.23	13.72			

Cognitive	Yes	160	14.14	4.21	***3.309***	***.001****	0.332
	No	245	12.82	3.72			
Emotional	Yes	160	14.10	5.04	***2.696***	***.007****	0.274
	No	245	12.77	4.66			
Behavioral	Yes	160	20.16	8.37	***3.243***	***.001****	0.325
	No	245	17.62	7.23			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988). **p<0.01 *p<0.05

The difference between ownership of personal computers and Internet Addiction and Digital Gaming was evaluated using the t-test analysis in Table 9. No statistically significant difference was found between individuals who own personal computers and those who do not in terms of Internet Addiction and the factors of loss of control, desire to stay online, and negative impact on social relationships (respectively, t=0.026, p=0.979; t=-0.062, p=0.950).

For Digital Gaming and cognitive, emotional, and behavioral factors, significant differences were observed between individuals who own personal computers and those who do not (respectively, t=-7.827, p=0.000; t=-6.402, p=0.000; t=-6.883, p=0.000; t=-6.998, p=0.000). These findings indicate differences in these factors based on the ownership of personal computers.

When the effects of personal computer ownership on internet addiction and playing digital games are examined with Cohen's d values (respectively, d = 0.003; d = 0.068; d = 0.007; d = 0.072; d = 0.352; d = 0.332; d = 0.274; d = 0.325), it is observed that the effect size is weak to moderate.

Table 10. Differences Between Internet Addiction and Digital Gaming in terms of Residence Types

	Residence Type	**n**	**x̄**	**Ss.**	**T-Testi**		**Cohen's d**
					t	**p**	
Internet Addiction	Family Environment	267	42.67	14.69	-1.450	.148	0.150
	Non-family Environment	138	45.00	16.35			
Loss of Control	Family Environment	267	17.44	6.00	-1.504	.133	0.156
	Non-family Environment	138	18.44	6.82			
Increased Desire to Stay Online	Family Environment	267	10.54	4.24	.664	.507	0.069
	Non-family Environment	138	10.23	4.73			
Negative Impact on Social Relationships	Family Environment	267	14.68	6.71	***-2.300***	***.022****	0.239
	Non-family Environment	138	16.31	6.92			
Digital Game Playing	Family Environment	267	44.74	14.66	-1.015	.311	0.107
	Non-family Environment	138	46.31	14.82			
Cognitive	Family Environment	267	13.33	4.00	-.087	.931	0.008
	Non-family Environment	138	13.36	3.92			
Emotional	Family Environment	267	13.16	4.85	-.765	.445	0.080
	Non-family Environment	138	13.55	4.85			
Behavioral	Family Environment	267	18.24	7.67	-1.397	.163	0.145
	Non-family Environment	138	19.38	8.00			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988). **p<0.01 *p<0.05

The difference between residence types and Internet Addiction and Digital Gaming was evaluated using the t-test analysis in Table 10. No statistically significant difference was found between individuals living in a family environment and those living outside the family environment in terms of Internet Addiction and the factors of loss of control, desire to stay online (respectively,

t=-1.450, p=0.148; t=-1.504, p=0.133; t=0.664, p=0.507). However, in the case of Negative Impact on Social Relationships, a statistically significant difference was found between individuals living in a family environment and those living outside the family environment (t=-2.300, p=0.022).

For Digital Gaming and cognitive, emotional, and behavioral factors, no significant differences were observed between the two groups (respectively, t=-1.015, p=0.311; t=-0.087, p=0.931; t=-0.765, p=0.445; t=-1.397, p=0.163). These results indicate that residence type creates a significant difference, especially in terms of negative impact on social relationships, but does not show interaction in other factors.

When the effects of residence type on internet addiction and playing digital games are examined with Cohen's d values (respectively, d = 0.150; d = 0.156; d = 0.069; d = 0.239; d = 0.107; 0.008; d = 0.080; d = 0.145), it is observed that the effect size is weak.

Table 11. Differences Between Internet Addiction and Digital Gaming in terms of Devices Used

	Device Used	**n**	**x̄**	**Ss.**	**T-Testi**		**Cohen's d**
					t	**p**	
Internet Addiction	Smartphone	345	42.86	14.85	-1.916	.056	0.253
	Computer	60	46.95	17.35			
Loss of Control	Smartphone	345	17.69	6.20	-.704	.482	0.095
	Computer	60	18.31	6.86			
Increased Desire to Stay Online	Smartphone	345	10.28	4.32	-1.666	.097	0.225
	Computer	60	11.31	4.84			
Negative Impact on Social Relationships	Smartphone	345	14.87	6.50	***-2.571***	***.010****	0.330
	Computer	60	17.31	8.20			
Digital Game Playing	Smartphone	345	42.90	13.34	***-8.446***	***.000****	1.135
	Computer	60	58.95	14.91			
Cognitive	Smartphone	345	12.72	3.57	***-8.135***	***.000****	1.068
	Computer	60	16.91	4.25			
Emotional	Smartphone	345	12.63	4.53	***-7.007***	***.000****	0.953
	Computer	60	17.13	4.91			
Behavioral	Smartphone	345	17.54	7.16	***-7.154***	***.000****	0.946
	Computer	60	24.90	8.35			

Cohen's d: d<0.2 = weak; d=0.5 = medium; d>0.8 = strong (Cohen, 1988).

The difference between device usage and Internet Addiction and Digital Gaming was evaluated using the t-test analysis in Table 11. No statistically significant difference was found between smartphone and computer users in terms of Internet Addiction, loss of control, and desire to stay online (respectively, t=-1.916, p=0.056; t=-0.704, p=0.482; t=-1.666, p=0.097). However, significant differences were identified between the two groups in terms of Negative Impact on Social Relationships (t=-2.571, p=0.010).

For Digital Gaming and cognitive, emotional, and behavioral factors, significant differences were observed between smartphone and computer users (respectively, t=-8.446, p=0.000; t=-8.135,

p=0.000; t=-7.007, p=0.000; t=-7.154, p=0.000). These results suggest that the device used may be particularly associated with Digital Gaming and cognitive, emotional, and behavioral factors.

When the effects of device type on internet addiction and playing digital games are examined with Cohen's d values (respectively, d = 0.253; d = 0.095; d = 0.225; d = 0.330; d = 1.135; d = 1.068; d = 0.953; d = 0.946), it is observed that the effect size is weak, moderate, and high.

Table 12. Relationships Between Age and Internet Addiction and Digital Gaming

		Internet Addiction	***Loss of Control***	***Increased Desire to Stay Online***	***Negative Impact on Social Relationships***
Age	**r**	-.080	***-.108****	-.042	-.053
	p	.107	***.029***	.403	.289
	n	405	405	405	405
		Digital Game Playing	***Cognitive***	***Emotional***	***Behavioral***
	r	***-.128****	***-.136****	***-.125****	-.094
	p	***.010***	***.006***	***.012***	.058
	n	405	405	405	405

**p<0.01 *p<0.05

The relationships between Internet Addiction, Loss of Control, Desire to Stay Online, Negative Impact on Social Relationships factors, and age were evaluated using Pearson Correlation Analysis. The results in Table 12 show weak relationships between age and these factors. The correlation coefficient between Internet Addiction and age was r=-0.080, and this relationship was not statistically significant (p=0.107). The relationships between Loss of Control, Desire to Stay Online, Negative Impact on Social Relationships factors, and age had correlation coefficients of r=-0.108 (p=0.029), r=-0.042 (p=0.403), and r=-0.053 (p=0.289), respectively. The negative correlation between the Loss of Control factor and age was statistically significant, but the relationships between Desire to Stay Online and Negative Impact on Social Relationships factors and age were not significant.

For Digital Gaming, Cognitive, Emotional, and Behavioral factors, the relationships with age were evaluated using Pearson Correlation Analysis. The results in Table 12 show weak relationships between age and these factors. The correlation coefficient between Digital Gaming and age was r=-0.128 (p=0.010), and this relationship was statistically significant. The correlations between Cognitive, Emotional, and Behavioral factors and age had correlation coefficients of r=-0.136 (p=0.006), r=-0.125 (p=0.012), and r=-0.094 (p=0.058), respectively. These results indicate that age may be particularly associated with Digital Gaming, Cognitive, Emotional, and Behavioral factors.

Table 13. Relationships Between Personal Monthly Income and Internet Addiction and Digital Gaming

		Internet Addiction	***Loss of Control***	***Increased Desire to Stay Online***	***Negative Impact on Social Relationships***
Personal Monthly Income	**r**	-.032	-.043	-.070	.014
	p	.597	.467	.241	.813
	n	283	283	283	283
		Digital Game Playing	***Cognitive***	***Emotional***	***Behavioral***
	r	.090	.080	.105	.063
	p	.131	.181	.078	.288
	n	283	283	283	283

**p<0.01 *p<0.05

The correlation analysis results evaluating the relationship between monthly personal income and factors related to Internet Addiction, Loss of Control, Desire to Stay Online, and Negative Impact on Social Relationships are presented in Table 13. Weak relationships were observed between monthly personal income and these factors. The correlation coefficient between Internet Addiction and monthly personal income was r=-0.032, and this relationship was not statistically significant (p=0.597). The relationships between Loss of Control, Online Craving, Negative Impact on Social Relationships factors, and monthly personal income had correlation coefficients of r=-0.043 (p=0.467), r=-0.070 (p=0.241), and r=0.014 (p=0.813), respectively. These results indicate that there is no significant relationship between monthly personal income and factors related to Internet Addiction, Loss of Control, Desire to Stay Online, and Negative Impact on Social Relationships.

Regarding Digital Game Playing, Cognitive, Emotional, and Behavioral factors, the correlation analysis results are presented in Table 13. Weak relationships were observed between monthly personal income and these factors. The correlation coefficient between Digital Game Playing and monthly personal income was r=0.090, and this relationship was not statistically significant (p=0.131). The relationships between Cognitive, Emotional, Behavioral factors, and monthly personal income had correlation coefficients of r=0.080 (p=0.181), r=0.105 (p=0.078), and r=0.063 (p=0.288), respectively. These results indicate that there is no significant relationship between monthly personal income and factors related to Digital Game Playing, Cognitive, Emotional, and Behavioral factors.

Conclusion and Discussion

This study aimed to investigate the relationships between internet addiction and digital gaming, exploring their associations with demographic factors, participation in sports activities, types of sports engagement, weekly sports activity duration, genders, possession of personal computers, residence types, devices used, age, and monthly personal income. The reliability of the study was rigorously assessed in accordance with the Cronbach's Alpha criteria proposed by George and

Mallery, (2003), affirming the high reliability of the measurement tools employed. Additionally, the adherence of internet addiction and digital gaming scales to normative boundaries indicated a normal distribution within the dataset.

A positive relationship was identified between internet addiction and digital gaming, indicating an increasing tendency toward digital gaming as internet addiction escalated. Significant and positive correlations were established between internet addiction and cognitive, emotional, and behavioral factors. These findings underscore that internet addiction transcends being merely a technological usage issue, influencing an individual's cognitive processes, emotional states, and behaviors.

In the era commonly referred to as the age of technology, the ubiquitous use of computers and the internet has become an integral part of life. While the primary purpose of the internet was to enhance communication and facilitate information sharing, its rapid proliferation has led to pathological overuse, giving rise to a novel form of addiction known as internet addiction (Arısoy, 2009). As the internet swiftly transforms into an indispensable tool of daily life, a small subset of individuals encounters issues in cognitive and behavioral functions when using it (Davis, 2001).

While no significant difference was observed in terms of general internet addiction between groups engaging in sports and those not engaging in sports, a distinct distinction emerged between these two groups in terms of factors such as loss of control and the desire to stay online. This suggests that engaging in sports may contribute to individuals managing their internet usage more effectively and limiting the desire to stay online.

Regarding digital gaming, a significant difference was identified between groups engaged in sports and those not engaged in sports. Individuals participating in sports exhibited a higher inclination toward digital gaming, with no discernible difference in cognitive factors. However, a notable distinction was found between individuals engaged in sports and those not engaged in sports in emotional and behavioral factors. This implies that sports can positively impact individuals' emotional and behavioral well-being. These findings are crucial in understanding the potential effects of sports on internet usage habits and psychosocial factors.

Upon reviewing the literature, studies have indicated that individuals with higher levels of social media addiction or digital gaming addiction tend to engage in regular sports or physical activities less frequently (Hazar et al., 2017; Tekkurşun Demir & Cicioğlu, 2019). It has been suggested that prolonged sedentary behavior resulting from addictive gaming negatively affects individuals physiologically, leading to issues such as obesity and musculoskeletal problems

(Uzunoğlu, 2021). Encouraging individuals to participate in sports and creating conducive environments are proposed as potential measures to reduce the levels of digital gaming addiction (Gülbetekin et al., 2021). Additionally, it has been noted that participants not involved in physical activity tend to have higher levels of digital gaming addiction (Güvendi et al., 2019).

No significant difference was observed in terms of internet addiction between groups engaged in team sports and individual sports. This suggests that the impact of sports on individuals' internet addiction may be independent of the type of sport.

However, regarding digital gaming, a significant difference was identified between individuals involved in team sports and those involved in individual sports. Those engaged in team sports showed a higher inclination toward digital gaming. This indicates that individuals participating in team sports may have a greater interest in digital games compared to those engaged in individual sports.

In a study conducted by Karabulut and Karaç Öcal (2023), the average scores of participants in total and sub-dimensions of digital gaming did not show a significant difference based on the type of sport. Nevertheless, upon examining the average scores, it was observed that students engaged in individual sports tended to have higher averages. It is a well-known fact that team sports disciplines are generally more crowded than individual sports. Athletes may prefer spending their free time with teammates rather than playing games on phones, computers, or tablets. Cihan and Ilgar (2019) stated that digital sports games positively affect athletes' advanced cognitive skills. Another study conducted by Sağlam and Topsümer (2019) focused on individuals participating in e-sports tournaments. This study revealed that individuals started playing digital games out of curiosity, influenced by growing up within the digital gaming culture. Additionally, it is known that digital games are played for reasons such as personal relaxation, satisfaction, building social relationships, meeting new people, belonging to a group, leadership, and leisure time engagement.

Initially, a significant relationship between sports activity and internet addiction, as well as loss of control, online staying desire, and negative social impact sub-factors, was not identified. This suggests that weekly sports duration may not directly impact internet addiction and its sub-factors, or its effect may be very weak.

No significant relationship was found between sports duration and digital gaming, cognitive, emotional, and behavioral factors. The low correlations between sports duration and these factors indicate that weekly sports activity does not directly influence these psychosocial factors.

According to the results obtained for loneliness, mobile phone, internet, and game addiction based on sports duration, no statistically significant relationship was found between participants' sports duration and loneliness, mobile phone addiction, game addiction, and internet addiction (Şar et al., 2018). As noted by Özkaya and Erkekli (2021), an increase in the preference for active recreational activities is expected. This suggests that individuals distancing themselves from passive activities may lead to changes in their levels of internet addiction. In a study conducted by Namli and Demir (2020), an increase in the attitude towards sports was found to reduce motivation for playing digital games.

No significant difference was observed between men and women regarding internet addiction and its sub-factors, including loss of control, online staying desire, and negative social impact. This indicates that the overall impact of gender on internet addiction is similar or that the differences in these factors are not statistically significant.

However, significant differences were found between men and women in terms of digital gaming, cognitive, emotional, and behavioral factors. Men scored significantly higher than women in digital gaming concerning cognitive abilities, emotional state, and behavioral characteristics. This highlights a notable gender difference in the effects on these factors.

The severity of internet addiction did not show a significant difference based on participants' genders. This result aligns with some studies in the literature (McNicol & Thorsteinsson, 2017; Taylan & Işık, 2015; Ertekin et al., 2016; Dalbudak & Evren, 2014; Balcı & Gülnar, 2009; Kim et al., 2006). Various studies have identified significant gender differences in digital gaming addiction, with men exhibiting higher levels than women (Ayhan & Köseliören, 2019; Çavuş et al., 2016; van Rooij et al., 2014). A study by Derelioğlu et al. (2021) demonstrated that male students display a more favorable attitude towards digital games compared to female students. Additionally, research by Wittek et al. (2016) indicated higher levels of digital gaming addiction in males. According to the literature, most video games are often designed for men to play with other men. Even when games feature powerful female characters, they are often overly sexualized, potentially alienating women instead of appealing to them (Fernandez et al., 2019).

No significant difference was found between the ownership of personal computers and internet addiction, as well as its sub-factors. This suggests that owning a personal computer generally does not have a decisive impact on the examined psychosocial factors.

However, significant differences were identified in digital gaming between those who own personal computers and those who do not, especially in cognitive, emotional, and behavioral factors.

Individuals with personal computers scored higher in digital gaming, cognitive abilities, emotional state, and behavioral characteristics. This indicates a potential association between personal computer use and these factors, suggesting that differences in these factors may be linked to personal computer ownership. While there is no significant relationship between personal computer ownership and internet addiction, variations in digital gaming and psychosocial factors may imply an influence of personal computer usage on individuals' psychosocial well-being.

In a study conducted by Sisson et al. (2010), individuals who used technological devices for longer periods were found to have twice the likelihood of obesity compared to non-users. Mustafaoğlu et al. (2018) similarly determined in their research that prolonged use of technological devices by individuals led to health risks such as physical inactivity and obesity.

No statistically significant difference was found between individuals living in a family environment and those living in non-family environments in terms of internet addiction, loss of control, and online presence desire. However, a significant difference was observed in terms of negative social impact between those living in a family environment and those in a non-family environment. Individuals in a family environment scored lower in negative social relationships. This suggests that the family environment may have a positive influence on social relationships.

Regarding digital gaming, no significant difference was found in cognitive, emotional, and behavioral factors between different living environments. This indicates that the type of living environment does not have a decisive impact on these psychosocial factors or that the impact is not statistically significant.

Examining internet addiction rates based on participants' residence types, no differentiation is evident. There is no significant distinction between the place participants connect to the internet and their levels of internet addiction. However, loneliness appears to emerge as a factor fueling internet addiction (Balcı & Gülnar, 2009).

No significant difference was found in terms of overall internet addiction between users of smartphones and computer users. However, meaningful differences were identified in the negative social impact sub-factor. Smartphone users scored lower in the negative social impact factor compared to computer users.

Between smartphone users and computer users, significant differences were found in digital gaming and cognitive, emotional, and behavioral factors. Smartphone users scored lower in digital gaming and its sub-factors compared to computer users. This suggests that smartphone usage may be associated with these factors, or the differences in these factors may be linked to the type of device.

As the features of easily portable mobile devices such as smartphones and tablet computers are enhanced, and access networks become more widespread and strengthened, the time allocated for internet use is expected to continue being a significantly increasing risk factor for internet addiction (Young, 1998). According to the findings of the study conducted by Demirer et al. (2011), an increase in the time spent on the computer leads individuals to adapt their minds more to the computer or game, resulting in behavior of being unable to detach from the game.

No significant relationship was found between age and internet addiction. However, there is a negative effect of age on loss of control. This suggests that as age increases, the loss of control may decrease, or the loss of control may change with age. There is no relationship between age and internet addiction. This finding is consistent with studies in the literature, such as Koçak (2014) and Göksel and Caz (2016).

No significant relationship was found between personal monthly income and internet addiction, loss of control, the desire to stay online, and negative social impact. This indicates that, in general, there is no statistically significant relationship between personal monthly income and the examined internet addiction.

Similarly, no significant relationship was observed between personal monthly income and digital gaming, cognitive, emotional, and behavioral factors. This suggests that the relationship between personal monthly income and these factors is not statistically significant. Consequently, these findings indicate that personal monthly income is not directly associated with internet addiction and psychosocial factors.

Studies conducted on high school students have found that as family income increases, the level of digital game addiction significantly increases (Göldağ, 2018). Çavuş et al. (2016) conducted a study with university students and found that as family income increases, the level of addiction also increases. In Horzum's (2011) study, it was concluded that as the socio-economic level of the family increases, students' levels of digital game addiction also increase.

This study aimed to examine the complex relationships between internet addiction, digital gaming, and various demographic factors. The analyses revealed a positive relationship between internet addiction and digital gaming. Internet addiction is significantly and positively associated with cognitive, emotional, and behavioral factors, indicating that internet addiction is not merely a problem of technology use but can also influence an individual's cognitive processes, emotional state, and behaviors.

When examining the relationships between participation in sports activities and digital addiction, it was observed that engaging in sports could contribute to more controlled internet use and limit the tendency to play digital games. Sports activities, particularly, may have a positive impact on an individual's inclination toward digital gaming. Individuals involved in sports show less inclination towards digital games and are observed to be advantageous in terms of psychosocial health.

In conclusion, this research elucidates the intricate relationships between internet addiction, digital gaming, and influencing factors. These findings may contribute to understanding various variables affecting digital addiction and assist individuals in making informed choices in this regard.

Recommendations

Longitudinal and Large-Scale Studies: Conducting long-term and large-scale studies would support the findings of this research and lead to more generalizable results. Such studies could shed light on how internet addiction, digital gaming, and associated factors evolve over time.

In-depth Investigations on Children and Adolescents: A similar study could delve more deeply into the relationships between internet addiction and digital gaming among children and adolescents. Given their increased interaction with digital environments, these age groups may warrant special attention.

Exploration of Protective Factors: Further exploration of protective factors that may mitigate internet addiction and gaming habits could be beneficial. Factors such as family communication patterns, sports activities, and educational levels could be emphasized.

Educational Use of Digital Games: Investigating the educational use of digital games could open up a different research area to evaluate the cognitive, emotional, and behavioral effects of these games.

Cross-Cultural Interactions: Expanding the study to individuals from different cultures could provide insights into how cultural differences impact tendencies toward internet addiction and gaming.

Social Support and Counseling Services: Research focusing on evaluating the effectiveness of social support and counseling services for individuals and families struggling with internet addiction could be explored. This could contribute to identifying effective strategies for combating addiction.

Development of Educational Programs: Developing educational programs on digital literacy and internet usage for children, teenagers, and families could be recommended. These programs could focus on promoting healthy digital habits and preventing internet addiction.

Limitations

Participant Profile: The participants in this study are limited to a specific geographical region or demographic group.

Measurement Tools: The reliability and validity of the measurement tools used can affect the accuracy of the data obtained, which may influence the interpretation of results related to internet addiction and digital gaming behaviors.

Cross-Sectional Design: The research is based on a cross-sectional design, which may limit the ability to capture changes in relationships over time.

Cross-Sectional Analysis: The study presents an analysis of surveys conducted at a specific point in time and cannot capture changes over time.

Voluntary Participation: The voluntary nature of participant involvement may affect the representation of the sample.

Self-Reported Data: The research relies on self-reported data from participants.

Information on Ethics Committee Permission Committee

Name: Ethics Committee of Ataturk University Faculty of Sport Sciences

Date: 19.07.2023

Issue/Decision Number: E-70400699-050.02.04-2300226415

Researchers' Contribution Statement

Within the scope of the study, the authors have equal contributions.

Conflict of Interest

There is no personal or financial conflict of interest within the scope of the study.

References

Arısoy, Ö. (2009). İnternet bağımlılığı ve tedavisi. *Psikiyatride güncel yaklaşımlar, 1*(1), 55-67.

Ayhan, B., & Köseliören, M. (2019). İnternet, Online Oyun ve Bağımlılık. *Online Journal Of Technology Addiction And Cyberbullying, 6*(1), 1-30.

Balcı, Ş., & Gülnar, B. (2009). Üniversite öğrencileri arasında internet bağımlılığı ve internet bağımlılarının profili. *Selçuk İletişim, 6*(1), 5-22.

Bauman, Z. (2012). Küreselleşme. çev. Yılmaz, A. (8.Baskı). Ayrıntı Yayınları İstanbul, 83.

Büyüköztürk, Ş. (2020). Veri Analizi El Kitabı. Pegem Akademi Yayınları

Cihan, B. B., & Ilgar, EA. (2019). Dijital Spor Oyunlarının Sporcular Üzerindeki Etkilerinin İncelenmesi: Fenomenolojik Bir Çözümleme. *Gaziantep Üniversitesi Spor Bilimleri Dergisi, 4*(1), 171-189.

Cohen J. (1998). The analysis of variance. In Statistical Power Analysis for the Behavioral Sciences (second ed.). Lawrence Erlbaum Associates. 274-87.

Çavuş, S., Ayhan, B. ve Tuncer, M. (2016). Bilgisayar oyunları ve bağımlılık: Üniversite öğrencileri üzerine bir alan araştırması. İletişim Kuram ve Araştırma Dergisi, 43, 265-289.

Çavuş, S., Ayhan, B., & Tuncer, M. (2016). Bilgisayar Oyunları ve Bağımlılık: Üniversite Öğrencileri Üzerine Bir Alan Araştırması. *İletişim Kuram ve Araştırma Dergisi,* (43).

Çetin, E. (2013). *Tanımlar ve temel kavramlar*. M. A. Ocak (Ed.), Eğitsel Dijital Oyunlar: Kuram, Tasarım ve Uygulama içinde (ss. 1-19). Ankara: Pegem Akademi Yayıncılık.

Dalbudak, E., Evren, C., Topçu, M., Aldemir, S., Coşkun, K.Ş., Bozkurt, M., Evren, B., & Canbal, M. (2013). Relationship of internet addiction with impulsivity and severity of psychopathology among turkish university students. Psychiatry Research, 210, 1086–1091.

Davis, R. A. (2001). A cognitive-behavioral model of pathological Internet use. *Computers in human behavior, 17*(2), 187-195.

Demir, G. T., & Bozkurt, T. M. (2019). Dijital oyun oynama tutumu ölçeği (DOOTÖ): Geçerlik ve güvenirlik çalışması. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi, 6(1*), 1-18.

Demirer, V., Cintaş, Y. & Sünbül, A. M. (2011). The relationship between primary school students' computer-internet usage and reading habits: Sample of Konya. Elementary Education Online, 10(3), 20-40.

Derelioğlu, M., Çankaya, S., & Saki, Ü. (2021). Lise öğrencilerinin dijital oyun tutumlarının incelenmesi. Kayantaş, İ ve Ilkım, M. (Ed.). *Spor Bilimlerinde Araştırma ve Değerlendirmeler- I* (S. 258). Gece Kitaplığı.

Durualp, E., & Aral, N. (2010). Altı yaşındaki çocukların sosyal becerilerine oyun temelli sosyal beceri eğitiminin etkisinin incelenmesi, *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 39*(39),160-172.

Ertekin, Y. H., Ertekin, H., Uludağ, A., & Tekin, M. (2016). İlköğretim sekizinci sınıf öğrencilerinde internet bağımlılığı: Çanakkale örneklemi. *Türk Aile Hek. Derg, 20*(2), 72-76.

Fernandez, O., Williams, A. J., Griffiths, M. D. & Kuss, D.J. (2019). Female gaming, gaming addiction, and the role of women within gaming culture: A narrative literature review. *Front. Psychiatry, 10,* 454,1-14

Gentile, D. (2009). Pathological video game use among youth 8 to 18: a national study. *Psychological Science*, 594–602.

George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simpleguide and reference. 11.0 update (4 th ed.). Boston: Allyn & Bacon.

Gökdaş İ., & Çavuş H. (2006). Eğitim Fakültesi'nde Öğrenim Gören Öğrencilerin İnternet'ten Yararlanma Nedenleri ve Kazanımları, *Eğitim Fakültesi Dergisi*, *3*(2), 56–78.

Göksel, A. G., & Caz, Ç. (2016). Anadolu lisesi öğrencilerinin beden eğitimi dersine yönelik tutumlarının incelenmesi. *Marmara Üniversitesi Spor Bilimleri Dergisi, 1*(1), 1-10.

Göldağ, B. (2018). Lise öğrencilerinin dijital oyun bağımlılık düzeylerinin demografik özelliklerine göre incelenmesi. *YYÜ Eğitim Fakültesi Dergisi, 15*(1),1287-1315.

Gülbetekin E., Güven E., & Tuncel O. (2021). Adolesanların dijital oyun bağımlılığı ile fiziksel aktivite tutum ve davranışlarını etkileyen faktörler. *Bağımlılık Dergisi. 22*(2): 148-160.

Gürsu, O. (2011). *Ergenlik Döneminde Psikolojik Sağlık ve Dindarlık İlişkisi*. Yayımlanmamış Doktora Tezi. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya.

Güvendi, B, Tekkurşun Demir, G, & Keskin, B. (2019). Ortaokul öğrencilerinde dijital oyun bağımlılığı ve saldırganlık. *OPUS Uluslararası Toplum Araştırmaları Dergisi, 11*(18), 1194-1217.

Hahn, A., Jerusalem, M. (2001). Internetsucht: Reliabilität und validität in der online-Forschung. Online: http://psilab.educat.huberlin.de/ssi/publikationen/internetsucht_onlineforschung_2001b.pdf

Hazar, Z., Tekkurşun Demir, G., Namlı, S., & Türkeli, A. (2017). Ortaokul öğrencilerinin dijital oyun bağımlılığı ve fiziksel aktivite düzeyleri arasındaki ilişkinin incelenmesi. *Niğde Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi, 11*(3), 320-332.

Horzum, M. B. (2011). İlköğretim öğrencilerinin bilgisayar oyunu bağımlılık düzeylerinin çeşitli değişkenlere göre incelenmesi. *Eğitim ve Bilim, 36*(159), 56-68.

Karabulut, E. O., & Karaç Öcal Y. (2023). İl Spor Merkezlerindeki Öğrencilerin Dijital Oyun Bağımlılıklarının İncelenmesi. *Akdeniz Spor Bilimleri Dergisi*, *6*(4), 1335-1344.

Karasar, N. (2023). Bilimsel araştırma yöntemi: kavramlar, ilkeler, teknikler. Ankara: Nobel Yayın Dağıtım.

Karasu, F., Bayır, B., & H, Çam. (2017). Üniversite Öğrencilerinin İnternet Bağımlılığı ile Sosyal Destek Arasındaki İlişkinin İncelenmesi, *Sosyal Bilimler Dergisi*, *7*(14).

Kim, K., Ryu, E., Chon, M. Y., Yeun, E. J., Choi, S. Y., Seo, J. S., & Nam, B. W. (2006). Internet addiction in Korean adolescents and its relation to depression and suicidal ideation: a questionnaire survey. *International journal of nursing studies*, *43*(2), 185-192.

Koçak, F. (2014). Üniversite öğrencilerinin spora yönelik tutumları: bir ölçek geliştirme çalışması. *Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi, 12*(1), 59-69.

McNicol, M. L., & Thorsteinsson, E. B. (2017). Internet addiction, psychological distress, and coping responses among adolescents and adults. *Cyberpsychology, Behavior, and Social Networking*, *20*(5), 296-304.

Mustafaoğlu, R, Zirek, E, Yasacı, Z, & Özdinçler A. R. (2018). Dijital teknoloji kullanımının çocukların gelişimi ve sağlığı üzerine olumsuz etkileri. *Addicta: TheTurkishJournal on Addictions*, *5*(2), 1-21.

Namli, S., & Demir, G. T. (2020). The Relationship between Attitudes towards Digital Gaming and Sports. *Turkish Online Journal of Educational Technology-TOJET*, *19*(1), 40-52.

Özkaya, H., & Erkekli, S. (2021). Bireylerin internet bağımlılıkları ile rekreasyonel aktivite tercihlerini belirlemeye yönelik bir çalışma Ankara ili örneği. *Journal of Recreation and Tourism Research*, *8*(3), 346-354.

Rideout V. J., Foehr U. G., & Roberts D. F. (2010). Generation M2: Media in the lives o 8- to 18-year olds. Kaiser Family Foundation.

Sağlam, M., & Topsümer, F. (2019). "Üniversite Öğrencilerinin Dijital Oyun Oynama Nedenlerine İlişkin Nitel Bir Çalışma". *Akdeniz Üniversitesi İletişim Fakültesi Dergisi, (AKİL),*32,485-504.

Sisson, S.B., Broyles, S.T., Baker, B.L., & Katzmarzyk, P.T. (2010). Screen time, physical activity, and over weight in US youth: National Survey of Children's Health 2003. *Journal of Adolescent Health, 47*(3), 309–311.

Şahin, C., Korkmaz, Ö .(2011). İnternet Bağımlılığı Ölçeğinin Türkçe'ye uyarlanması. Se*lçuk Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi Dergisi. 32,* 101-115.

Şen, A. T. (2015), *Tıp fakültesi öğrencilerinde internet bağımlılığı yaygınlığı, internet bağımlılığının sosyodemografik özellikler, depresyon ve sosyal fobi ile ilişkisi,* (Tez No. 480862) [Tıpta Uzmanlık Tezi, Kocaeli Üniversitesi Tıp Fakültesi, Kocaeli]. Yükseköğretim Kurulu Ulusal Tez Merkezi.

Tabachnick, B. G. & Fidell, L. S. (2015). Çok değişkenli istatistiklerin kullanımı (Çev: Baloğlu, M.), Nobel Yayın Dağıtım, Ankara.

Taylan, H. H., & Işık, M. (2015). Sakarya'da ortaokul ve lise öğrencilerinde internet bağımlılığı. Turkish Studies. International Periodical for the Languages, *Literature and History of Turkish or Turkic, 10*(6), 855-874.

Tekkurşun Demir, G., & Cicioğlu, H., (2019). Fiziksel aktiviteye katılım motivasyonu ile dijital oyun oynama motivasyonu arasındaki ilişkinin incelenmesi. *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi, 17*(3), 23-34.

Tekkurşun-Demir, G., & Mutlu-Bozkurt, T. (2019). Dijital Oyun Oynama Tutumu Ölçeği (DOOTÖ): Geçerlik ve güvenirlik çalışması. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi, 6*(1), 1-18.

Uzunoğlu, A. (2021). Dijital Oyun ve Bağımlılık. *Yeni Medya, 2021*(11), 116-131.

van Rooij, A. J., Kuss, D. J., Griffiths, M. D., Shorter, G. W., Schoenmakers, T. M., & Van De Mheen, D. (2014). The (co-) occurrence of problematic video gaming, substance use, and psychosocial problems in adolescents. *Journal of behavioral addictions, 3*(3), 157-165.

Wittek, C. T., Finserås, T. R., Pallesen, S., Mentzoni, R. A., Hanss, D., Griffiths, M. D., & Molde, H. (2016). Prevalence and predictors of video game addiction: A study based on a national representative sample of gamers. International journal of mental health and addiction, 14(5), 672-686.

Yaygır, C. (2018). *Üniversite öğrencilerinde internet bağımlılığı depresyon ve benlik saygısı arasındaki ilişkinin incelenmesi* (Tez No. 529135). Yüksek Lisans Tezi, İstanbul Gelişim Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul. Yükseköğretim Kurulu Ulusal Tez Merkezi.

Yazıcıoğlu, Y. ve Erdoğan, S. (2004). *SPSS Uygulamalı Bilimsel Araştırma Yöntemleri.* Ankara: Detay Yayıncılık.

Young, K. (1998). Internet addiction: the emergence of a new clinical disorder. *Cyber Psychology & Behavior,* 3, 237- 244.