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RESEARCH ARTICLE

Digital Game Addiction Tendency of Preschool Children: How Does It Affect Social Skills?

Cansu DOKUMACI[1], Servet KARDEŞ[2]

[1]Ministry of National Education, Van, Türkiye
[2]Department of Preschool Education, Van Yüzüncü Yıl University Faculty of Education,Van, Türkiye

What is already known on this topic?

- *Digital game addiction negatively affects children's academic success, social life, and physical health.*
- *Digital game addiction has symptoms such as loss of control, change of priorities, withdrawal symptoms, and continued use despite negative consequences.*
- *Digital game addiction can be prevented with the right interventions.*

What this study adds on this topic?

- *Preschool children show a low level of digital game addiction tendency.*
- *This study shows that preschool children's digital game addiction tendencies and social skills are negatively correlated.*
- *The findings emphasize the importance of parents increasing their knowledge on this subject and providing proper guidance to children in order to prevent children's tendency toward digital game addiction.*

Abstract

This quantitative research investigates the relationship between preschool children's social skills and digital game addiction tendencies. A total of 591 parents participated in the study. Demographic Information Form, "Digital Game Addiction Tendency Scale," and "Social Skills Evaluation Scale for Preschool Children" were used to collect the data. The results showed a statistically significant negative relationship between digital game addiction tendencies and social skills. Specifically, as digital game addiction tendencies increased, social skills decreased. Additionally, the findings indicated that, overall, preschool children exhibited low levels of digital game addiction tendencies. These results highlight the importance of monitoring and managing digital game use in early childhood to support the development of social skills.

Keywords: Digital game addiction, preschool children, social skills, technology, video games

Introduction

The term "digital game" refers to the integration of games with technology and the use of digital devices such as tablets, computers, mobile phones, and game consoles (Palaiologou, 2016). The intensive use of smartphones, tablets, and computers in every environment where children are present has also digitalized the world of children's games. Children have turned to digital games for reasons such as having fun, reducing stress, and relieving exhaustion (Green & Bavelier 2007), and research shows that the time spent with digital games is increasing day by day (Gentile 2009; Rideout et al., 2010). Digital games are considered to be one of the most addicting pastimes (Günüç, 2009). Lemmens et al. (2009) study digital gaming addiction, which is defined as playing games uncontrollably and intensively for lengthy periods of time.

Research shows that playing violent videos and video games contributes to children's aggressive behavior (Ergür, 2015; She et al., 2022). Contrarily, when children spend time with educational programs, media exposure can have more prosocial effects by increasing children's altruism, cooperation, and even tolerance for others (Wilson, 2008). Social skills in preschool consist of waiting in line, obeying social rules, sharing one's belongings, working in a group, respecting one's friends' rights, participating in games, making compromises, developing self-confidence, initiative, and being able to apologize when one makes a mistake (Merrel, 2003). Regarding social skills, it may be claimed that skills that help children form interpersonal interactions are critical. For this reason, children must have basic communication skills such as talking, listening, eye contact, and smiling, as well as behaviors such as group inclusion, cooperation, and collaboration. Failure to acquire these abilities during preschool can lead to an inability to socialize, low self-esteem, and various unsocial behaviors later in life (Kaya, 2016).

When the literature is studied, it is clear that further research on the subject is required to better understand how children's rising digital gaming habits affect their social abilities. While there are various studies in the literature regarding the screen time of preschool children, there are very few studies focusing on their digital game playing habits (Budak & Işıkoğlu, 2022; Carson & Janssen, 2012; Kanak & Özyazici, 2018; Yalçın et al., 2021). Therefore, it is necessary to establish appropriate mediation strategies and conduct research that will help us better understand the digital gaming habits of preschoolers and the effect of digital gaming habits on their social skills.

Since technology use and digital game playing begins at the age of two, research on digital game addiction in preschoolers should be carried out (Anitha et al. 2021). Early awareness of children's experiences and interactions in digital environments can help prevent issues later on that could arise from future unrestrained

Corresponding author: Cansu Dokumacı
E-mail: cansudkmc@gmail.com

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use of digital games (Kardeş & Dokumacı, 2021; Rehbein & Baier, 2013; Wu et al., 2014). Furthermore, it is critical to improve children's social skills from a young age in order to enhance their psychosocial situations and assist them in coping with difficult situations, establishing good relationships with their friends, family members, and dealing with failures. Digital gaming addiction can have a social impact on children and should be addressed for future generations (Bağatarhan, 2023; Yavaş Çelik, 2024).

Studies (Kaya et al., 2022; Kim & Kim, 2015; Mozelius et al., 2016) have looked at how digital game addiction affects different populations, such as elementary, secondary, high school, and college students; social anxiety (Karaca et al., 2020; Lo et al., 2005); lifestyle behaviors (Aksoy & Erol, 2021); and interpersonal relationships (Lo et al., 2005). Some other studies have linked it to risky behaviors, psychological trauma, and other disorders (Grüsser et al., 2006; Okenbay et al., 2016). However, limited research exists on the relationship between digital game addiction tendencies and social skills in preschool (Aspandi et al., 2026; Aydoğdu, 2018; Işıkoğlu Erdoğan, 2019; Toran et al., 2016), despite widespread discussion of their effects among scientists, teachers, parents, and individuals from various backgrounds. Additionally, it is acknowledged that the growing problem of digital game addiction has a substantial effect on children and is turning into a public health issue (Günüç, 2015). Because of this situation, it is now essential to increase research on digital game addiction and to take immediate action to avoid it (Digital Game Addiction Workshop, 2018).

The Present Study

Unlike previous studies, this study aims to investigate the relationship between digital game addiction tendencies and social skills and to determine whether digital game addiction tendencies differ significantly according to demographic characteristics. The study aim to gain insights into the unique contribution of digital game addiction tendencies and social skills in early childhood. In this context, understanding children's digital game addiction tendencies is critical for assessing the various roles these games play in their development. The study also intends to lay the groundwork for future research on digital game addiction. In this context, it is believed that the research findings can provide concrete contributions to the development of educational programs, the shaping of digital media policies, and the direction of future scientific studies by revealing the relationship between preschool children's digital game addiction and social skills.

According to a review of the literature, children's social skills and their addiction to digital games are negatively correlated. A similar inverse association between these variables is anticipated (Paulus et al., 2018). To examine these associations, the main problem statement of the study within the context of this objective is: Is there a statistically significant relationship between digital gaming addiction tendencies and preschool children's social skills?

In addition to the research question, the following sub-questions are addressed.

(1) What is the prevalence of digital gaming addiction among preschool children?
(2) Is there a substantial difference in the digital gaming addiction tendency of preschool children based on the mother's employment status and the parents' education level?
(3) Is there a statistically significant difference in the prevalence of digital game addiction in preschoolers based on their gender and daily digital game playing time?
(4) What is the relationship between preschool children's digital game addiction and their social skills?

Methods

Correlational survey model is used in this study. In correlational survey model, the existence and/or the level of relationship between two or more variables (situations or events) are determined. As Fraenkel, Wallen, and Hyun (2019) point out, such an approach allows for the collection of data on the skills, opinions, attitudes, beliefs, and/or knowledge of samples of people who represent a given target demographic. The attitudes, tendencies, or opinions of the research population are numerically characterized by working with a sample drawn from the population. In these investigations, sample results are extrapolated to the research population (Fowler, 2013).

Sample

The study sample consisted of 591 parents who voluntarily participated and were selected using the convenience sampling method to represent the target population. Although there are various sampling methods, convenience sampling is defined as the researcher's choice of a setting that is easily accessible and close to the researcher in terms of time and practice (Dawson & Trapp, 2001; Gravetter & Forzano, 2012). Fowler (2013) recommends a sample size of 500 people with a ± 4% error limit and a 95% confidence level. As a result, the study included 591 parents. The study participants not only provided their own information but also demographic information such as age, education, and employment status for the other parent. This ensured that the demographic information of both mothers and fathers was complete for all 591 children.

Among the participants, 228 fathers and 156 mothers had a bachelor's degree or higher education; 30.8% of the women (n = 181) and 13.4% of the fathers (n = 78) completed primary school. The majority of the children's mothers (n = 479) are unemployed. Parents completed the scales 52.5% (n = 310) for females and 47.5% (n = 281) for boys. During the day, 46% (n = 272) of children spend less than an hour, 27.9% (n = 165) spend 1–2 hours, 12.4% (n = 73) spend 2–3 hours, and 13.7% (n = 81) spend 4 hours or more playing digital games.

Measures

The researcher used the "Personal Information Form" to collect demographic information from preschool children and their parents, while Budak and Işıkoğlu's (2022) "Digital Game Addiction Tendency Scale" was used to assess children's digital game addiction tendencies. The maximum score that can be acquired from the scale, which consists of 20 items and four sub-dimensions in total, has no negative items, and is produced in a 5-point Likert type, is "100," while the lowest score is "20." The increase in the total score on the scale indicates that children's addiction to digital games is also increasing. According to Budak and Işıkoğlu (2022), the scale has a Cronbach's Alpha score of $\alpha = 0.93$ and a cumulative variance rate of 63.06 percent. Cronbach's Alpha scores for the research scale were $\alpha = 0.95$.

To assess preschool children's social skills, Aksoy and Baran's (2020) "Social Skills Assessment Scale for Preschool Children" was utilized. The scale, which had 44 items and five sub-dimensions, was designed in a 5-point Likert format. During the evaluation process, reversal items on the scale are evaluated in reverse, resulting in total values ranging from 44 to 220. Aksoy and Baran (2020) found that the scale's data set supports the five-factor structure, which has a good level model and a total Cronbach alpha coefficient of $\alpha = 0.89$. The Cronbach's alpha value for the scale utilized in the study was $\alpha = 0.94$.

Statistical Analysis

Before beginning data analysis, 612 of the 800 forms supplied were thoroughly inspected. The analysis process did not include 9 forms in which all questions were given the same score, 21 forms in which one of the scales was filled and the other was left blank, resulting in

incomplete data, and 2 forms in which it was stated in writing that the child did not play digital games and the scale items were filled in by taking the child's screen time into account. Scales with blank demographic data were omitted from the analytical process for that variable only. In addition, 11 forms completed via Google Forms were included in the analytic procedure, for a total of 591 forms studied.

Data was analyzed using the statistical software program. Before beginning data analysis, it was determined whether parametric or non-parametric tests would be used. George and Mallery (2010) reported that the data had a normal distribution when the variables' kurtosis and skewness coefficients were between −2 and +2. The skewness values of the variables ranged from −0.743 to 1.585, whereas the kurtosis values ranged from −0.773 to 1.988, allowing for parametric testing.

Descriptive statistics (frequency, percentage) were utilized to analyze personal information about parents and children. Because the data had a normal distribution, the *t*-test was employed to compare two groups and analysis of variance (ANOVA) to analyze several groups. Tukey and least significant difference tests are used to understand the source of the difference when the data are homogeneously distributed; when they are not, the Tamhane test is utilized. The Pearson moment diameter correlation coefficient was used to assess the relationship between the measures. The correlation coefficient was interpreted using the following criteria: 0.00 for no relationship, 0.01–0.29 for a low level of relationship, 0.30–0.70 for a moderate relationship, 0.71–0.99 for a high level of relationship, and 1.00 for a perfect relationship (Köklü et al. 2006).

Ethical Statement

To collect data during the spring semester of the 2021–2022 academic year, an application was submitted to Van Yüzüncü Yıl University's Social and Humanities Ethics Commission. On February 23, 2022, the ethics committee permission was obtained from the relevant board with the decision number 2022/5–10. Data were collected after receiving ethics committee clearance and consent from the Provincial Governorship and the Provincial Directorate of National Education. Before collecting data, the researcher told the school principals and preschool teachers that the essential approvals for the research had been received, as well as the research's aim. The introductory section of the surveys included an informed consent section. Analyses of responses that selected the option "I prefer to participate in the research voluntarily" under the informed consent sections were included.

Results

Table 1 presents the prevalence of digital gaming addiction among preschool children. This table shows that the average digital game addiction propensity of preschool children is 2.51, with a SD value of 0.93. When the averages of the digital game addiction tendencies of the preschool children in the sample were examined according to the score ranges of the Digital Game Addiction Tendency Scale dimensions and the levels corresponding to the score ranges, it was discovered that preschool children's digital game addiction tendencies are "low."

Table 1.
Digital Game Addiction Tendency Levels of Preschool Children

Sub-Dimensions	*n*	$\bar{x}$	Standard Deviation
Continuous playing	591	2.33	1.04
Conflict	591	2.65	1.10
Reflection on life	591	2.62	1.05
Do not break away from life	591	2.48	1.04
DOBE scale (total)	591	2.51	0.93

Note: DOBE = Digital Game Addiction Trend Scale.

Table 2 shows that there is no statistically significant relationship between mothers' education level and children's digital gaming addiction tendencies in the sub-dimensions of reflection on life ($F_{(3,584)}=0.461$, $p > .05$) and detachment from life ($F_{(3,584)}=1.092$, $p > .05$). The mother's education level significantly affects the sub-dimensions of constant gaming ($F_{(3,584)}=12.255$; $p \leq .05$) and conflict ($F_{(3,584)}=7.309$; $p \leq .05$), as well as the total of the digital game addiction inclination scale ($F_{(3,584)}=4.898$; $p \leq .05$). The post-hoc Tamhane test was employed to evaluate which groups had a significant difference in ANOVA results. As a result of the Tamhane test, overall scale; children of mothers with elementary, secondary, and high school education are more likely to be addicted to digital games than children of mothers with university or higher education.

Table 3 shows that fathers' education level and children's digital game addiction tendencies have no statistically significant relationship with the sub-dimensions of reflection on life ($F_{(3,580)}=0.685$; $p > .05$) and detachment from life ($F_{(3,580)}=0.956$; $p > .05$). The subscales of constant gaming ($F_{(3,580)}=10.379$; $p \leq .05$) and conflict ($F_{(3,584)}=4.367$; $p \leq .05$), as well as the total of the digital game addiction inclination scale ($F_{(3,584)}=3.700$; $p \leq .05$), reveal a significant difference based on fathers' education level. The post-hoc Tukey test was used to identify which groups showed a significant difference in the ANOVA data. A substantial difference was discovered in favor of secondary school graduates compared to fathers with university education or higher ($p \leq .05$).

The *t*-test results in Table 4 show that there is no significant difference based on the variable of mothers' work status scores derived from the sub-dimensions of contemplation on life (t (586) = 0.805; $p > .05$) and detachment from life (t (586) = 1.024; $p > .05$). Consistent gaming (t (586) = 3.036; $p < .05$), conflict (t (586) = 3.230; $p < .05$), sub-dimensions, and overall scale (t (586) = 2.339; $p < .05$)), the results demonstrate a significant difference based on the variable of mothers' work status. When the arithmetic means are evaluated, it is revealed that unemployed mothers have a considerable advantage in the constant playing ($\bar{x}=2.40$) and conflict ($\bar{x}=2.72$) sub-dimensions, as well as the total scale ($\bar{x}=2.56$). According to this finding, the working status of mothers influences the digital game addiction tendencies of preschool children, with children whose mothers are not employed having higher digital game addiction tendencies than children whose mothers are employed.

The *t*-test results in Table 5 show that there is no significant difference based on the variable of children's gender scores obtained in the sub-dimension of detachment from life (t (589) = −1.647; $p > .05$). The gender variable significantly affects the scores for the sub-dimensions of constant playing (t (589) = −3.265; $p \leq 0.05$), conflict (t(589) = −2.805; $p \leq .05$), reflection on life (t (589) = −2.398; $p \leq .05$), and overall scale (t (589) = −2.800; $p \leq .05$). When the arithmetic means are studied, it is revealed that male students have a considerable advantage in the sub-dimensions of constant playing ($\bar{x}=2.47$), conflict ($\bar{x}=2.78$), reflection on life ($\bar{x}=2.73$), and the overall scale ($\bar{x}=2.62$). In other words, when arithmetic means are studied, it is found that boys have larger digital gaming addiction inclinations than girls.

The ANOVA results Table 6 show a significant difference in all sub-dimensions of the scale, including continuous playing ($F_{(3,587)}=198.102$; $p \leq .05$), conflict ($F_{(3,587)}=67.284$; $p \leq .05$), reflection on life ($F_{(3,587)}=39.911$; $p \leq .05$), detachment from life ($F_{(3,587)}=45.568$; $p \leq .05$), and the total scale ($F_{(3,587)}=103.857$; $p \leq 0.05$). The post-hoc Tukey test was used to identify which groups showed a significant difference in the ANOVA test findings. As a result of the Tukey tests, preschool children's digital game addiction tendencies vary depending on how much digital game time they spend each day. It has been shown that children who spend more time playing digital games have higher levels of digital game addiction than children who play less.

Table 2.
The ANOVA Results for Comparison of Preschool Children's Digital Game Addiction Tendency Scores Based on Mother's Education Level

Dimensions	Source of Variance	SS	df	MS	*F*	*p*	Significant Difference
Digital game addiction trend (Total)	Intergroup	12.456	3	4.152	4.898	.002*	1 > 4 2 > 4 3 > 4
	Within groups	495.069	584	0. 848			
	Total	507.525	587	Continuous playing			
Intergroup	38.112	3	12.704		12.255	.000*	1 > 4 2 > 4 3 > 4
Within groups	605.389	584	1.037				
Total	643.502	587	Conflict	Intergroup			
25.671	3	8.557		7.309	.000*	1 > 4 2 > 4 3 > 4	Within groups
683.719	584	1.171					Total
709.391	587	Reflection on life	Intergroup				1.542
3	0.514		.461	.710	…	Within groups	651.976
584	1.116					Total	653.519
587	Do not break away from life	Intergroup				3.557	3
1.186		1.092	.352	…	Within groups	634.057	584
1.086					Total	637.614	587

Note: 1 = Primary School, 2 = Middle School, 3 = High School, 4 = University, and above and $p \leq .05$.*

Table 7 shows a significant negative moderate relationship between preschool children's digital game addiction tendencies and social skills ($p = -.632$; $p < .01$), a significant negative moderate relationship between the communication sub-dimension ($p = -.478$; $p < .01$), a significant negative moderate relationship between the compliance sub-dimension ($p = -.508$; $p < .01$), and a significant negative moderate relationship. This result finds that as children's computer game addiction grows, their social skills deteriorate.

Discussion

According to the findings, preschool children in the study had modest levels of computer gaming addiction. Based on this finding, it may be concluded that the children included in the study group did not exhibit a significant level of digital gaming addiction, as is frequently claimed. Aküzüm et al. (2022), Baysan (2022), and Budak and Işıkoğlu (2022) all concluded that preschool children showed modest digital gaming addiction tendencies. According to Güzen (2021), children spent more time on digital games during the epidemic, and their addiction tendencies grew. Similarly, Han et al. (2022) reported that game usage times and scores increased over the Covid-19 period. Yavaş Çelik (2024) and Ünsal (2019) found significant levels of digital game addiction in preschool children, but Ulum (2016) found moderate levels of computer game addiction in children aged 6–13. When the research findings are compared to the findings of other studies in the literature, different conclusions are reached about children's degrees of digital gaming addiction. Furthermore, investigations with various sample groups provide diverse outcomes. This distinction is assumed to be owing to the multifaceted nature of digital gaming addiction, as well as the fact that numerous things influence it. Indeed, studies have shown that parental approaches/attitudes (Wu et al., 2014), parenting strategies (Budak & Işıkoğlu, 2022) the duration of parents' smartphone use (Park & Park, 2014), and a variety of other factors influence children's technology and digital game addiction. Domoff et al. (2020) also presented a theoretical framework that summarizes the many effects of problematic

Table 3.
The ANOVA Results for Comparison of Preschool Children's Digital Game Addiction Tendency Scores Based on Father's Education Level

Dimensions	Source of Variance	SS	df	MS	*F*	*p*	Significant Difference
Digital game addiction trend (Total)	Intergroup	9.483	3	3.161	3.700	.012*	2 > 4
	Within groups	495.543	580	0.854			
	Total	505.026	583	Continuous playing			
Intergroup	32.431	3	10.810		10.379	.000*	1 > 4 2 > 4 3 > 4
Within groups	604.100	580	1.042				
Total	636.531	583	Conflict	Intergroup			
15.603	3	5.201		4.367	.005*	2 > 4 3 > 4	Within groups
690.752	580	1.191					Total
706.355	583	Reflection on life	Intergroup				2.293
3	0.764		0.685	.562	…	Within groups	647.357
580	1.116					Total	647.357
583	Do not break away from life	Intergroup				3.124	3
1.041		0.956	.413	…	Within groups	631.476	580
1.089					Total	634.600	583

Note: 1 = Primary School, 2 = Middle School, 3 = High School, 4 = University and above, and $p \leq .05$*

Table 4.
Independent Groups t-*Test Results on Preschool Children's Digital Game Addiction Tendencies Based on Mother's Working Status Variable*

Dimensions	Working Situation	*N*	M	SD	*t*	df	*p*
Digital game addiction trend (Total)	Not working at a job	479	2.56	0.92	2.339	586	.020*
	Working at a job	109	2.32	0.97			
Continuous playing	Not working at a job	479	2.40	1.03	3.036	586	.003*
	Working at a job	109	2.06	1.08			
Conflict	Not working at a job	479	2.72	1.09	3.230	586	.001*
	Working at a job	109	2.35	1.09			
Reflection on life	Not working at a job	479	2.64	0.05	0.805	586	.421
	Working at a job	109	2.55	0.10			
Do not break away from life	Not working at a job	479	2.51	0.05	1.024	586	.306
	Working at a job	109	2.39	0.10			

Note: SD = Standard deviation.

media consumption in early life. As a result, while assessing young children's digital game addiction tendencies, several variables that may influence digital game addiction should be considered.

Digital game addiction tendencies of preschool children included in the study differed according to the education level of the parents, with children from families with university or higher education levels having lower tendencies. Many investigations in the literature have produced comparable results to the research findings (Budak & Işıkoğlu, 2022; Turen & Bagceli Kahraman, 2025; Ulum 2016; Ünsal 2019). The study's findings, as well as similar findings in the literature, are thought to be due to the fact that as education levels rise, parents' knowledge of digital technologies grows, they become more aware of the benefits and risks of digital tools, they seek to choose appropriate games for their children by having more ideas about the content of digital games, and they take care to establish more positive relationships with their children. Studies in the literature clearly state that parents with low levels of education have little knowledge about child development, they cannot control the content on technological devices and have problems restricting their children, they make incorrect interventions in the use of technology, and they have communication problems (Cengiz Saltuk & Erciyes, 2020). According to Livingstone et al. (2015), more educated parents are aware of their children's digital lives. According to Işıkoğlu Erdoğan et al. (2018), parents with higher education levels are less likely to allow their children to play digital games. According to Cengiz Saltuk and Erciyes (2020), parents with a higher level of education check the content of games with their children and download games that are age suitable. Gökçearslan and Durakoğlu (2014) found that children with greater levels of education are more prone to digital gaming addiction, contrary to previous research findings. It was suggested that the outcome was achieved because families with a higher degree of education spend more time outside the home, giving their children more freedom and paying less attention to them.

Research suggests that mothers have a crucial role in preventing children from becoming addicted to computer games (Yiğit & Günüç, 2020). Another finding from the analysis of the study shows that the digital game addiction tendencies of the preschool children participating in the study vary according to their mothers' employment status. Given the limited time that working mothers spend with their children compared to non-working mothers, it is assumed that mothers make an effort to make the most of this limited time, and thus working mothers help reduce their children's digital game addiction tendencies by taking responsibility for how they use digital tools.

Within the scope of the research, it was determined that the digital gaming addiction of the preschool children included in the study differed by gender, with boys having stronger tendencies than girls. Research suggests that boys are more prone to digital game addiction (Aydoğdu, 2018; Güvendi et al., 2019; Hasting et al., 2009; Liu et al., 2024; Paulus et al., 2018). Research suggests that boys tend to be more addicted to digital games than girls due to their increased use of digital devices (Akçay & Özcebe, 2012; Esposito et al., 2020; Güzen, 2021; Ünsal, 2019). According to Reiss (2008), boys are more likely to be biologically tied to digital games, and the pleasure region in men's brains is more active than the pleasure region in women's brains when they play digital games. According to Çetinkaya and Sütçü (2016), mothers and fathers tend to regulate and guide their daughters' usage of digital gadgets differently. According to Hartmann and Klimmt (2006), girls are less interested in video games than boys and dislike them because of the competitive components and violent nature. Unlike previous research findings, Ulum (2016) examined computer game addiction, in which control is lost, within the context of developmental features and determined that girls are more addicted than boys. According to Ünsal (2019), the reasons for high computer game addiction in girls should be evaluated alongside a variety of personal and environmental factors.

Another result; it was established that as children's daily digital game playing time increased, so did their likelihood of being addicted to digital games. When the literature is examined, similar results are discovered with the research findings in many studies (Bağatarhan, 2023; Chan & Rabinowitz, 2006; Esposito et al., 2020; Gökçearslan & Durakoğlu, 2014; Işıkoğlu Erdoğan 2019; Paulus et al., 2018; Ulum, 2016). Mehroof and Griffiths (2010) found that when individuals spent more time playing digital games, their anxiety levels increased. Especially in light of the current pandemic, it has been observed that children who spend more time playing digital games have a higher potential to become addicted to them. According to Balhara et al. (2020), 50.8% of the participants in their study increased their digital gaming activity during this procedure. According to Oğuz and Kutluca (2020), parents set time limits and monitor their children's digital games to prevent detrimental effects on their social skills. Akçay and Özcebe (2012) found that their preschoolers spend hours playing digital games. According to Güzen (2021), children should not be left alone with screens for extended periods of time in order to avoid digital gaming addiction.

Finally, the study found a moderate unfavorable relation between digital gaming addiction tendencies and preschool children's social abilities. There are studies in the literature that produce similar results to the research findings (Alborzi & Torabi, 2024; Baysan, 2022; Budak & Işıkoğlu, 2022; Misirli et al., 2025; Singha & Singha, 2025). Research indicates that children who are exposed to negative content in digital games exhibit and adopt negative behaviors (Alrobai et al., 2016; Erdoğan, 2023; Jansz & Martens, 2005; Paulus et al., 2018). According to Akaroğlu (2022), digital gaming addiction might have a negative impact on children's psychological well-being. Additionally,

Table 5.
t-*Test Results of DOBE Scale Scores According to Children's Gender*

Dimensions	Gender	*N*	M	SD	*t*	df	*p*
Digital game addiction trend (Total)	Girl	310	2.40	0.95	−2.800	589	.005*
	Boy	281	2.62	0.88			
Continuous playing	Girl	310	2.19	1.04	−3.265	589	.001*
	Boy	281	2.47	1.02			
Conflict	Girl	310	2.53	1.12	−2.805	589	.005*
	Boy	281	2.78	1.05			
Reflection on life	Girl	310	2.52	1.07	−2.398	589	.017*
	Boy	281	2.73	1.02			
Do not break away from life	Girl	310	2.41	1.06	−1.647	589	.100
	Boy	281	2.55	1.01			

Note: DOBE = Digital Game Addiction Trend Scale; SD = Standard deviation

Table 6.
The ANOVA Results for Comparing Digital Game Addiction Tendency Scores Based on Daily Playing Time

Dimensions	Source of Variance	SS	df	MS	*F*	*p*	Significant Difference
Digital game addiction trend (Total)	Intergroup	176.504	3	58.835	103.857	.000*	2 > 1, 3 > 1, 4 > 1, 3 > 2, 4 > 2, 4 > 3
	Within groups	332.534	587	0.566			
	Total	509.038	590	Continuous playing			
Intergroup	324.322	3	108.107		198.102	.000*	2 > 1, 3 > 1, 4 > 1, 3 > 2, 4 > 2, 4 > 3
Within groups	320.335	587	0.546				
Total	644.657	590	Conflict	Intergroup			
183.117	3	61.039		67.284	.000*	2 > 1, 3 > 1, 4 > 1, 3 > 2, 4 > 2, 4 > 3	Within groups
532.518	587	0.907					Total
715.635	590	Reflection on life	Intergroup				111.014
3	37.005		39.911	.000*	2 > 1, 3 > 1, 4 > 1, 3 > 2, 4 > 2	Within groups	544.262
587	0.927					Total	655.276
590	Do not break away from life	Intergroup				120.878	3
40.293		45.568	.000*	2 > 1, 3 > 1, 4 > 1, 3 > 2, 4 > 2	Within groups	519.047	587
0.884					Total	639.926	590

Note: 1 = Less than 1 hour, 2 = 1–2 hours, 3 = 2–3 hours, 4 = 4 hours and above, and $p \leq .05$*

Table 7.
Correlation Analysis Between Preschool Children's Digital Game Addiction Tendencies and Their Social Skills and Sub-Dimensions

	1	2	3	4	5	6	7
Digital game addiction trend total	1						
Social skills total	−0.632**	1					
Communication	−0.478**	0.845**	1				
Rapport	−0.508**	0.823**	0.649**	1			
Self control	−0.600**	0.727**	0.381**	0.553**	1		
Prosocial behavior	−0.444**	0.614**	0.424**	0.308**	0.431**	1	
Assertiveness	−0.444**	0.614**	0.424**	0.308**	0.431**	1.000**	1

$p < .01$**; $p \leq .05$*.

research suggests that excessive digital use can lead to violent conduct. Research indicates that an increase in children's tendency for digital game addiction correlates with a decline in their social problem-solving and communication abilities (Xu et al., 2023). Bhagat et al. (2020) determined that there exists an inverse correlation between children's tendency for digital gaming addiction and their positive social behavior. Likewise, Xu et al. (2023) discovered that youngsters with greater engagement in digital games exhibited poorer social development. Violent games have been observed to boost relational aggression for girls and physical aggression for boys at school (Zhang et al., 2021). On the other hand, Terlouw et al. (2018) found that some children communicated often with others while playing video games. Video games have been proved to provide a safe atmosphere, particularly for communication. Similarly, it was Cao et al. (2021) indicated that parents think digital technology can be effective in early childhood education. Among the advantages perceived by parents was that it improved children's knowledge, learning, and social (communication) abilities.

Limitations

This research was limited to parents of students who attended preschool education and who volunteered to participate in the study through convenience sampling. All findings obtained were limited to the responses given by parents to the scales. Since digital game addiction is a variable sensitive to socioeconomic and cultural structure, the socioeconomic and cultural characteristics of the sample group limited the findings of the study.

Conclusions

The results showed that early years and primary education give a unique opportunity to investigate the connection between preschoolers' social abilities and their tendency for digital gaming addiction. These findings add to the literature new knowledge by presenting evidence that as children's digital game addiction grows, their social skills decline. Furthermore, it was shown that children who spent more time playing digital games also tended to be more addicted to them, and that boys were more likely than girls to be addicted to digital games. Based on findings, it is recommended that parents consult with their children about the duration of digital games during the day, the content of the digital games played, and the security rules that must be followed when using digital games. It is also recommended that the rules for digital games be established at the start of the process, that the rules be strictly enforced throughout the process, and that parents demonstrate consistent behavior about their children's digital games. Instead of prohibiting children from playing digital games for extended periods of time, it is recommended that they be steered toward physical activity, exercise, or other hobbies. Further research would be beneficial into the preschool families and other shakeholders' effects on children's social skills and digital gaming addiction tendency.

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

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Informed Consent: Written informed consent was obtained from the parents of the children who participated in this study.

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