Journal of Learning and Teaching in Digital Age, 2023, **8**(1), 47-54
https://dergipark.org.tr/en/pub/joltida
ISSN: 2458-8350 (online)

Research Paper

Examination of Digital Game Addiction Levels of Adolescent Mainstreaming Students

Tuğba Sivrikaya[*a], Müzeyyen Eldeniz Çetin[b]

[a](ORCID ID: 0000-0003-0707-1023), Bolu Abant İzzet Baysal University, tugba.sivrikaya@gmail.com
[b](ORCID ID: 0000-0001-9231-7344), Bolu Abant İzzet Baysal University, eldeniz_m@ibu.edu.tr
[*]Corresponding author

ARTICLE INFO

Received: 8 March 2022
Revised: 17 September 2022
Accepted: 21 September 2022

Keywords:
Mainstreaming Students
Adolescents
Digital Game
Digital Game Addiction
Students With Disabilities

doi: 10.53850/joltida.1084792

ABSTRACT

This study aims to examine the digital game addiction levels of adolescent mainstreaming students in terms of various variables. 157 adolescent mainstreaming students between the ages of 12-18 who attend secondary school, Anatolian High School, Vocational and Technical Anatolian High School, and Vocational Education Center in Düzce province participated in the research. Data were collected using the Demographic Data Form and the Digital Game Addiction Scale in the study, which is designed with the single survey model. As a result of the research, the digital game addiction levels of mainstreaming students among adolescents were found to be low in general. While there was no significant difference between digital game addiction levels of adolescent mainstreaming students according to grade level, type of disability, and degree of disability, there was a significant difference according to gender and type of school attended. Suggestions for further research and applications are included.

INTRODUCTION

Play is an action and activity that is freely consented to, performed completely by the rules, within the limits of a certain time and place, has a purpose, is accompanied by a sense of tension and joy, and the consciousness of "being different" from "ordinary life" (Huizinga, 2007). Digital games, in other words, video games, are very useful tools for learning some knowledge, skills, and strategies and ensuring the long-term persistence of these learnings (Gros, 2014). Academic studies on digital games go back to the early 1980s. Researches on the effects of digital games or video games on social life, teaching video games to individuals with disabilities, the importance of acquiring digital skills show the effect of technology on leisure time activities (Bryce & Rotter, 2006). Digital games or video games have benefits for coping with problems, increasing self-confidence, and increasing visual attention skills, as well as, they are fun and provide people the opportunity to relax and rest and especially educational games are positively related to school success (Yalçın Irmak & Erdoğan, 2016). Sedlak, Doyle, and Schloss (1982) pointed out the need to teach age-appropriate entertainment and leisure time activities to individuals with disabilities and pointed out the benefits of including digital games or video games in the education plans of adolescents with disabilities.

In addition to the various benefits of educational use of digital games, some experimental studies show that in extreme cases, excessive digital game playing leads to destructive potential effects and unhealthy habits on individuals exhibiting compulsive and/or addictive behaviors, just like other types of addiction (Griffiths, 2014; Jeong & Kim, 2011). Although the term addiction is not widely used by clinical psychologists, game addiction is the most common term used in the literature to describe excessive, obsessive, compulsive, and generally problematic use of video games (Lemmens, Walkenburg, & Peter, 2009). Digital game addiction is defined as an impulse control disorder characterized by symptoms such as difficulty in controlling the time spent in the game, loss of interest in other activities, continuing to play despite negative effects, and experiencing a sense of deprivation when unable to play (Yalçın Irmak & Erdoğan, 2016). Although digital games have become a very popular leisure activity among adolescents, research reveals that a very small proportion of adolescents exhibit problematic gaming behavior, including those with learning disabilities. (Griffiths, 2010).

When the studies on digital game addiction in the literature are considered in terms of participant groups, it is seen that they are divided into two as studies with adolescents (Chiu, Lee, & Huang, 2004; Rooij, Schoenmakers, Vermulst, Eijnden, & Mheen; Horzum, 2011; Şahin & Tuğrul, 2012; Zhu, Zhang, Yu & Bao, 2015) and studies with adults (Bhagat, Jeong & Kim, 2020; Jeong, Kim, Lee & Lee, 2016; Kneer, Rieger, Ivory & Ferguson, 2014).

When the researches are considered in terms of variables affecting digital game addiction, it is seen that, while studies with adolescents mostly examine both demographic and psychological variables such as gender, grade, socioeconomic level, education level of parents, family functions, and psychological health (Chiu et al, 2004; Coutelle et al, 2017; Horzum, 2011; Rooij et al., 2011; Şahin & Tuğrul, 2012; Zhu et al, 2015), studies with adults mostly examine psychological variables such as loneliness, need for social interaction, depression, and self-regulation skills (Bhagat et al, 2020; Jeong et al, 2016; Kim, E., Namkoong, Ku, & Kim,

2008; Kneer et al, 2014; Weinstein, 2010). A limited number of studies have been found in the literature on digital game addiction of adolescents with disabilities (Bayrak, 2022; Bekar, 2018; Coutelle et al., 2021; Griffiths, 2010; Kislyakov, 2017).

Coutelle et al. (2021) compared the results of 15 studies in a compilation study in which they examined the use of digital games of individuals with Autism Spectrum Disorder (ASD) in the context of digital game addiction and limited interest in digital games. As a result of the study, it was reported that video game use, which can be defined as digital game addiction, is observed in male adolescents with ASD who do not have an intellectual disability. It has been taken into account that addictive processes work together with restricted interests, which is among the characteristics of ASD.

Griffiths (2010) discussed the addictive behavior of a 15-year-old male adolescent with a learning disability, who exhibited addiction to various computer and internet applications, within the scope of a case study. As a result of the study, it was stated that increasing parental control over the digital games played by adolescents, integrating the games in the educational context, and intervention programs can reduce addiction and turn them into beneficial use.

In the study of Kislyakov (2017), in which he examined the opinions of teachers working with individuals with special needs to determine the risk factors affecting the antisocial behavior of adolescents with intellectual disabilities, digital game addiction was discussed together with socially negative behaviors such as asociality, low maturity level, distrust to the outer world and bullying. It was stated digital game addiction in adolescents with intellectual disabilities was reported as low as 3.98% by the teachers.

Studies in Turkey indicate that adults with attention deficits are accompanied by various addiction conditions like smart phone, social media, alcohol and substance addictions (Bayrak, 2020; Bekar, 2018; Tufan & Yaluğ, 2010; Tuğlu & Şahin, 2010). Difficulties in communication and social skills and impulsive behaviors can also cause addiction problems in individuals with learning difficulties (Al-Dababneh & Al-Zboon, 2018; Üdücü, 2019). Attention deficit and hyperactivity disorder (ADHD) can be a risk factor for computer game addiction also (Bekar, 2018). Since the educational settings where individuals with attention deficit and learning difficulties are placed are mostly mainstreaming settings, it is important to evaluate mainstreaming students in terms of digital game addiction and other addictions.

Although there are many studies in the literature examining the level and risk factors of adolescents' digital game addiction, a limited number of studies have been found on digital game addiction of adolescents with disabilities (Bayrak, 2020; Bekar, 2018; Coutelle et al., 2021; Griffiths, 2010; Kislyakov, 2017), and there has been no study examining digital game addiction of adolescent mainstreaming students. Therefore, this study aims to examine the digital game addiction of adolescent mainstreaming students in terms of various variables.

The Purpose of the Study

This study aims to examine the digital game addiction levels of adolescent mainstreaming students in terms of various variables. The sub-objectives that are aimed to be examined in line with this general purpose are as follows:

1. What is the level of digital game addiction of adolescent mainstreaming students?
2. Does the level of digital game addiction of adolescent mainstreaming students differ in terms of the student's age, gender, type of disability, level of disability, and the type of school attended?

METHOD

Research Model

This research was designed with the single survey model. Single survey models are research models made to determine the occurrence of variables one by one, type, or amount. In such models, the event of interest is tried to be described separately (Karasar, 2000). In this study, digital game addiction levels of adolescent mainstreaming students were analyzed and described in terms of various variables. For this reason, it can be said that the research is suitable for the single survey model.

Sample

The study group of this research was determined by the cluster sampling method. Sampling made when all clusters in the universe have an equal chance of being selected one by one is called cluster sampling (Karasar, 2000). In cluster sampling, groups are randomly selected and all units in the selected groups are sampled. For a unit to be included in any randomly selected group, it must have a common feature with other units in that group (Karagöz, 2017). In this study, a sample of 157 people was reached by cluster sampling method from a universe consisting of mainstreaming students aged 12-18 who attend secondary school, Anatolian High School, Vocational and Technical Anatolian High School, and Vocational Education Center in Düzce province. Demographic data of the study group is given in Table 1.

Table 1. Demographic data

		N	%
Grade Level	11-13	51	32,48
	14-16	77	49,04
	17-19	29	18,47
Gender	Female	121	77,07
	Male	36	22,92
Type of Disability	Spesific Learning Disability	108	68,8
	Attention Deficit and Hyperactivity Disorder (ADHD)	10	12,1
	Mental Disability	7	4,5
	Physical Disability	11	7
	Visual Impairment	6	3,8
	Auditory Impairment	3	1,9
	Autism Spectrum Disorder (ASD)	2	1,3
	Down Syndrome	1	,6
Level of Disability	Mild Disability	138	87,89
	Moderate Disability	13	8,28
	Severe Disability	6	3,82
Type of School Attended	General High School	4	2,54
	Vocational High School	52	33,12
	Vocational Education Center	47	29,93
	Secondary School	54	34,39

Data Collection

Ethics committee approval was received for this study from Bolu Abant İzzet Baysal University, Human Research Ethics Committee in Social Sciences with the letter dated 01/06/2021 and numbered 2021/06. Verbal informed consent was obtained from all subjects before the study. The Digital Game Addiction Scale (DGAS-7) and demographic data form were transferred to the digital platform using Google Forms, and the data were collected by being delivered to the students between June and October 2021 through school administrations and school counselors.

Data Collection Tools

Demographic Data Form

The Demographic Data Form was developed by the researchers by examining the literature. The Demographic Data Form consists of the variables like age, gender, type of disability, degree of disability, and type of school attended.

Digital Game Addiction Scale (DGAS-7)

DGAS-7, developed by Lemmens et al. to determine the problematic digital game playing behaviors of adolescents between the ages of 12-18, is a seven-item short form of DGAS-21, consisting of 21 items and seven sub-dimensions. The Turkish adaptation of the scale and the validity-reliability study of the Turkish form were carried out by Yalçın Irmak and Erdoğan (2015). The validity and reliability values of the scale, which has a five-point Likert type and single-factor structure, were found to be 0.92 for Cronbach's alpha, CFI=0.904, RMSEA=0.053 (90% CI=0.049 and 0.056), and it was stated that it could be used in adolescents.

Monothetic and polythetic diagnoses were used to determine whether an adolescent is addicted to digital games with the help of DGAS-7. According to the monothetic diagnosis, if the person scores three (sometimes) or more on seven of the seven items; according to the polythetic diagnosis, if he scores three (sometimes) on at least four of the seven items, he is defined as a game addict (Yalçın Irmak & Erdoğan, 2015).

Monothetic and polythetic typologies differ mainly in their requirements for the identification of samples/specimens. A typology is monothetic if possession of a unique set of features is both necessary and sufficient for identifying a sample/specimen as belonging to a specific element of the typology. On the contrary, a polythetic typology is formed by grouping together those elements within a particular sample which have the greatest number of shared characteristics. No single feature is either necessary or sufficient in polythetic typologies. The objects/samples or specimens are grouped to maximize overall similarity within each group (Bailey, 1973).

In the diagnosis of gaming addiction, polythetic diagnosis requires that the addicts have half (or more) of the recommended criteria; monothetic diagnosis requires having all of the criteria (Lemmens et al., 2009).

Lemmens et al. (2009) mentioned two different arguments predicting that the monothetic approach would give better results in predicting gaming addiction, although the DSM applied polythetic diagnosis in diagnosing pathological gambling behaviors. The first is that the polythetic diagnosis overestimates the number of gaming addicts. Second, according to several researchers, negative life consequences are a crucial element in distinguishing addiction from habits. According to this view, criteria conflict, withdrawal from the addictive substance, and problems indicate negative life consequences and pathological tendencies. Because the monothetic format requires that all criteria of game addiction are met, this format automatically incorporates the endorsement of the criteria for negative life consequences. Herewith, a more accurate distinction is made between habit and addiction (Lemmens et al., 2009). In the consideration of all these arguments, Lemmens et al. (2009) stated that they adapted both monothetic and polythetic diagnostics, during the development process of the original form of the Digital Game Addiction Scale.

DATA ANALYSIS

Normality Test

To decide on the tests to be carried out to examine the digital game addiction levels of adolescent mainstreaming students in terms of various variables, the kurtosis and skewness values and the normality of the scale scores were tested with the Kolmogorov-Smirnow Test which is applied in case the group size is greater than 30 (Can, 2017). According to Kolmogorov Smirnov-Z [K-S=0,107; *p*=,000], kurtosis [0,029; S.E=0,385] and skewness [0,659; S.E=0,194] data, the distribution in the scale scores is not found to be normal. Therefore, the Mann-Whitney U test is applied in cases where the distribution is not normal and the number of groups is two, and the Kruskal Wallis H-Test is applied in cases where there are more than two. The statistical significance level is accepted as .05.

FINDINGS

1.What is the level of digital game addiction of adolescent mainstreaming students?

According to the monothetic diagnosis, individuals who score three (sometimes) or more on seven of the seven items in DGAS-7 are considered game addicts, while according to the polythetic diagnosis, if they score three (sometimes) or more on at least four of the seven items, they are considered game addicts.

a. Determination of digital game addiction level of adolescent mainstreaming students according to monothetic diagnosis

Table 2. Descriptive distribution of adolescent mainstreaming students who have game addiction according to monothetic diagnosis

	f	%
Non-addicted to games	147	93,6
Addicted to games	10	6,4

When Table 2 is examined, it is seen that the number of adolescent mainstreaming students who are not game addicts is 147 (93.6%), while the number of game addicts is 10 (6.4%) according to the monothetic diagnosis.

a.Determination of digital game addiction level of adolescent mainstreaming students according to polythetic diagnosis.

Table 3. Descriptive distribution of adolescent mainstreaming students who have game addiction according to polythetic diagnosis

	f	%
Non-addicted to games	95	60,5
Addicted to games	62	39,5

When Table 3 is examined, it is seen that the number of adolescent mainstreaming students who are not game addicts is 95 (60.5%), while the number of game addicts is 62 (39.5%) according to the polythetic diagnosis.

The mean score of the participants in DGAS-7 is 15.12, and the standard deviation is 6.18. Considering that the highest score that can be obtained from the scale is 35 and the lowest score is 7, it can be said that the scores of adolescents who are mainstreaming students are below the average score and their digital game addiction levels are low.

Adolescent mainstreaming students were asked to indicate how often they experienced the answers to the following questions in the last 6 months. The average scores of the participants on the basis of items are presented in Table 4.

Table 4. *Average scores of scale items*

Items	$\bar{X}$	Sd
1. Did you think about playing a game all day long?	2,24	1,39
2. Did you spend increasing amounts of time on games?	2,36	1,30
3. Did you play games to forget about real life?	2,49	1,30
4. Have others unsuccessfully tried to reduce your game use?	2,32	1,41
5. Have you felt bad when you are unable to play?	1,88	1,16
6. Did you have fights with others (e.g., family, friends) over your time spent on games?	1,99	1,26
7. Have you neglected other important activities (e.g., school, work, sports) to play games?	1,86	1,20

According to Table 4, the three items with the highest average score of the participants are the 3rd, 2nd and 4th items. Item 3 is about playing games to forget about the real life, item 2 is about increasing amounts of time on games, and item 4 is about the failure of others to reduce the individual's game use.

2.Does the digital game addiction level of adolescent mainstreaming students differ in terms of the student's age, gender, type of disability, level of disability, and the type of school attended?

a.Kruskal Wallis H test result according to the grade level of adolescent mainstreaming students

The results of the Kruskal Wallis H test of DGAS-7 scores of adolescent mainstreaming students according to grade level are given in the table.

Table 5. Kruskal Wallis H test results of DGAS-7 scores according to the grade level of adolescent mainstreaming students

Grade Level	N	Mean Rank	sd	Chi-Square	*P*
11-13	51	72,29	2	1,650	,438
14-16	77	82,30			
17-19	29	82,03			

As can be seen in Table 5, there is no significant difference between the Kruskal Wallis test results of DGAS-7 scores of adolescents with mainstreaming students according to grade level (χ^2 [sd=2, n=157] =1,650, p>0,05).

b.Mann-Whitney U test results according to the gender of adolescent mainstreaming students

Table 6. Mann-Whitney U test results of DGAS-7 scores according to the gender of adolescent mainstreaming students

Gender	N	Mean Rank	Rank Sum	U	P
Female	36	52,94	1906,00	1240,00	,000
Male	121	86,75	10497,00		

As seen in Table 6, it is found that there is a statistically significant difference between the levels of digital game addiction of females and males according to the Mann Whitney U test results of DGAS-7 scores according to the gender of adolescent mainstreaming students . ([U:1240,00] p<.05). Considering the mean rank, it is understood that the digital game addiction levels of males are higher than females.

According to the effect size analysis on the size of the significant difference [r= Z / √N), r=-3,924/(√157] effect size is found r=.31. About the effect size ranges determined by Cohen, it is stated that the r-value indicates a small effect at the level of .10, a medium effect at the level of .30, and a large effect at the level of .50 (Cohen, 1988; Field, 2009). Hereunder, it can be said that gender has a moderate effect on digital game addiction levels of adolescent mainstreaming students.

b.Kruskal Wallis H test result according to the type of disability affected by adolescent mainstreaming students.

Tablo 7. Kruskal Wallis H test results of DGAS-7 scores of adolescent mainstreaming students according to disability type

Type of Disability	N	Mean Rank	sd	Chi-Square	*P*
Spesific Learning Disability	108	75,61	7	11,476	,119
ADHD	19	101,55			
Mental Disability	7	98,93			
Physical Disability	11	78,95			
Visual Impairment	6	56,33			
Auditory Impairment	3	38,50			
ASD	2	122,00			
Down Syndrome	1	85,75			

As can be seen in Table 7, there is no significant difference between the Kruskal Wallis test results of DGAS-7 scores according to the type of disability of adolescent mainstreaming students. (χ^2 [sd=7, n=157] =11,476, p>0,05).

a.The result of Kruskal Wallis H test according to the disability level of adolescent mainstreaming students

Table 8. Kruskal Wallis H test results of DGAS-7 scores according to the disability level of adolescent mainstreaming students

Disability Level	N	Mean Rank	sd	Chi-Square	*P*
Mild	138	76,78	2	5,194	,074
Moderate	13	106,23			
Severe	6	71,08			

As can be seen in Table 8, there is no significant difference between the Kruskal Wallis test results of DGAS-7 scores according to the disability level of the adolescent mainstreaming students. (χ^2 [sd=2, n=157] =5,194, p>0,05).

a.The result of the Kruskal Walis H test according to the type of school attended by the adolescent mainstreaming students

Table 9. Kruskal Wallis H test results of DGAS-7 scores according to the type of school attended by adolescent mainstreaming students

Type of School Attended	N	Mean Rank	sd	Chi-Square	*P*	Significant Difference
Secondary School	54	72,56	3	11,829	,008	3-1,3-4,3-2,
Anatolian High School	4	38,88				1-4,1-2,
Vocational and Technical Anatolian High School	52	95,06				
Vocational Education Center	47	72,05				

As seen in Table 9, it is found that DGAS-7 scores differ significantly according to the type of school attended by adolescent mainstreaming students according to the Kruskal Wallis test result. (χ^2 [sd=3, n=157] =11,829, p<0,05). Considering the mean rank of the groups, it is seen that adolescent mainstreaming students attending Vocational and Technical Anatolian High School got the highest score from DGAS-7, followed by adolescent mainstreaming students attending secondary school, Vocational Education Center, and Anatolian High School, respectively.

According to the effect size analysis on the size of the significant difference [($\eta^2 = \chi^2/(N-1)$, $\eta^2=11,829/(157-1)$] effect size is found $\eta^2=0,075$ (Green ve Salkind, 2005; Akt. Can, 2017). About the effect size ranges determined by Cohen, 0.01 indicates a small effect, 0.06 indicates a medium effect, and 0.14 indicates a large effect for the η^2 value (Ellis, 2010; Özçomak ve Çebi, 2017). Hereunder, it can be said that the type of school they attend has a great effect on the digital game addiction levels of adolescent mainstreaming students.

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

As a result of the research, digital game addiction levels of adolescent mainstreaming students were found to be low in general, considering both the monothetic and polythetic definitions and the average scores of the participants from the scale. The three items with the highest average score of the participants are about playing games to forget about the real life, increasing amounts of time on games, and the failure of others to reduce the individual's game use. Studies reveal that a very small proportion of adolescents exhibit problematic gaming behavior, including those with learning disabilities (Griffiths, 2010). Şahin and Tuğrul (2012) conducted a study on 372 students, 178 females, and 194 males, attending the 4th and 5th grades to determine the computer game addiction levels of 4th and 5th-grade students. As a result of this research, they reported that the students' computer game addiction scores were low in general. Rooij et al. (2011) conducted a longitudinal study with 1572 Dutch high school students aged between 13 and 16 in 2008 and 1476 in 2009 to determine the characteristics of adolescents addicted to digital games and found out that game addiction was as low as 3% among Dutch adolescents. Kislyakov (2017) examined teachers' views, who work with individuals with special needs in the research, conducted to determine the risk factors that affect the antisocial behavior of adolescents with intellectual disabilities. As a result of this research, it is stated that teachers reported digital game addiction of adolescents with intellectual disabilities as low as 3.98%. On the other hand, Özdarendeli (2021), in his study examining internet addiction, focus of control and family relations of children aged 14-16 with learning disabilities, determined that children with learning disabilities have a high level of internet addiction, are self-controlled and have unhealthy family functions. This study is conducted with 157 adolescent mainstreaming students, 121 of whom were males, and 36 were females. The digital game addiction level of the participants is found low. This finding supports the information, about the digital game addiction level of adolescents reported in the literature.

In this study, the digital game addiction level of adolescent mainstreaming students has been examined in terms of variables such as grade level, type of disability, disability level, and type of school attended. In studies conducted with adolescents in the literature, it has been observed that digital game addiction is examined only with demographic variables (Horzum, 2011; Şahin & Tuğrul, 2012) or with both demographic and psychological variables (Chiu et al., 2004; Rooij et al., 2011, Zhu et al., 2015). Several studies have found that gender and family functions generally affect adolescents' digital game addiction level (Chiu et al., 2004; Coutelle et al.,

2017; Horzum, 2011; Rooij et al., 2011; Şahin & Tuğrul, 2012; Zhu et al., 2015). In a study by Üdücü (2019), which compared the internet addiction levels of individuals aged 10-16 with and without learning disabilities, the internet addiction levels of 139 students, 58 of whom had learning disabilities and 81 of whom had normal development, were examined. It was found that the internet addiction levels of the participants did not change according to gender and other familial characteristics such as income status, education of parents and being apart or together. Bekar (2018), in a study conducted with 200 children between the ages of 10-13 with and without ADHD, found that children with ADHD have more computer game addictions. This study has examined the digital game addiction level of adolescent mainstreaming students with demographic variables such as grade level, type of disability, disability level, and type of school attended. While there has been no significant difference between the digital game addiction levels of the participants according to the grade level, type of disability, and disability level, there is a significant difference according to gender and type of school attended. This difference may be due to the fact that male and female students have different interests according to the type of school they attend.

The digital game addiction levels of the males are higher than the females and that gender has a moderate effect on the digital game addiction levels of the adolescent mainstreaming students. In many studies, it has been reported that the gender variable has a significant effect on the level of digital game addiction. (Chiu, Lee and Huang, 2004; Coutelle et al., 2017; Horzum, 2011; Şahin & Tuğrul, 2012). In studies on adolescents in Turkey, digital game addiction of males is high (Horzum, 2011; Şahin & Tuğrul, 2012), while Chiu et al. (2004) found that females had higher levels of digital game addiction than males in a study conducted with Taiwanese children and youth. When this finding of the study is evaluated together with the studies in the literature, it can be said that gender affects digital game addiction in general.

According to the type of school attended, the digital game addiction levels of the adolescent mainstreaming students attending Vocational and Technical Anatolian High School were found to be the highest, followed by the adolescent mainstreaming students attending secondary school, Vocational Education Center and Anatolian High School, respectively. It has been determined that the type of school he/she attends has a great effect on the digital game addiction of adolescent mainstreaming students. Afacan and Ozbek (2019) conducted a study with 596 high school students, 304 of whom were female and 292 were male, in order to examine social media addictions of high school students in terms of various variables. As a result of the research, it was found that the social media addiction levels of high school students were moderate, and there was no significant difference between the gender, age and class level of the students and their social media addictions, while a significant difference was found between the type of high school they attended and their social media addiction. It was found that the social media addiction levels of the students attending Vocational and Technical Anatolian High School were higher than the students attending Anatolian High School. On the other hand, high school type was determined to have a small effect on social media addiction. This finding in the literature supports the research finding. The type of school attended may have an impact on digital game addiction as it consists of individuals with similar interests and creates a common environment.

This research is limited to examining the digital game addiction levels of adolescent mainstreaming students in terms of various demographic variables, and in line with the results obtained, it is recommended that further studies examining the risk factors affecting digital game addiction of individuals with disabilities in the context of both demographic and psychological variables should be applied on different study groups. In addition, it is recommended to organize interventions to prevent digital game addiction of these individuals and include their families in these practices, and inform them about digital game addiction.

Ethics Committee Approval: Ethics committee approval was received for this study from Bolu Abant İzzet Baysal University, Human Research Ethics Committee in Social Sciences with the letter dated 01/06/2021 and numbered 2021/06. Verbal informed consent was obtained from all subjects before the study.

REFERENCES

Afacan, O., & Ozbek, N. (2019). Investigation of social media addiction of high school students. *International Journal of Educational Methodology, 5*(2), 235-245. https://doi.org/10.12973/ijem.5.2.235.

Al-Dababneh, K. A. & Al-Zboon, E. K. (2018). Understanding impulsivity among children with specific learning disabilities in inclusion schools. *Learning Disability Quarterly*, *41*(2), 100-112.

Bailey, K.D. (1973). Monothetic and polythetic typologies and theır relation to conceptualization, measurement, and scaling. *American Sociological Review, 38* (1), 18-33.

Bayrak, N. (2020). *Üniversite öğrencilerinde akıllı telefon bağımlılığı ve olası erişkin dikkat eksikliği hiperaktivite bozukluğu arasındaki ilişki* (Master's Thesis). İstanbul: İstanbul Gelişim University.

Bekar, B. (2018). *Dikkat eksikliği hiperaktivite bozukluğu olan ve olmayan çocuklarda bilgisayar oyun bağımlılığı* (Master's Thesis). Gaziantep: Hasan Kalyoncu University.

Bhagat, S., Jeong, E.J.& Kim, D.H. (2020). The Role of individuals need for online social interactions and interpersonal incompetence in digital game addiction, *International Journal of Human–Computer Interaction, 36* (5), 449-463, https://doi.org/10.1080/10447318.2019.1654696.

Brown, G.T.L. & Hattie, C. (2012). The Benefits of Regular Standardized Assesment In Childhood Education. Sebastian Suggate, ve Elaine Reese (Ed.). *Comtemporary Debates in Childhood Education and Development* içinde (ss.287-293). Routledge. ISBN: 978-0-415-61489-4.

Can, A. (2017). *Bilimsel araştırma sürecinde nicel veri analizi*. Pegem Publishing, Ankara.

Chiu, S., Lee, J.Z. & Huang, D.H. (2004). Video game addiction in children and teenagers in Taiwan. Cyberpsychology and Behavior, 571-581, https://doi.org/10.1089/cpb.2004.7.571.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd Edition). Erlbaum.

Coutelle, R., Weiner, L., Paasche, C., Pottelette, J., Bertschy, G., Scröder, C.M. & Lalanne, L. (2021). Autism Spectrum Disorder and Video Games: Restricted Interests or Addiction?. *International Journal of Mental Health Addiction*, https://doi.org/10.1007/s11469-021-00511-4.

Ellis, P. D. (2010), The Essential Guide to Effect Size, Statistical Power, MetaAnalysis and Interpretation Research Results. Cambridge University Press

Field, A. P. (2009). *Discovering statistics using SPSS: (and sex and drugs and rock 'n' roll)*. SAGE.

Griffiths, M.D., (2010). Excessive online computer use and learning disabilities. *Australian Journal of Dyslexia and Other Learning Disabilities*, 5, 31-34. Erişim Tarihi: 04.05.2021, http://irep.ntu.ac.uk/id/eprint/10719.

Griffiths, M.D. (2014). An Overview of Online Gaming Addiction. Thorsten Quandt ve Sonja kröger (Ed.) Multiplayer: The Social Aspects of Gaming içinde. Routledge.

Gros, B. (2017). Digital games in education. *Journal of Research on Technology Education, 40(*1), 23-38, https://doi.org/10.1080/15391523.2007.10782494.

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

Huizinga, J. (2006). *Homo Ludens: Oyunun Toplumsal İşlevi Üzerine Bir Deneme*, Çev: Mehmet Ali Kılıçbay, İstanbul: Ayrıntı Yayınları, 2. Baskı

Jeong, E.J., Kim, D.J., Lee, D.M. & Lee, H.R. (2016) A study of digital game addiction from aggression, loneliness and depression perspectives. 49. Hawaii International Conference on System Sciences (HICSS), ss. 3769-3780, https://doi.org/10.1109/HICSS.2016.470.

Karagöz, Y. (2017). SPSS ve AMOS Uygulamalı Nitel Nicel Karma Bilimsel Araştırma Yöntemleri ve Yayın Etiği. Nobel.

Karasar, N. (2000). Bilimsel Araştırma Yöntemi. Nobel.

Kim, E., Namkoong, K., Ku, T., ve Kim, S. (2008). The relationship between online game addiction and aggression, self-control, and narcissistic personality traits. *European Psychiatry, 23*(3), 212-218. https://doi.org/10.1016/j.eurpsy.2007.10.010.

Kislyakov, P.A. (2017). Risk factors related to antisocial behavior in teenagers with intellectual disabilities, *Psychology in Russia: State of the Art,10*(2), 215-227.

Kneer, J., Rieger, D., Ivory, J.D. & Ferguson, C. (2014). Awareness of risk factors for digital game addiction: ınterviewing players and counselors. *Int J Ment Health Addiction 12*, 585–599. https://doi.org/10.1007/s11469-014-9489-y.

Lemmens, J.S., Valkenburg, P., M. & Peter, J. (2009) Development and Validation of a Game Addiction Scale for Adolescents, Media Psychology, 12:1, 77-95, https://doi.org/10.1080/15213260802669458.

Özdarendeli, E. (2021). *Özel öğrenme güçlüğüne sahip çocukların internet bağımlılığı, denetim odağı ile aile içi ilişkilerinin incelenmesi* (Master's Thesis). Konya: KTO Karatay University.

Özçomak, M.S. & Çebi, K. (2017). İstatistiksel güç analizi: Atatürk üniversitesi iktisadi ve idari bilimler dergisi üzerine bir uygulama. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, 31*(2), 413-431.

Rooij, A.J., Schoenmakers, T.M. Vermulst, A.A., Eijnden, R.J.J.M. & Mheen, D. (2011). Online video game addiction: identification of addicted adolescent gamers. *Addiction, 106*(1), 205-212. https://doi.org/10.1111/j.1360-0443.2010.03104.x.

Sedlak, R. A., Doyle, M. & Schloss, P. (1982). Video games: a training and generalization demonstration with severely retarded adolescents. *Division on Autism and Developmental Disabilities, 17* (4), 332-336, http://www.jstor.org/stable/23877304.

Tufan, A.E. & Yaluğ, İ. (2010). Erişkinlerde dikkat eksikliği hiperaktivite bozukluğu: Türkiye verilerine dayalı bir gözden geçirme. Anadolu Psikiyatri Dergisi, 11, 351-359.

Tuğlu, C ve Şahin, Ö.Ö. (2010) Erişkin dikkat eksikliği hiperaktivite bozukluğu: nörobiyoloji, tanı sorunları ve klinik özellikler. *Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry, 2* (1), 75-116.

Üdücü, E. (2019). *Özel öğrenme güçlüğü tanısı almış ve almamış 10-16 yaş arası öğrencilerin internet bağımlılığı düzeylerinin karşılaştırılması* (Master's Thesis). İstanbul: İstanbul Gelişim University.

Weinstein, A.M. (2010) Computer and video game addiction—a comparison between game users and non-game users, *The American Journal of Drug and Alcohol Abuse, 36*(5), 268-276, https://doi.org/10.3109/00952990.2010.491879.

Yalçın Irmak, A. & Erdoğan, S. (2015). Dijital Oyun Bağımlılığı Ölçeği Türkçe formunun geçerliliği ve güvenilirliği. *Anadolu Psikiyatri Dergisi, 16*(Özel Sayı.1), 10-18.

Yalçın Irmak, A. & Erdoğan, S. (2016). Ergen ve genç erişkinlerde dijital oyun bağımlılığı: güncel bir bakış. *Anadolu Psikiyatri Dergisi, 27(*2), 128-137.

Zhu, J. Zhang, W., Yu, C. & Bao, Z. (2015). Early adolescent internet game addiction in context: How parents, school, and peers impact youth. *Computers In Human Behavior, 50*, 159-168. https://doi.org/10.1016/j.chb.2015.03.079.