

## **School Attachment and Video Game Addiction of Adolescents with Divorced vs. Married Parents**

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### **ABSTRACT**

As in all societies, one of the central issues in our society is the adolescents' problems and psychological conditions. Even children with a soft temperament may have their adolescence as troubled and problematic. Especially if the parents of these adolescents are divorced, this process is experienced as a more difficult and problematic process for adolescents. In this process, the academic process is experienced and there are problems in the field of school attachment. One of the central problems of today is Video Game Addiction. This problematic situation in children and adults has become a more central problem for adolescents. Many parents mention that adolescents have withdrawn themselves in the social environment, that their academic success has declined and that they have Video Game Addiction. Especially the divorced parents stated that their adolescents had problems in this area. For this reason, this study aimed to examine the areas of school attachment and Video Game Addiction of adolescents with divorced parents or with married parents. Descriptive screening method was used in the study. The study group was attended by 209 high school and secondary school students receiving education in İstanbul in 2018 as 102 of them were the adolescents with divorced parents and 107 of them were the adolescents whose parents are not divorced. At the end of the study, the levels of school attachment and gaming addiction of the general adolescents do not change according to whether the parents of the adolescents are divorced or their parents are married. In terms of gaming addiction, when the results were analyzed according to gender, it was determined that boys' gaming addiction scores were higher than girls. Adolescents' internet usage time increased to 5 hours and more, game addicts increased as a result. When the levels of Video Game Addiction of the adolescents with divorced parents are examined, it is concluded that Video Game Addiction varies according to gender and that men have higher level of Video Game Addiction than girls.

### **Internet, Social Media Use and Game Addition of Adolescents**

In the study of Dursun and Eraslan-Çap (2018), it was determined that the reasons of adolescents to apply to the Internet are to use social media, to do homework, to play game and to chat. In the study, it was seen that adolescents frequently prefer internet to play games. In particular, a large proportion of adolescents were found using the mobile phone to the Internet. In the studies of Yalçın Irmak and Erdoğan titled "Digital Video Game Addiction of Adolescent and Young Adults" in 2015, it was found that digital games were used as a popular and widespread entertainment tool among the young and adolescents. They emphasized that uncontrolled violence and other content of digital games threaten their mental health. Educational, instructive and developer digital games can contribute to the development of adolescents if they are played within appropriate time measures and under control. In the studies on internet addiction conducted with secondary school and high school students in Sakarya, it was determined that the two-thirds of the participants are the normal internet user, and one third of them are the internet addicts (4.1%) and internet addiction risk is (28.5%). Boys and secondary school students were more at risk of internet addiction than girls and high school students (Taylan, Işık, 2015). In a study conducted by Tas in 2018, a positive correlation was found between internet addiction and psychological symptoms. At the same time, parental attitudes were related to internet addiction and psychological symptoms in adolescents. Besides, it was concluded that internet access for games, entertainment and chat was related to internet addiction. In the area of class level and age and psychological symptoms, the results were found to be related to each other. In the study of Taylan and Işık (2018), the reasons of using the internet more than three hours a day for the middle school and high school students in the city center of Kocaeli is mostly the social media, chat-chat, series, film, video viewing and uploading purposes. In this study, they obtained the result that two-thirds of the students were normal, one-third of them were under risk and problematic Internet users. In this study, in the area of gender variability, males were found to use internet more problematic and in terms of age, the ones between the ages of 13 and 15 were found to use internet more problematic than the ones who are older than 16 years old. In addition, as the time spent on the internet, social media and digital games increased, the

possibility of problematic internet usage was increased. In the study of Anlı (2018) on high school students' relationship between interpersonal sensitivity and internet addiction in terms of various variables, it was found that there was a significant and positive relationship between interpersonal sensitivity and internet addiction levels. It was found that internet addiction levels showed significant differences in terms of gender, but did not differ significantly in terms of perceived income level and parental attitudes.

### **School Attachment and Academic Success of Adolescents**

Griffiths (2010) emphasizes that there is little information about the long-term effects of regular computer game play on the social development while indicating that the computer game is a popular leisure activity. In a study conducted with 144 undergraduate students, the relationship between students' play behavior and social insufficiency is frequently investigated. In the social status questionnaire designed to detect social insufficiency, the aim was to reveal the frequency of computer game play behaviors. As a result of the study, high frequency computer game players have found that they often show more anxiety than low frequency game players. In describing this result, the possible explanations for this relationship explain the high frequency of computer games that endanger the acquisition of social skills during childhood and adolescence. In divorced-family adolescents, being addicted to the internet brings together Video Game Addiction. In general, people are surprised by the attitude of adolescents towards divorce. They think that adolescents are old enough to understand their parents. The psychological pressure of divorce on adolescents is not taken into consideration. Normal concerns experienced during adolescence are strengthened by parental divorce. Parents' divorce status creates anger and tense feeling for adolescents (Wallerstein and Blakeslee, 1989, p. 336). Or, in the divorce of parents, some other adolescents take on too much responsibility, and some adolescents complete the school tasks and become dominant in many decision-making areas. This may lead to the adolescent maturation, but the risk here is that they may miss the period of normal adolescence they should have experienced (Wallerstein and Blakeslee, 1989, p. 336). In the case assessing the divorce of parents by means of gender differences, Wallerstein and Blakeslee (1989) concluded that girls and adolescents handle the parental divorces more positive in terms of social, emotional and success areas than boys and adolescents. In the field of school achievement, adolescents who did not have any problems experienced decrease in success at the period when their parents are divorced. In addition to the success decreases in school, adolescent males showed aggressive behaviors. It is observed that there are problems especially in the field of school attachment (Wallerstein and Blakeslee, 1989, p. 95). In the study of Wallerstein and Blakeslee (1980), it was found that adolescents also feel upon their parents divorced as they left them alone. In this process, the success of the children is generally decreases. Children also have a problem of concentrating and focusing on lessons due to the divorce of parents. This causes their grades to decrease. The decrease in success of children at school is due to the fact that their minds are engaged in divorce. Even if parental divorce is experienced before adolescence, the negativity remaining on the child is seen again during adolescence, especially when the level of school achievement decreases, especially boys show this decrease. Parental support in this field plays an active role in the re-education of children. (Figdor, 1997, p. 71). In this process, adolescents find themselves in social media or on the computer to play most of their time in order to avoid problems or to forget. Bozkurt, Sahin and Zoroglu (2016) stated as a result of their reviews on internet addiction and current studies that Internet use has become an indispensable part of life, the pathological use of the Internet has begun to lead to internet addiction which can be defined as new addiction type and the long – time uncontrolled use of internet may cause individuals to have physical, psychological, social, cognitive, social, cognitive health problems and their lives are adversely affected. It is stated that, in your country, this addiction is more prevalent in young people and children who are more dominant in technology. The study aimed to investigate the areas of school attachment and Video Game Addiction of adolescents with Divorced vs. Married parents. The following questions have been sought.

1. Is there a significant difference between the adolescents with Divorced vs. Married parents in terms of school attachment?
2. Is there a significant difference between the adolescents with Divorced vs. Married parents in terms of Video Game Addiction?
3. Is there a significant difference between the adolescents with Divorced vs. Married parents in terms of school attachment and Video Game Addiction?
4. Do the levels of school attachment and Video Game Addiction of adolescents with divorced parents and married parents change according to the gender, according to the marital status of the parents, according to age, daily use of the Internet, according to the type of school, to the current economic situation, to the parental education style?

## METHOD

### Research Model

This research is a relational study in the screening model, which aims to examine the levels of addiction and school attachment of high school students living with their families and the ones with divorced parents (Karasar, 2004). Quantitative data collection methods were used in the study. Video Game Addiction and school attachment levels of high school students living together with their families and the ones with divorced parents were investigated according to various demographic variables.

### Study Group

In this study, a total of 211 students participated, 102 of them are the ones with divorced families and 109 of them are the ones from non-divorced families, who have received education in 2018-2019 in İstanbul. The mean age of the participants was 15.4 and the standard deviation was 1.1.

### Data Collection Tools

#### School Attachment Scale:

The school attachment scale developed by Savi Çakar and Karataş (2014) measures attachment to school in children and adolescents. The measurement tool consisting of 15 items is a 5-point Likert-type scale. The lowest score is 15 and the highest score is 75 and the high score indicates the highest school attachment. The validity and reliability studies conducted by Savi Çakar and Karataş (2014) showed that the scale is a valid and reliable measurement tool in adolescents.

#### Video Game Addiction Scale:

The Video Game Addiction scale developed by Anlı and Taş (2018) is a 9-item Likert-type scale. The items in the scale are 5-point Likert-type grading “Never”, “Rare”, “Sometimes”, “Often” and “Always”. The lowest score is 9 and the highest score is 45 points and the highest score indicates high Video Game Addiction. The validity and reliability studies conducted by Anlı and Taş (2018) showed that the scale is a valid and reliable measurement tool in adolescents.

### Data Collection and Analysis:

For analysis, the between-groups variance analysis (ANOVA) was used. Because the parametric analyzes were used, the distribution of variables was examined and the values for deviancy and kurtosis were found to be (0.63-0.14) for the Video Game Addiction and (1.2-0.9) for school attachment respectively and it was concluded that the distribution was normal. Variance analysis was used to determine whether the variances were equal or not and that the variances were equal for all analyzes.

## FINDINGS

In this study, firstly, it was compared whether adolescents with divorced parents and married parents showed difference according to variables such as gender, Divorced vs. Married parents, age, education style, daily internet use. Then it was discussed whether the adolescents with divorced parents are different in terms of gender, age, type of schooling, current economic situation, and parental education style. Finally, the differences between the levels of school attachment and Video Game Addiction of adolescent with married parents in terms of gender, age, type of school, current economic situation, and parental education style were studied.

Within the scope of the study, reliability analyzes of the scales were performed and high values were found for the school attachment scale (Cronbach  $\alpha = .94$ ) and the Video Game Addiction scale (Cronbach  $\alpha = .91$ ). For the additional reliability analysis, the item total correlation values were checked and it was found to be between 0.38 and .81 for Video Game Addiction and between 0.55 and 0.80 for school attachment, and it was close to the ideal (Pallant, 2001). Total scores for school attachment and Video Game Addiction were calculated for the procedures to be performed after this analysis.

### Findings Regarding the Investigation of Attachment to School and Video Game Addiction Levels According to the Adolescents with Divorced vs. Married Parents

In the study, it was aimed to examine the students' attachment to school and Video Game Addiction in terms of the adolescents with Divorced vs. Married parents. The results of the t test performed for this purpose are presented in Table 1.

Table 1. *t* test table for Levels of school attachment and Video Game Addiction of adolescents with Divorced vs. Married parents (Levene: school attachment 0.5; Video Game Addiction 0.9)

Variables	Group	N	Mean	SD	t	df	p	Cohen's d
School attachment	Married	109	32.8	11.5	-0.922	209	0.35	-0.12
	Divorced	102	34.2	11.1				
Video Game Addiction	Married	109	15.7	6.9	0.322	209	0.74	0.04
	Divorced	102	15.4	7.01				

As can be seen in Table 1, school attachment scores indicate that Adolescents with Divorced Parents have slightly higher average scores than Adolescents with Married Parents, but this difference is not statistically significant.  $t(209) = -0.92$ ,  $p = 0.35$ . When the Video Game Addiction scores of the adolescents were examined according to the ones with divorced and married parents, it was seen that there was no noticeable difference between the two groups. It is observed that this observation is confirmed statistically. There is no difference between the scores of Video Game Addiction of adolescents with Divorced vs. Married parents.  $t(209) = 0.32$ ,  $p = 0.74$ . As a result, school attachment and gaming addiction do not differ according to whether the parents of the adolescents are divorced or their parents are married.

**Finding Regarding the Examination of School Attachment Levels of Adolescents with Divorced vs. Married parents in Terms of Gender, Divorced- Parenthood, Married-Parenthood, Age, Training Style, Daily Internet Use**

Adolescents' levels of school attachment were examined and in this context the variables as gender, divorced parents and married parents, age were studied together. To analyze whether the differences between the averages were significant, 2 (Gender) \* 2 (Divorced Parents and Married Parents) \* 4 (Age) groups of ANOVA analysis was performed and the results are presented in table 2.

As seen in Table 2, there is no difference in terms of school attachment for boys and girls ( $F = 2.964$ ,  $p = 0.08$ ). When the divorced parents and married parents are studied, there is no difference between the students with divorced parents and the married parents. ( $F = 0.005$ ,  $p = 0.9$ ). Similar findings were found in age and there was no difference in terms of age-related attachment to school. ( $F = 1.727$ ,  $p = 0.1$ ). Similarly, it was found that there is no significant difference between gender, divorced parenthood and married parenthood, age by means of primary and secondary effects and as a result, it was determined that students' school attachment did not change according to gender, parental marital status and age.

Table 2. *2\*2\*4* between-groups ANOVA table for comparison in terms of gender, divorced parents and married parents and age for school attachment scores (Levene= .36).

Source	Type III Sum of Squares	df	Mean Square	F	p	$\eta^2$
Gender	382.033	1	382.033	2.964	0.087	0.014
Divorced parents and married parents	0.583	1	0.583	0.005	0.946	0.000
Age	667.835	3	222.612	1.727	0.163	0.025
Gender*Divorced parents and married parents	8.791	1	8.791	0.068	0.794	0.000
Gender*Age	162.950	3	54.317	0.421	0.738	0.006
Divorced parents and married parents* Age	288.243	3	96.081	0.745	0.526	0.011

Gender*Divorced parents and married parents*Age	427.508	3	142.503	1.106	0.348	0.016
Residual	24.747.488	192	128.893			

It was analyzed whether the school attachment scores of the adolescents were changed according to the education style and daily internet usage. In this analysis, the variance analysis between the groups was carried out (4), and the results were presented in table 3. As it will be seen in Table 3, the students' attachment to school scores do not differ according to the education style. ( $F = 2.386, p = 0.7$ ). Similarly, attachment to school ( $F = 0.761, p = 0.5$ ) did not differ according to daily internet usage.

Table 3. 4\*5 between – groups ANOVA (Levene = .51) table for comparison in terms of training style and daily internet use of students for school attachment scores

Source	Type III Sum of Squares	df	Mean Square	F	p	$\eta^2$
Training Style	816.929	3	272.310	2.386	0.070	0.033
Daily Internet Usage	347.456	4	86.864	0.761	0.552	0.014
Training Style*Daily Internet Usage	2.100.331	12	175.028	1.534	0.115	0.085
Residual	21.569.432	189	114.124			

### Finding Regarding the Examination of Video Game Addiction Levels of Adolescents with Divorced vs. Married parents in Terms of Gender, Divorced-Parenthood, Married-Parenthood, Age, Training Style, Daily Internet Use

Similar analyzes were performed for Video Game Addiction, which is another dependent variable of the study. In order to analyze whether the mean differences between the variables were significant, 2 (Gender) \* 2 (Divorced Parents and Married Parents) \* 4 (Age) groups of variance analysis was performed and the results are presented in table 4.

As seen in Table 4, it was found that the main effects were not significant for the ones with divorced parents, with married parents ( $F = 1.842, p = 0.9$ ) and age ( $F = 0.647, p = 0.5$ ) on the other hand, that the main effects were significant for gender ( $F = 7.505, p = 0.01, \eta^2 = 0.036$ ). This effect has a moderate effect size. Post hoc analysis results were significantly higher in boys than in girls. It was determined that the primary and secondary effects were not significant gender, divorced parents and married parents and for age. According to this result, boys' addiction scores are higher than girls. Video Game Addiction scores of adolescents do not change according to divorced parents and married parents. Similarly, the addiction scores of adolescents do not show any change according to age.

Table 4. 2 \* 2 \* 4 between-groups ANOVA (Levene = .20) table for comparison of gender, divorced parents and married parents and age for Video Game Addiction

Source	Type III Sum of Squares	df	Mean Square	F	p	$\eta^2$
Gender	354.461	1	354.461	7.505	0.007	0.04
Divorced Parent and Married Parents	0.009	1	0.009	1.842	0.989	0.000
Age	91.679	3	30.560	0.647	0.586	0.009
Gender*Divorced Parent and Married Parents	125.546	1	125.546	2.658	0.105	0.013
Gender*Age	52.234	3	17.411	0.369	0.776	0.005

Divorced Parent and Married Parents*Age	9.342	3	3.114	0.066	0.978	0.001
Gender*Divorced Parent and Married Parents*Age	159.466	3	53.155	1.125	0.340	0.016
Residual	9.067.859	192	47.228			

It has been analyzed whether or not the Video Game Addiction changes depending on the student’s education style and daily internet usage. In order to test the difference between the averages of the educational style and daily internet usage variables for the Video Game Addiction, 4 (training style) \* 5 (daily internet usage) variance analysis between-groups was performed for the Video Game Addiction and the results were presented in table 5.

As seen in Table 5, it was found that the main effects were not significant for the education style ( $F = 0.516, p = 0.7$ ) of student whereas for the daily internet use ( $F = 8.466, p = 0.001, \eta^2 = 0.14$ ) the main effect was found to be significant. This effect has a large effect size. The results of post hoc analysis of the students using internet for 5 hours or more are significantly higher than those who use 1,2,3,4 hours respectively. It was determined that the primary effects for the style of education and daily internet use were not significant. According to this result, people who use internet for 5 hours or more have higher scores of Video Game Addiction than people using 4 hours or less. On the other hand, Video Game Addiction scores do not change according to the education style of the students.

Table 5. 4 \* 5 between groups ANOVA (levene = .07) table for comparisons in terms of the training style and daily internet use of students for Video Game Addiction scores

Source	Type III Sum of Squares	df	Mean Square	F	p	$\eta^2$
Training Style	62.57	3	20.857	0.516	0.671	0.01
Daily Internet Usage	<b>1.367</b>	<b>4</b>	<b>341.972</b>	<b>8.466</b>	<b>.001</b>	<b>0.14</b>
Training Style*Daily Internet Usage	801.12	12	66.760	1.653	0.080	0.08
Residual	7.634	189	40.393			

**Findings about the examination of school attachment levels of adolescents with divorced parents according to gender, age, type of school, current economic situation and parental education style.**

In the study, it was aimed to examine whether there was a significant difference between boys and girls in terms of the school attachment levels of adolescents with divorced parents and the results of independent sample t test are given in Table 6 for this analysis.

Table 6. Independent sample t-test results for gender-based comparisons of school attachment levels of adolescents with divorced parents

Group	N	Mean	SD	t	df	p	Cohen's d
Boy	47	35.4	13.3	0.964	100	0.33	0.191
Girl	55	33.3	8.9				

Table 6 shows when the average of school attachment levels of adolescents with divorced parents is examined; it is seen that the scores of the boys are relatively high when compared to girls. However, no statistically significant difference was found between the t-test results of these scores,  $t(100) = 0.96, p > .33$ . According to these results, it can be stated that boys and girls are similar to each other in terms of school attachment levels of adolescents with divorced parents.

The aim of this study is to examine whether the Adolescents with Divorced Parents differ significantly in their school attachment levels according to their age and the results of the mean and standard deviations and the ANOVA results are presented in Table 7.

Table 7. One-way analysis of variance (ANOVA) table for age based comparison for school attachment scores (Levene = .86)

Age	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
14	33.7	10.8	18	Age	307.33	3	102.4	0.818	0.48	0.024
15	31.6	9.59	23							
16	36.4	12.4	31							
17	34.4	11.2	30							

As seen in Table 7, it is seen that school attachment scores are the lowest among the 15-year old adolescents when compared to other age groups and are the highest among the 16-year old adolescents. When we examine ANOVA results to examine the effect of these averages, it was found that the Adolescents with Divorced Parents did not differ significantly in school attachment scores according to their age,  $F(3, 98) = 0.818, p > .48, \eta^2 = .024$ .

It was requested to examine whether there is a significant difference depending on the parental education style of adolescents between the school attachment level of adolescents with divorced parents and the results of this analysis regarding the averages on parental training style and standard variations and one – way variance analysis (ANOVA) are presented in Table 8.

Table 8. One-way analysis of variance (ANOVA) table for comparisons according to the parent education style in which they are educated for school attachment scores (Levene = .18)

Parental education style	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Democratic	32.4	9.4	35	Between Groups	396.8	3	132.2	1.064	0.36	0.03
Authoritarian	34.5	10.5	42							
Negligent	40.5	12.7	7							
Over Protective	34.7	14.5	18							

As it is seen in Table 8, when the school attachment levels of adolescents with divorced parents are examined according to the parental education style, it is seen that the scores of children whose parents are negligent are higher than those with democratic, authoritarian and overprotective parents. There is no noticeable difference between the other groups. When we examine the ANOVA results to examine the effect of these averages, it was found that there was no statistically significant difference in school attachment scores according to the parental education style of the adolescents with divorced parents.  $F_{(3, 98)} = 1.064, p > .36, \eta^2 = .03$ .

In this study, it is aimed to examine whether there is a significant difference between school types of adolescents with divorced parents and independent sample t test results of this analysis are presented in Table 9.

Table 9. Independent sample t-test results for comparing school attachment levels of adolescents with divorced parents according to school types

Group	N	Mean	SD	SE	t	df	p	Cohen's d
Anatolian High School	86	33.9	11	1.192	-0.640	100	0.524	-0.174
Vocational and Technical High School	16	35.9	11.9	2.984				

In Table 9, the mean scores of school attachment levels of adolescents with divorced parents are examined by school type; it is seen that the scores of those who study at vocational and technical high schools are relatively high compared to those of Anatolian high schools. However, no statistically significant difference was found

between the t-test results of these scores,  $t(100) = -0.640, p > .52$ . According to these results, it can be stated that adolescents with divorced parents have similar levels of school attachment according to school type.

The aim of this study is to examine whether the adolescents with divorced parents differ significantly in school attachment levels depending on social and economic status.

Table 10. One-way analysis of variance (ANOVA) table for school attachment scores compared to social and economic situation (*levene* = .61)

Social and Economic Status	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Low	37.4	12.1	20	Between Groups	643.06	2	321.53	2.666	0.075	0.051
Mid	34.3	10.3	73							
High	27.2	13.1	9							

As seen in Table 10, when the school attachment levels of adolescents with divorced parents were examined depending on the social and economic situation, it was found that adolescents with low social and economic status had higher school attachment scores than those with medium and high social and economic status. When we examine ANOVA results to examine the effect of these averages, it was found that the Adolescents with Divorced Parents did not differ significantly in school attachment scores according to social and economic status.  $F(2, 99) = 2.666, p > .07, \eta^2 = .05$ .

**Findings about the examination of Video Game Addiction levels of adolescents with divorced parents according to gender, age, type of school, current economic situation and parental education style**

The aim of this study is to examine whether the adolescents differ significantly depending on social and economic situation in terms of the levels of Video Game Addiction and the social and economic situation averages of this analysis and standard deviations and one-way ANOVA results are presented in Table 11.

Table 11. One-way analysis of variance (ANOVA) table for comparisons depending on social and economic situation for Video Game Addiction scores (*levene* = .07)

Social Economic Status	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Low	16.4	7.9	20	Between Groups	275.4	2	137.7	2.902	0.06	0.055
Mid	14.6	5.8	73							
High	20.2	11.5	9							

As seen in Table 11, when the levels of Video Game Addiction of the Adolescents with Divorced Parents were examined depending on the social and economic situation, it was found that the adolescents with high social and economic status had higher Video Game Addiction scores than the middle and low group. When we examine the ANOVA results to examine the effect of these averages, it was found that the adolescents with divorced parents did not differ significantly in the Video Game Addiction scores according to the social and economic situation.  $F(2, 99) = 2.902, p > .06, \eta^2 = .06$ .

The aim of the study was to examine whether the adolescents with divorced parents differed significantly in terms of the level of Video Game Addiction depending on age, and the mean and standard deviations and ANOVA results of the analysis were presented in Table 12.

Table 12. One-way analysis of variance (ANOVA) table for school attachment comparisons depending on age (Levene = .20)

Age	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
14	16.3	7.8	18	Between Groups	120.6	3	40.22	0.812	0.49	0.024
15	16.4	7.4	23							
16	15.7	7.4	31							
17	13.8	5.5	30							

As seen in Table 12, it is observed that when the addiction levels of the Adolescents with Divorced Parents were examined depending on age, the Video Game Addiction scores were the highest among the 14- and 15-year-old age group and were the lowest among the 17-year old group, respectively. When we examine ANOVA results to examine the effect of these averages, it was found that the Adolescents with Divorced Parents did not differ significantly in Video Game Addiction scores according to their age.  $F(3, 98) = 0.812, p > .49, \eta^2 = .024$ .

It was requested to examine whether there is a significant difference depending on Parental education style of adolescents with divorced parents in terms of Video Game Addiction level and in this analysis, the averages regarding the parental education style and standard variances and one – way variance analysis were presented in Table 13.

Table 13. One-way analysis of variance (ANOVA) table for comparisons depending on the parent education style in which they are trained for Video Game Addiction scores (Levene = .28)

Parental training style	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Democratic	16.2	7.9	35	Between Groups	297.8	3	99.2	2.081	0.11	0.060
Authoritarian	13.5	5.6	42							
Negligent	17.1	8.6	7							
Over Protective	17.8	6.6	18							

As seen in Table 13, when adolescents with divorced parents are examined according to the parental education style with which their levels of addiction are raised, it is seen that the scores of Video Game Addiction of children of over-protective and negligent parents are higher than those of democratic and authoritarian parents. When we examine the ANOVA results to examine the effect of these averages, it was found that there was no statistically significant difference in Video Game Addiction scores according to the parental education style in which the students with divorced parents were trained.  $F(3, 98) = 2.081, p > .11, \eta^2 = .06$ .

In this study, it was aimed to examine whether there was a significant difference between boys and girls at the levels of Video Game Addiction of adolescents with divorced parents. The results of this analysis are presented in Table 14.

Table 14. Independent sample welch test results for comparison of gender-based levels of gaming addiction of adolescents with divorced parents

Group	N	Mean	SD	Test	Statistic	df	p	Cohen's d
Boy	47	18.1	8.1	Welch	3.748	72.126	.001	0.758
Girl	55	13.1	4.8					

Table 14 shows the average score of Video Game Addiction levels of adolescents with divorced parents; it is seen that the scores of the boys are relatively high compared to girls. According to the welch test results, it was found that this difference was statistically significant,  $t(w) (72.2) = 3.748, p > .001$ . According to these results, adolescent boys with divorced parents have higher levels of gaming addiction than girls with divorced parents.

In the study, it was requested to examine whether there is a significant difference between school types depending on levels of Video Game Addiction of adolescents with divorced parents. The results of this analysis are presented in Table 15.

Table 15. *Independent sample welch test results for comparing the levels of Video Game Addiction of Adolescents with Divorced Parents depending on school types*

Group	N	Mean	SD	Test	Statistic	df	p	Cohen's d
Anatolian School	High 86	15.6	7.4	Welch	1.276	47.286	0.20	0.258
Vocational and Technical School	High 16	14.1	3.4					

In Table 15, the average score of Video Game Addiction levels of adolescents with divorced parents is examined by type of school; it is seen that the scores of those who study in vocational and technical high schools are relatively low compared to those studying in Anatolian high school. However, there was no statistically significant difference between the mean scores of these scores according to the welch test results,  $t(w) (47.2) = 1.276, p > .20$ . According to these results, it can be stated that adolescents with divorced parents are similar to each other according to school type at Video Game Addiction levels.

**Findings about the examination of school attachment levels of adolescents with married parents according to gender, age, type of school, current economic situation and parental education style**

In this study, it is aimed to examine whether there is a significant difference between boys and girls in terms of school attachment levels among the adolescents with married parents. It is seen that the scores of the boys (33.6) are relatively higher than the girls (32.5). However, there was no statistically significant difference between the t-test results of these scores,  $t(107) = 0.402, p > .68$ . According to these results, it can be stated that boys and girls are similar to each other when their parents are married.

In this study, it was aimed to examine whether there was a significant difference between school types in terms of school attachment levels of the adolescents with married parents and the average scores of school attachment levels of the adolescents with married parents were examined according to the type of school; it is seen that the scores of the students who study in vocational and technical high schools (37.7) are relatively high compared to those studying in Anatolian High School (31.4). According to the t-test results made among these scores, it was found that this result was statistically significant,  $t(107) = -2.462, p > .05$ . According to these results, it can be said that the level of school attachment of adolescents with married parents is higher in vocational and technical high schools than in Anatolian high school.

It was aimed to examine whether the adolescents with married parents differ significantly in their school attachment levels depending on their age and when the age-related differences of adolescents with married parents are examined in terms of school attachment levels, it was seen that the school attachment scores of 16 year old adolescents (36.1) were significantly higher than adolescents in other age groups (15 years: 33.9, 17 years): 34.1) It is the lowest in the ones with 14 years old (30.1). When we examine ANOVA results to examine the effect of these averages, it was found that the Adolescents with Married Parents did not differ significantly in their school attachment scores depending on their age.  $F(3, 102) = 1.514, p > .21, \eta^2 = .043$ .

The aim of this study is to investigate whether the Adolescents with Married Parents differ significantly depending on the social and economic situation in terms of school attachment levels and the social and economic status averages and standard deviations and the ANOVA results are presented in Table 16.

Table 16. One-way analysis of variance (ANOVA) table for school attachment scores compared depending on social and economic situation (levene= .40)

Social and economic status	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Low	34.6	10.21	8	Between groups	67.02	2	33.513	0.249	0.780	0.005
Mid	32.6	11.6	100							
High	39		1							

As it is seen in Table 16, it is seen that school attachment scores of adolescents with low social and economic status are higher than the middle group when the school attachment levels of adolescents with married parents are examined. When we examine the ANOVA results to examine the effect of these averages, it was found that the Adolescents with Married Parents did not differ significantly in terms of school attachment scores depending on social and economic situation.  $F_{(2, 106)} = 0.249, p > .07, \eta^2 = .05$ .

It was aimed to examine whether the adolescents with married parents differ significantly depending on the parental education style they were raised in terms of the school attachment levels and the mean and standard deviation of the parental education style and the one-way analysis of variance (ANOVA) results are presented in Table 17.

Table 17. One-way variance analysis (ANOVA) table for the comparisons depending on the parental education style in which they are educated in terms of school attachment scores (levene= .49)

Parental Training Style	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Democratic	30.3	10.1	56	Between Groups	535.4	3	178.4	1.541	0.208	0.043
Authoritarian	34.3	11.8	39							
Negligent	38.7	9.9	4							
Over Protective	32.5	8.9	8							

As seen in Table 17, it is seen that when the school attachment scores of adolescents with married parents are examined, it is seen that the scores of the ones with negligent parents are higher than those of democratic, authoritarian and overprotective children. Among the other groups, the authoritarian ones are relatively high. When we examine the ANOVA results to examine the effect of these averages, it was found that there were no statistically significant differences in the scores of school attachment according to the parent education style.  $F_{(3, 103)} = 1.541, p > .20, \eta^2 = .04$ .

**Findings about the examination of Video Game Addiction levels of adolescents with married parents according to gender, age, type of school, current economic situation and parental education style**

It was aimed to examine whether the adolescents with the married parents differed significantly in terms of the level of Video Game Addiction depending on the parent education style and the results of the mean and standard deviations of the parental education style and the one-way analysis of variance (ANOVA) results are presented in Table 18.

Table 18. One-way analysis of variance (ANOVA) table for comparisons depending on the parent education style in which they are trained in terms of Video Game Addiction scores (levene= .19)

Parental training style	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Democratic	15.0	6.3	56	Between groups	112.9	3	37.6	0.757	0.52	0.02
Authoritarian	16.7	7.5	39							
Negligent	18.7	12.2	4							
Over Protective	14.7	6.4	8							

As seen in Table 18, when the Video Game Addiction scores of adolescents with married parents depending on the parental education styles are examined, it is seen that the scores of Video Game Addiction of the children of the authoritarian and negligent parents are higher than those of the democratic and overprotective ones. When we examine the ANOVA results to examine the effect of these averages, it was found that there were no statistically significant differences in Video Game Addiction scores according to the parental education style.  $F_{(3, 103)} = 0.757, p > .75, \eta^2 = .02$ .

It was aimed to examine whether the Adolescents with Married Parents significantly differentiated depending on age in terms of Video Game Addiction and the mean and standard deviations and ANOVA results of this analysis are presented in Table 19.

Table 19. One-way analysis of variance (ANOVA) table for comparisons depending on the age in terms of school attachment scores (levene= .81)

Age	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
14	16.1	7.06	39	Between groups	34.08	3	11.3	0.230	0.87	0.007
15	15.8	6.8	25							
16	15	7.48	26							
17	14.6	6.3	16							

As it is seen in Table 19, when the Video Game Addiction levels of adolescents with married parents are examined, it is seen that Video Game Addiction scores of 14, 15 and 16 year-old adolescents are the lowest relatively when compared to the 17-year old group and the scores of 17-year-old ones are the lowest. When we examine ANOVA results to examine the effect of these averages, it was found that the Adolescents with Married Parents did not differ significantly in Video Game Addiction scores according to their age.,  $F_{(3, 103)} = 0.230, p > .89, \eta^2 = .007$ .

It was aimed to examine whether the Adolescents with Married Parents differ significantly in terms of Video Game Addiction levels depending on social and economic situation. The results and standard deviations of the social and economic situation and the one-way analysis of variance (ANOVA) results are presented in Table 20.

Table 20. One-way analysis of variance (ANOVA) table for comparisons depending on the social and economic status in terms of Video Game Addiction scores (levene= .42)

Social and economic status	Mean	SD	N	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$
Low	15	8.8	8	Between groups	8.35	2	4.17	0.084	0.91	0.002
Mid	15.8	6.9	100							
High	14		1							

As seen in Table 20, when the levels of Video Game Addiction of Adolescents with Married Parents are examined depending on social and economic status, it is seen that the scores of Video Game Addiction of adolescents with high, low and medium social and economic status are at similar levels. When we examine the ANOVA results to examine the effect of these averages, it was found that the Adolescents with Married Parents did not differ significantly in the Video Game Addiction scores according to the social and economic situation.  $F_{(2, 106)} = 0.084, p > .09, \eta^2 = .002$ .

In this study, it was aimed to examine whether there was a significant difference between the Video Game Addiction levels of boys and girls among adolescents with married parents and the mean scores of Video Game Addiction levels of adolescents with married parents were examined; the scores of boys (16.7) are relatively high compared to girls (15.4). According to the t test results, it was found that this difference was not statistically significant,  $t(107) = 0.838, p > .40$ . According to these results, levels of Video Game Addiction are similar among adolescents with married parents.

In the study, it was requested to examine whether there was a significant difference between the level of Video Game Addiction of Adolescents with Married Parents depending on school types and since this variance was not

homogeneous, Welch statistics were used. When the mean score of Video Game Addiction of adolescents with married parents is examined according to the type of school; it is seen that the scores of those who study in vocational and technical high school (16.3) are relatively high compared to those who study in Anatolian high school (15.5). However, there was no statistically significant difference between the mean scores of these scores according to the Welch test results,  $t(w) (32,2) = -0,386, p > .70$ . According to these results, it can be stated that Adolescents with Married Parents are similar to each other depending on school type in terms of Video Game Addiction levels.

## RESULT AND DISCUSSION

In the study, for the school attachment and Video Game Addiction of all the adolescents, there are the analysis depending on being adolescents with divorced parents and married parents, gender, age, parental training style and daily internet use. According to this, general adolescents' school attachment and gaming addiction levels do not change according to whether the parents of the adolescents are divorced or their parents are married. According to these results, it is understood that the parental divorce is similar to other adolescents in terms of school attachment and Video Game Addiction. Similar results were obtained between different genders in terms of school attachment. In the field of Video Game Addiction, the interesting result is that; men have higher addiction scores than girls. A similar result was found in study of Taylan and Işık (2018) with secondary and high school students. As a result of the study, it was found that male students used internet with more problems than girls. As a result of the study, Griffiths (2010) found that high frequent computer game players showed more anxiety than low frequent players. The possible explanations for this relationship explain that the high frequency of computer games endanger the acquisition of social skills in childhood and adolescence. When we look at the results regarding school attachment and play addiction depending on parental training skill, it has been determined that the parent's being democratic, authoritarian, negligent, overprotective does not have an effect on school attachment and Video Game Addiction for the general adolescent group. Finally, it was analyzed whether adolescents' school attachment and Video Game Addiction changed according to daily internet usage. According to this, while there is no difference for school attachment; Video Game Addiction scores of the general adolescent group using internet for 5 hours or more are significantly higher than those who use 1,2,3,4 hours respectively. Video Game Addiction increase when adolescents' Internet usage time exceeds 5 hours. Bozkurt, Şahin and Zoroğlu (2016) state that the use of internet has become an indispensable part of life, the pathological use of the Internet has begun to lead to internet addiction which can be defined as new addiction type and that the uncontrolled and long-time of use computer and internet adversely affect the individuals physical, psychological, social, cognitive health and life. In this direction, young people need to be encouraged to read books or participate in other healthy social activities instead of using their free time with internet usage. In this study, the levels of school attachment and Video Game Addiction of adolescents with divorced parents or married parents were examined according to gender, age, type of school, current economic situation, and parental education style. Firstly, the levels of school attachment and Video Game Addiction of the adolescents with divorced parents were examined and it was found that the scores of school attachment did not differ depending on gender, age, type of school, current economic situation, and parental education style. On the other hand, when the levels of Video Game Addiction were examined, it was concluded that Video Game Addiction varies according to gender and the boys have higher level of Video Game Addiction than girls. In adolescents with divorced parents, male adolescents are more likely to be addicted to games. This is an important finding as in the above. In this direction, in general, it should be studied on how to find and offer solution – based opportunities in game addiction of male adolescents. At the same time, in the studies conducted on adolescents with divorced parents, it was determined that the boys and adolescents have more negative effects than girls in terms of school success areas when there are the divorced parents. In adolescence, the negativity caused on adolescents may be seen, especially in the school, the success rate is very low especially in boys, parent support in this area plays an active role in the re-school success level of children. (Figdor, 1997, p. 71). In order to avoid the problems or to forget negativities of parental divorce, some adolescents find themselves playing on social media or on the computer. In general, girls are more likely to cope with problems after their parents are divorced than boys. In the study of Wallerstein and Blakeslee (1989), it is concluded that girls and adolescents handled the divorce of their parents more socially, emotionally and more positively in terms of success skill. Video Game Addiction of this adolescent group with divorced parents does not differ according to age, type of school, current economic situation, and parental education style. When the levels of school attachment and gaming addiction of the adolescents with married parents are examined according to gender, age, type of school, current economic situation, and parental education style; while there was no change in school attachment levels depending on gender, age, current economic status, parental training style; there was a difference according to the type of school. According to this study, it was determined that the level of school attachment of adolescents with married parents in vocational and technical high schools showed higher school attachment rates compared to those in Anatolian high school. It can be stated that the levels of Video Game Addiction of the Adolescents with

Married Parents did not show any change in terms of gender, age, type of school, current economic situation, and the parental education style in which they were educated; in other words, they are similar to each other.

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