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Digital game addiction, anger and aggression among university students

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Abstract

Background and Study Aim: The increasing prevalence of digital games and their potential impact on mental health highlight the need to identify protective mechanisms against possible negative effects. This study aims to determine how gender, daily internet use, and age influence digital game addiction, anger expression styles, and aggression levels among university students.

Material and Methods: The study included 1074 university students (429 women and 645 men) from various universities in Turkey. Data were collected using a personal information form, the Digital Game Addiction Scale, the Anger Expression Styles Questionnaire, and the Buss-Perry Aggression Questionnaire. Statistical analyses included Independent Samples t-tests, One-Way ANOVA, and Pearson correlation tests to examine the relationships between digital game addiction, anger, and aggression. The study followed ethical guidelines and was approved by the Ethics Committee of Selcuk University.

Results: Male students demonstrated significantly higher levels of digital game addiction, aggression, and anger compared to female students ($p < 0.05$). Additionally, students with higher daily internet usage exhibited increased levels of digital game addiction, aggression, and anger ($p < 0.05$). However, no significant differences were found based on age. A positive correlation was observed between digital game addiction and anger expression styles ($p < 0.05$), suggesting that higher digital game addiction is associated with increased anger.

Conclusions: The findings suggest that male students are more susceptible to digital game addiction, aggression, and anger than female students, and that increased daily internet usage exacerbates these issues. These results underscore the need for further research and targeted interventions to mitigate the negative effects of digital game addiction on mental health, particularly among young adults. Developing educational programs and preventive strategies may help reduce the risks associated with excessive digital gaming and internet use.

Keywords: anger, aggression, university students, digital addiction

Introduction

Digital games were initially designed as single-player experiences, challenging human logic against the machine. With advancements in technology and the expansion of the digital world, including increased smartphone, tablet, laptop, and internet usage, multiplayer gaming has grown alongside the rising number of digital gamers. The ease of access from anywhere, without requiring additional devices or equipment, has enabled these games to reach millions of users in a short time.

In digital games, a limited number of scenarios are pre-determined. The player's role is to make choices that bring these scenarios to life and introduce improvements. However, rather than fostering creativity, this primarily makes players functional within the game [1]. The vast environments, imaginative worlds, and the ability to perform actions impossible in real life make digital games one of the most preferred forms of entertainment [2].

When players lose track of time in the immersive world of digital games and experience control issues affecting their quality of life, digital addiction becomes a concern. Lemmens et al. [3] defined digital game addiction as excessive and habitual gaming behavior, where individuals fail to control their gaming habits despite social and emotional consequences. The World Health Organization (WHO) [4] reports that one in ten people is affected by gaming addiction. Young [5] noted that the sense of realism in these games causes individuals to spend hours playing.

Socialization in digital gaming environments introduces further complexities. Virtual game groups, disconnected from real-life interactions, contribute to the appeal of multiplayer games. Due to their competitive nature, multiplayer game software has rapidly evolved into an industry, allowing players to collaborate with in-game partners. Kuss and Griffiths [6] highlighted that in-game characters enable players to adopt social masks, providing them with a second virtual life, thereby increasing the appeal and frequency of digital gaming.

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Play not only helps children acquire the knowledge, skills, and attitudes necessary for social life but also fosters socialization, enhances creativity, and instills social roles [7]. While a young child spending hours playing alone or with friends on a dirt ground is seen as preparation for individual and social life, contributing positively to later developmental stages rather than leading to addiction, digital addiction presents a different scenario. Individuals affected by digital addiction may neglect their physiological needs, sometimes even attempting to manage eating and toileting while sitting in front of a computer.

Lee et al. [8] reported that digital game addicts often forgo sleep, meals, and social interactions to spend more time in the virtual world. The same study found that individuals with internet gaming disorder exhibited higher levels of depression, anxiety, and stress, while their overall life satisfaction declined. Positive emotions and behaviors contribute to an improved quality of life and provide a foundation for self-actualization. When emotions and behaviors such as anger, stress, anxiety, and aggression are properly regulated, they can serve as sources of motivation and success.

Mehroof and Griffiths [9] identified a significant relationship between online gaming addiction and psychological factors such as aggression, self-control, and anxiety. Kim et al. [10] reported that specific psychological traits, including aggression, lack of self-control, and narcissistic personality patterns, increase an individual's susceptibility to digital game addiction.

Calado et al. [11] suggest that while young people seek prestige through their online gaming performance, young adults are primarily motivated by the opportunity to remain anonymous and explore various forms of self-representation. The study also highlights that multiplayer online games function as a reward system, allowing players to earn credits, rewards, and money. This creates a "virtual economy," which can contribute to additional psychiatric issues, such as pathological gambling.

UNICEF [12], in its report *The State of the World's Children: Children in a Digital World*, categorizes online risks for children into three groups: content, contact, and conduct. The *content* category includes exposure to unwanted or inappropriate material. *Contact* risks involve threats that may lead to physical, emotional, sexual, or economic exploitation by adults. *Conduct* risks refer to situations where children engage in behavior that contributes to risky content or communication. This also includes producing, disseminating, or sharing hate-inducing material about other children.

Nazligül et al. [13], in their research on internet gaming disorder and treatment approaches, emphasize that while technological advancements, including internet use, have made daily life more convenient, problematic internet use and gaming habits can gradually develop into psychiatric issues. They highlight the importance of defining, assessing, and treating this disorder. Additionally, they suggest that implementing protection programs for adolescents and expanding psychoeducation initiatives to help families recognize early warning signs could play a preventive role in reducing the spread of the disorder. Männikkö et al. [14] state that digital game addiction contributes to psychological, social, and health-related problems. Issues such as low life satisfaction, anxiety, fatigue, and sleep disorders are associated with the rise in problematic gaming behavior.

Addiction is defined as the loss of control over a substance, alcohol, object, or behavior that an individual engages in. Any substance used or behavior performed uncontrollably carries the risk of leading to addiction. Individuals can develop dependencies on various aspects of life, including substances, alcohol, cigarettes, gambling, technology, objects, or behaviors [15].

Irmak and Erdoğan [16] define game addiction as an impulse control disorder characterized by an inability to regulate time spent playing, loss of interest in other activities, continued play despite negative consequences, and psychological withdrawal symptoms when unable to play. Doğan Keskin [17] states that the duration and frequency of digital game play are key variables in predicting game addiction.

Gentile et al. [18] define gaming disorder as the prioritization of online or offline gaming (including video games) to the extent that it becomes more important than other aspects of life. This disorder involves a loss of control over gaming behavior and an inability to stop playing despite physical, mental, and social consequences. Negative outcomes include missing school or work, academic or professional difficulties, and disruptions in family life.

Research findings indicate that gaming disorder is associated with impulse control issues, psychological distress, and negative social consequences. While various authors emphasize the role of self-regulation, psychoeducation, and protective programs in mitigating addiction, existing interventions often fail to fully address the complexity of this phenomenon. Despite numerous studies on digital game addiction, the need for more effective solutions remains evident.

In this context, the present study aims to examine how gender, daily internet use, and age influence digital game addiction, anger expression styles, and aggression levels among university students.

Materials and Methods

Participants

This cross-sectional study was conducted among

students enrolled in the faculty of sport sciences in Turkey. To ensure a diverse sample, participants were selected using a combination of convenience and snowball sampling methods. Students recruited through convenience sampling were encouraged to share the survey link with their peers.

The inclusion criteria were:

- Being a student of sport sciences,
- Not currently taking psychiatric medication,
- Not undergoing psychotherapy.

The final study group comprised 1074 students, including 429 women and 645 men.

Informed consent was obtained from all subjects involved in the study. The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of Faculty of Sport Sciences of Selcuk University (E-40990478-050.99-525338 / 29.05.2023).

Research Design

Socio-demographic data were collected using a personal information form created by the researcher. The Digital Game Addiction Scale was used to assess digital addiction levels, the Buss-Perry Aggression Questionnaire measured aggression levels, and the Anger Expression Styles Questionnaire evaluated anger expression styles.

Digital Game Addiction Scale

The scale was developed based on the *Digital Game Addiction Scale for Children* by Hazar and Hazar (2017) [19]. Adapted for university students by the same authors, the scale aims to identify digital game addiction problems [20]. It consists of 21 items structured on a five-point Likert scale, where individuals rate their responses from 1 (Strongly Disagree) to 5 (Strongly Agree) [20].

Anger Expression Styles Questionnaire

Developed by Spielberger, the Turkish adaptation and validity study of the *State-Trait Anger Scale (STAS)* was conducted by Özer [21]. This scale measures how individuals express anger and consists of two main subscales: *trait anger* and *anger expression style.* The anger expression style subscale includes three dimensions: *Anger-In, Anger-Out,* and *Anger-Control,* comprising 34 items. It is a four-point Likert-type scale, with responses ranging from *Almost Never (1 point)* to *Almost Always (4 points).*

Buss-Perry Aggression Questionnaire

The *Buss-Perry Aggression Questionnaire* was developed by Buss and Perry, with its original version created in 1992. The Turkish adaptation was conducted by Demirtaş Madran [22]. The scale comprises 29 items and is divided into four subscales: *Physical Aggression* (9 items), *Anger* (7 items), *Hostility* (8 items), and *Verbal Aggression* (5 items). Items 9 and 16 are reverse-scored. Responses are given on a five-point Likert scale, with higher scores indicating greater levels of aggression in the respective subscale.

Statistical Analysis

Data were analyzed using SPSS version 23. First, responses with invalid or missing data were excluded from the analysis. The normality of the data was assessed by examining the kurtosis and skewness values of all scale items, which fell within the acceptable range of ±2.00, as recommended by George and Mallery [23]. Since the data followed a normal distribution, the *Independent Samples t-test* was used for pairwise comparisons, *One-Way ANOVA* for multiple comparisons, and the *Pearson correlation test* to examine relationships between variables. A significance level of $p < 0.05$ was applied.

Results

The results of the study are presented in Tables 1–4. As shown in Table 1, males exhibited significantly higher average scores across all dimensions of digital game addiction compared to females ($p < 0.05$). Similarly, males scored higher than females in all dimensions of aggression, with statistically significant differences observed in anger, hostility, and overall aggression ($p < 0.05$). Furthermore, males also had higher scores than females in all dimensions of anger expression styles, with significant differences noted in trait anger, external anger, and overall anger ($p < 0.05$).

As shown in Table 2, an increase in daily internet usage was associated with a statistically significant rise in all dimensions of digital game addiction ($p < 0.05$). Regarding aggression, no significant changes were observed in hostility and verbal aggression dimensions. However, for the other aggression dimensions, students who used the internet for 8 hours or more daily had significantly higher scores compared to those who used it for 1-3 hours and 4-7 hours ($p < 0.05$). Additionally, in all dimensions of anger, students who used the internet for 8 hours or more daily exhibited significantly higher values compared to those with lower internet usage ($p < 0.05$).

As seen in Table 3, no statistically significant differences were found in digital game addiction, aggression, or anger dimensions based on age.

As seen in Table 4, a significant positive correlation was found between digital game addiction and anger expression styles ($p < 0.05$).

Discussion

In this study, which aimed to examine and evaluate university students' levels of digital game addiction, anger, and aggression, it was found that males had statistically significantly higher mean scores across all dimensions of digital game addiction compared to females. The literature contains numerous studies indicating that males

Table 1. Changes in Digital Addiction, Aggression, and Anger Expression Styles by Gender

Gender	n	%	Focusing $\bar{X}$ ± SD	Deprivation $\bar{X}$ ± SD	Immersion $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
Female	429	39.94	37.88 ± 5.01	19.37 ± 3.66	12.93 ± 2.73	70.18 ± 7.40
Male	645	60.06	38.95 ± 4.44	20.40 ± 3.27	13.52 ± 2.73	72.87 ± 6.61
Total	1074	100.00	38.52 ± 4.70	19.99 ± 3.47	13.28 ± 2.74	71.80 ± 7.06
t			-3.56	-4.69	-3.52	-6.08
p			.000*	.000*	.000*	.000*

Gender	n	%	Physical $\bar{X}$ ± SD	Anger $\bar{X}$ ± SD	Hostility $\bar{X}$ ± SD	Verbal $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
Female	429	39.94	27.75 ± 3.87	21.46 ± 3.56	24.76 ± 3.61	15.46 ± 2.86	89.57 ± 7.38
Male	645	60.06	28.20 ± 3.81	22.23 ± 3.06	25.24 ± 3.47	15.75 ± 2.78	91.45 ± 7.10
Total	1074	100.00	28.02 ± 3.84	21.93 ± 3.29	25.05 ± 3.53	15.64 ± 2.82	90.70 ± 7.27
t			-1.88	-3.67	-2.18	-1.63	-4.16
p			.059	.000*	.028*	.103	.000*

Gender	n	%	Chronic Anger $\bar{X}$ ± SD	Anger Control $\bar{X}$ ± SD	Anger Directed Outward $\bar{X}$ ± SD	Anger Directed Inward $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
Female	429	39.94	24.33 ± 3.04	19.42 ± 2.70	19.23 ± 2.64	19.33 ± 2.67	82.31 ± 5.82
Male	645	60.06	25.02 ± 3.20	19.53 ± 2.64	19.69 ± 2.70	19.56 ± 2.83	83.81 ± 6.74
Total	1074	100.00	24.75 ± 3.15	19.49 ± 2.66	19.51 ± 2.69	19.47 ± 2.77	83.21 ± 6.43
t			-3.53	-0.62	-2.81	-1.36	-3.76
p			.000*	.535	.005*	.168	.000*

* Statistically significant at $p < 0.05$.

Table 2. Changes in Digital Addiction, Aggression, and Anger Expression Styles Based on Daily Internet Usage

Daily Usage	n	%	Focusing $\bar{X}$ ± *SD*	Deprivation $\bar{X}$ ± *SD*	Immersion $\bar{X}$ ± *SD*	Total $\bar{X}$ ± *SD*
1-3 hours	402	37.43	37.72 ± 4.87^{c}	19.60 ± 3.59^{b}	12.92 ± 2.77^{b}	70.23 ± 7.81^{c}
4-7 hours	498	46.37	38.64 ± 4.53^{b}	20.14 ± 3.25^{a}	13.45 ± 2.74^{a}	72.23 ± 6.26^{b}
8+ hours	174	16.20	40.03 ± 4.41^{a}	20.47 ± 3.70^{a}	13.66 ± 2.61^{a}	74.16 ± 6.60^{a}
F			15.458	4.665	6.191	21.325
p			.000*	.010*	.002*	.000*

Daily Usage	n	%	Physical $\bar{X}$ ± SD	Anger $\bar{X}$ ± SD	Hostility $\bar{X}$ ± SD	Verbal $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
1-3 hours	402	37.43	28.01 ± 3.92^{b}	21.90 ± 3.24^{b}	24.96 ± 3.52	15.44 ± 2.83	90.27 ± 7.47^{b}
4-7 hours	498	46.37	27.77 ± 3.79^{b}	21.73 ± 3.36^{b}	24.92 ± 3.55	15.68 ± 2.75	90.20 ± 7.04^{b}
8+ hours	174	16.20	28.75 ± 3.69^{a}	22.56 ± 3.12^{a}	25.61 ± 3.47	15.96 ± 2.96	93.09 ± 7.00^{a}
F			4.250	4.156	2.669	2.218	11.495
p			.015*	.016*	.070	.109	.000*

Daily Usage	n	%	Chronic Anger $\bar{X}$ ± SD	Anger Control $\bar{X}$ ± SD	Anger Directed Outward $\bar{X}$ ± SD	Anger Directed Inward $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
1-3 hours	402	37.43	24.47 ± 2.91^{b}	19.45 ± 2.74^{b}	19.37 ± 2.63^{b}	19.43 ± 2.72^{b}	82.72 ± 5.82^{b}
4-7 hours	498	46.37	24.64 ± 3.11^{b}	19.29 ± 2.61^{b}	19.34 ± 2.59^{b}	19.26 ± 2.76^{b}	82.53 ± 5.96^{b}
8+ hours	174	16.20	25.71 ± 3.62^{a}	20.14 ± 2.56^{a}	20.30 ± 2.95^{a}	20.15 ± 2.80^{a}	86.29 ± 8.02^{a}
F			10.111	6.736	9.165	6.835	25.088
p			.000*	.001*	.000*	.001*	.000*

* Statistically significant at $p < 0.05$. $^{a, b, c}$ – Source of difference.

Table 3. Changes in Digital Game Addiction, Aggression, and Anger Expression Styles Based on Age Factor

Age Group	n	%	Focusing $\bar{X}$ ± SD	Deprivation $\bar{X}$ ± SD	Immersion $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
18-22	482	44.88	38.49 ± 4.70	19.91 ± 3.44	13.26 ± 2.74	71.65 ± 6.88
23-27	357	33.24	38.59 ± 4.46	20.09 ± 3.46	13.47 ± 2.84	72.14 ± 6.92
28+	235	21.88	38.50 ± 5.09	20.01 ± 3.54	13.06 ± 2.58	71.57 ± 7.62
F			0.050	0.282	1.581	0.640
p			.951	.755	.206	.528

Age Group	n	%	Physical $\bar{X}$ ± SD	Anger $\bar{X}$ ± SD	Hostility $\bar{X}$ ± SD	Verbal $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
18-22	482	44.88	28.18 ± 3.74	22.03 ± 3.36	24.88 ± 3.40	15.60 ± 2.75	90.70 ± 7.15
23-27	357	33.24	28.13 ± 3.89	21.73 ± 3.25	25.36 ± 3.61	15.62 ± 2.88	90.96 ± 7.04
28+	235	21.88	27.50 ± 3.92	22.00 ± 3.20	24.90 ± 3.66	15.74 ± 2.86	90.30 ± 7.84
F			2.737	0.949	2.106	0.198	0.589
p			.065	.387	.122	.821	.555

Age Group	n	%	Chronic Anger $\bar{X}$ ± SD	Anger Control $\bar{X}$ ± SD	Anger Directed Outward $\bar{X}$ ± SD	Anger Directed Inward $\bar{X}$ ± SD	Total $\bar{X}$ ± SD
18-22	482	44.88	24.71 ± 3.16	19.51 ± 2.52	19.54 ± 2.65	19.51 ± 2.69	83.26 ± 6.43
23-27	357	33.24	24.66 ± 3.08	19.35 ± 2.73	19.53 ± 2.73	19.40 ± 2.87	82.95 ± 6.41
28+	235	21.88	24.96 ± 3.26	19.64 ± 2.83	19.41 ± 2.70	19.47 ± 2.77	83.49 ± 6.47
F			0.710	0.869	0.187	0.165	0.518
p			.492	.420	.830	.848	.596

Table 4. Pearson Correlation Values of Digital Game Addiction, Aggression, and Anger Expression Styles

Variable		Digital Game Addiction	Anger	Anger Expression
Digital Game Addiction	Pearson Correlation	1	.050	.099**
	Sig. (2-tailed)		.099	.001
	n		1075	1075
Anger	Pearson Correlation		1	.041
	Sig. (2-tailed)			.178
	n			1075

**. Correlation is significant at the 0.01 level (2-tailed).

exhibit significantly higher levels of digital game addiction compared to females [24, 25, 26, 27, 28, 29, 30]. However, some studies report no significant difference in this respect [5, 31, 32, 33]. The homogeneous pattern observed among males in both the literature and this study could be attributed to the roles and statuses ascribed to males within the societal structure.

It was determined that the mean scores for all dimensions of aggression were higher in males compared to females, with statistically significant differences observed in anger, hostility, and overall aggression. Additionally, males scored higher in all anger expression styles, with significant differences in trait anger, external anger, and overall anger dimensions.

Shabbir et al. [34] reported that males have higher levels of digital game addiction compared to females and identified a negative relationship between game addiction and aggression. Liu and Peng [35] noted that when young people are prohibited from playing digital games, they may exhibit aggressive behavior and withdrawal-related conduct disorders. Numerous studies have indicated that digital games can cause both physical and psychological harm to human health [36, 37, 38, 39]. It has been observed that male adolescents predominantly prefer violent games [40, 41].

Anderson et al. [37], in their meta-analysis of 130,000 individuals, reported that violent digital games influence behavior and thoughts, reduce positive emotions and behaviors, and lead to desensitization to violence when played for extended periods. The same study found that problems associated with digital games yield similar outcomes regardless of gender or cultural

differences between Eastern and Western societies.

The significantly higher levels of overall anger and aggression among males in our study could be attributed to the greater freedom afforded to men in societal life, as well as the restrictions and social pressures placed on women.

It was found that as daily internet usage increased, all dimensions of digital game addiction were statistically significantly higher. The statistical differences in aggression and anger values related to daily internet usage followed a similar pattern to those observed in digital addiction. As daily usage time increased, there was a corresponding rise in addiction, aggression, and anger levels.

While the type and nature of digital games play a role, the primary concern is the amount of time allocated to these games and the significance they hold in daily life [76]. It was found that students who played games for five or more hours per day had significantly higher digital game addiction scores [42]. Esen et al. [25] reported a positive relationship between the duration of digital gameplay and digital game addiction in their study on university students. Yücel et al. [43], in their research on digital game addiction among medical students, found that although students generally had low levels of digital game addiction, their addiction levels increased as the time spent playing digital games rose.

In addition, not only the inability to quit but also the increasing attachment over time is critical. Studies have shown that digital game addicts gradually extend their gaming time, reinforcing their addiction over time [44, 45, 46, 47]. Young [5] reported that adolescents who spend all their free time playing digital games tend to delay their physical needs and neglect social responsibilities.

Mustafaoğlu and Yasaci [28] concluded that digital gameplay in children can lead to both mental health issues, such as anxiety, aggressive behavior, and depression, as well as physical health problems, including musculoskeletal disorders, dry eyes, pain, redness, and reduced sleep quality. Excessive use of digital games can result in both an inability to control the time spent on these games [5] and the development of negative emotions and behaviors in individuals [48]. Numerous studies across various contexts have found that an increase in daily gaming time leads to a rise in game addiction [49, 50, 51, 52].

Sözer [53] reported that as internet usage time increases, problematic internet use, internet addiction, and risky internet behaviors also rise. According to the 2015–2018 *Information Society Strategy and Action Plan*, Turkey has a gaming population of 21.8 million, with 11.4 million spending money on games. By 2012, the gaming market was estimated to have exceeded $300 million. The same report estimated that due to Turkey's young population, digital gaming culture is highly prevalent, with 39 million hours of gameplay recorded daily. In the social gaming category, Turkey ranked first in the world, with an average of 38.4 hours of gameplay per player.

The findings of our study, which indicate that increased gaming time not only reinforces addiction but also elevates levels of anger and aggression, highlight the potential severe consequences of unregulated digital platform use.

No statistical changes in digital game addiction, aggression, or anger dimensions were observed based on age. Gentile [44] emphasizes that digital games attract users of all ages, particularly young people, and that the time spent playing these games is steadily increasing. Studies that do not report changes in digital addiction levels based on age [49, 54] align with our findings. However, some studies in the literature indicate variations in digital addiction across different age groups [55, 56]. Specifically, digital addiction risk appears to be more concentrated among individuals aged 10–19 [24, 26, 29, 57].

Madran and Çakilci [58], in their research on video game addiction and aggression, identified inverse significant relationships between age and addiction/aggression levels, emphasizing that younger age groups are more at risk for online game addiction. Our research findings do not align with studies reporting statistical changes based on age. The inconsistency in the literature may be attributed to differences in study scope, sample groups, and the timing of the research.

A positive correlation between digital game addiction and anger was found in this study. The literature includes numerous studies indicating that digital game addiction contributes to negative emotions and behaviors [59, 60, 61, 62, 63]. Yücel and Şan [63] found that violent digital games increase physical responses, aggressive perceptions, aggressive feelings, and aggressive behaviors. Similarly, Hazar et al. [59] identified a positive relationship between digital game addiction and aggression, showing that as digital game addiction levels increase, aggression also rises.

Küçük and Çakir [64] reported that higher levels of digital game addiction in children are associated with increased aggression. Jeong et al. [60] found that aggression is significantly influenced by loneliness and depression, with aggression being the strongest predictor of game addiction among the three variables. Their findings also suggest that aggression mediates the relationship between depression and game addiction. López-Fernández et al. [65] reported that exposure to violent video games has a slight but significant effect on aggressive behavior.

Digital game addiction can lead to different emotional and behavioral outcomes depending on individual characteristics, with specific personal traits and various internal and external factors

shaping the effects of this addiction.

Limitations of the Study

This study has several limitations. First, the cross-sectional design does not allow for causal inferences regarding the relationships between digital game addiction, aggression, and anger expression. Second, data were collected through self-reported questionnaires, which may be subject to response bias. Additionally, the study sample consisted solely of university students from Turkey, limiting the generalizability of the findings to other populations. Future research should consider longitudinal designs, diverse participant groups, and experimental approaches to further explore the impact of digital game addiction on psychological and behavioral

Conclusions

Unregulated and excessive use of the internet and social media, when not integrated with necessary educational considerations, has the potential to disrupt societal structures and cultural stability. Based on the findings of this study, male students were found to be more prone to digital game addiction, aggression, and anger compared to female students. Additionally, addiction, aggression, and anger levels increased with the duration of internet use. However, no statistical effect of age was observed on addiction, anger, or aggression. The results also indicate that as digital game addiction increases, so does anger.

Young individuals who prioritize digital games over essential needs may continue playing despite its negative consequences, making them more susceptible to other forms of addiction and negative emotional and behavioral outcomes. To mitigate the adverse effects of digital addiction on young people's lives, further research on digital platform use and addiction should be conducted across various contexts, and preventive measures should be implemented based on research findings.

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Conflicts of Interest

The author declares no conflicts of interest.

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