

Virtual Triggers, Real Reactions: Investigating the Link Between Internet Addiction and Aggression

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Abstract

This study aims to examine the relationship between internet addiction and aggression among university students. In the study conducted with a relational screening design, data were collected from 289 university students using the Internet Addiction Scale and Aggression Scale. The findings show that male students scored significantly higher in all sub-dimensions of the aggression scale; however, there was a significant difference in terms of internet addiction only in the “negativity in social relationships” sub-dimension according to gender. In the analyses conducted according to grade level, it was observed that first-year students had higher levels of both internet addiction and aggression. While the family income level variable did not create a significant difference in internet addiction and aggression in general, it was found that low-income students scored higher only in the verbal aggression sub-dimension. Finally, positive and significant relationships were found between internet addiction and aggression in all sub-dimensions. These results reveal that problematic internet use can negatively affect the emotional and behavioral functioning of individuals. In line with the findings, it is recommended that protective and preventive psycho-education programs be developed in universities to raise awareness about the relationship between internet addiction and aggression.

Keywords: Internet addiction, aggression, university students, correlation

INTRODUCTION

Today, digital technologies have become an inseparable part of an individual's life. The technological developments of the 21st century have played an important role in the use of digital technologies in individuals' daily life skills to the fullest. With developing technology, people have begun to prefer internet-based technologies in all areas of life. University students, in particular, have begun to prefer using the internet to help their academic lives, organize their social lives, and meet their entertainment needs. However, this intensive use carries the risk of turning into an addiction that will impair individuals' functionality (Montag et al., 2021). Internet addiction is defined as individuals' inability to control their internet use or limit the duration of their daily use and their use at a level that will negatively affect their daily life skills (WHO, 2020). Shapira et al. (2003) defined internet addiction as difficulty in limiting internet use and continued use, and this situation causing various problems in the individual's academic, social, or professional life. Recent studies have shown that internet addiction is associated with various psychological problems such as depression, anxiety, loneliness, low self-esteem, and psychological distress (Cheng et al., 2021; Tas, 2018). Kütük (2023) stated that internet addiction may negatively affect individuals' psychological resilience, leading to increased levels of anxiety. Studies in the literature have examined the psychological harms of internet addiction as well as its effects on social relationships and behavioral patterns. Li et al. (2021) focused on these effects on behavioral patterns and stated that uncontrolled internet use paves the way for individuals to exhibit various behavioral problems. They emphasized that internet-addicted individuals may exhibit more aggressive behavior along with impulsivity and may experience anger management problems.

Aggression is basically defined as behaviors that emerge with the instinct to harm. Anderson and Bushman (2018) defined aggression as any behavior that aims to harm a person physically, psychologically, or socially. According to Freud, aggression is an important derivative of the death instinct and is the redirection of a person's self-destructive tendencies toward objects in the outside world (Gençtan, 2006). Aggression can be exhibited as physical, verbal, sexual, or emotional behaviors (Kaynak, 2013). Uncontrolled use and long periods of internet addiction can pave the way for an individual

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to display aggressive attitudes. Ko et al. (2022) emphasize that long periods spent on the internet can cause a lack of empathy, emotional regulation problems, and social isolation, which can trigger a tendency to aggression. Studies conducted especially on university students show that students at risk of internet addiction are also at risk for aggressive behavior. Zhou et al. (2020) emphasized this relationship between the two variables and stated that internet addiction can increase aggression. Mathew et al. (2024) also emphasized the strong relationship between the concepts in a similar study.

Based on the literature, this study aims to examine the relationship between internet addiction and aggression tendencies among university students. The fact that studies conducted in Türkiye address these two variables and are relatively limited increases the importance of the study. The relationship between the two variables will also be addressed in terms of various demographic variables in the study. In this way, it will contribute to understanding the psychosocial effects that may arise due to problematic internet use. In addition, it is expected that the results obtained will contribute to the development of preventive intervention programs.

METHOD

Research model

The main purpose of this research is to examine the relationships between internet addiction and aggression levels of university students in terms of various variables. The research was designed in a relational design considering that there is a relationship between internet addiction and aggression levels.

Participants

The universe of the study consists of university students studying in Istanbul in 2023-2024. Since it is not possible to reach the entire universe, a representative sample was selected. The sample selection was made with the convenience sampling method. The scales were applied to 320 students studying in various faculties. Students who did not fill in the requested data on the scales were not evaluated. There were 31 participants who were not evaluated. The participant group consists of 91 male and 198 female students. The ethical rules stated in the Declaration of Helsinki were observed during the research. The data of the study were collected face-to-face and after obtaining the informed consent of each participant. Before the data collection forms, detailed information was provided about the current study, voluntary participation, and data confidentiality. In addition, the participants were informed that they could withdraw from the study at any stage they wanted and that the information they provided would not be included in the study. The data of individuals who agreed to participate in the study on a voluntary basis were included in the study.

Measures

Demographic Information Form. This form includes questions about gender, class level, and total monthly family income. The form was prepared by the research team.

Internet Addiction Scale. The internet addiction scale, originally named "Skala zur Erfassung der Internetsucht" and developed by Hahn and Jerusalem (2001), was translated into Turkish by Şahin and Korkmaz in 2011. It is a five-point Likert-type scale and consists of 19 items. A minimum of 19 and a maximum of 95 points can be obtained from the entire scale. It is accepted that the level of internet addiction increases as the scores obtained from the scale increase. It consists of three sub-dimensions: loss of control, staying online more, and negativity in social relationships. Loss of control refers to excessive use of the internet and the problems resulting from this. The desire to stay online more indicates the time spent on the internet and reveals that this desire has increased when compared to the beginning. Negativity in social relationships refers to problems that occur in interpersonal relationships due to excessive internet use (Şahin & Korkmaz, 2011). The Cronbach Alpha internal consistency coefficient calculated for the scale is .85.

Aggression Scale. The study used the "Aggression Questionnaire" scale, developed by Buss and Perry in 1992. This scale was adapted to Turkish by Can (2002). The aggression scale is a five-point Likert-type scale consisting of 34 items. Scores obtained from the scale: 0-58 indicates low, 59-110 indicates normal, and 111 and above indicates a high aggression level. It has 5 sub-dimensions: physical, verbal, anger, hostility, and indirect aggression. In the reliability examination, Cronbach's alpha internal consistency coefficient for the scale was calculated as .91.

Statistical analysis

The main purpose of the present study is to test the relationship between the internet addiction levels and aggression levels of university students and the demographic variables that may affect this relationship. First, missing values and extreme values were determined and removed from the data set. Then, the mean scores, standard deviations, skewness and kurtosis values of the variables were calculated to evaluate whether the data were normally distributed. The results showed that all variables had skewness and kurtosis values within the range of ± 2 , indicating that the normality assumption was met (George & Mallery, 2010). In the analysis of the study, $p < 0.05$ was accepted. The results were interpreted according to the principle that if it is less than .05, it is significant; if it is greater than .05, it is not significant, calculated by the SPSS 24 program. ANOVA and Tukey multiple comparison tests were used for the significance of the difference between more than two independent variables and dependent variables, and t-tests were used for the significance of the difference between two variables. In addition, correlational analysis of the total scores obtained from the two scales and the scores obtained from the sub-dimensions was performed.

RESULTS

In this section, the findings obtained during the research process are presented in order. The first finding of the study pertains to the relationship between gender and levels of internet addiction and aggression. According to the results of the independent samples t-test (see Table 1), male participants scored significantly higher than female participants on the subscales of

the aggression scale, including physical aggression ($t(157.36) = -6.51, p = .001$), verbal aggression ($t(153.92) = -3.76, p = .001$), anger ($t(287) = -3.36, p = .001$), hostility ($t(287) = -2.82, p = .001$), and indirect aggression ($t(287) = -2.71, p = .001$), as well as on the total aggression score ($t(287) = -5.06, p = .001$). Regarding internet addiction, a significant difference was found only in the subscale of negative impact on social relationships ($t(155.88) = -2.43, p = .01$), with males again scoring higher than females. No significant gender differences were observed in the other subscales or in the total score of the Internet Addiction Scale.

The second finding of the study pertains to the relationship between university students' year of study and their levels of internet addiction and aggression. The findings, presented in Table 2, are summarized below in accordance with the sequence of the table.

A significant difference was found in the physical aggression scores of first year ($M = 18.43, SD = 7.41$), second year ($M = 18.50, SD = 8.26$), third year ($M = 14.84, SD = 6.77$), and fourth year students ($M = 16.16, SD = 7.34; F_{(3, 285)} = 3.96, p = .01$). According to the results of the Tukey post-hoc test, the source of this difference lies between second year and third year students ($p = .01$).

A significant difference was found in the verbal aggression scores among first year ($M = 15.10, SD = 4.27$), second year ($M = 14.46, SD = 4.17$), third year ($M = 12.32, SD = 4.05$), and fourth year students ($M = 13.14, SD = 3.72; F_{(3, 285)} = 5.83, p = .001$). According to the Tukey post-hoc test, this difference stemmed from comparisons between second year and third year

students, as well as between first year and third year students ($p = .001$).

A significant difference was also observed in the anger scores of students based on their year of study: first year ($M = 23.67, SD = 5.97$), second year ($M = 22.42, SD = 5.78$), third year ($M = 19.18, SD = 4.74$), and fourth year students ($M = 20.10, SD = 5.04; F_{(3, 285)} = 8.76, p = .001$). Tukey's post-hoc test indicated that the source of this difference was between first- and both third- and fourth year students, as well as between second- and both third- and fourth year students ($p = .001$).

Hostility scores differed significantly across grade levels: first year ($M = 19.43, SD = 5.58$), second year ($M = 18.98, SD = 5.62$), third year ($M = 16.19, SD = 4.81$), and fourth year students ($M = 15.82, SD = 5.05; F_{(3, 285)} = 7.69, p = .001$). Tukey post-hoc comparisons revealed that the significant differences were between first- and both third- and fourth year students, as well as between second- and both third- and fourth year students ($p = .01$).

A significant difference was found in the indirect aggression scores among first year ($M = 15.23, SD = 4.28$), second year ($M = 15.52, SD = 4.74$), third year ($M = 12.57, SD = 3.30$), and fourth year students ($M = 13.08, SD = 4.01; F_{(3, 285)} = 9.20, p = .001$). According to the Tukey post-hoc test, the source of this difference was between first year and third year students and between second- and both third- and fourth year students ($p = .001$).

Table 1. T-test results of the scores obtained from the Internet Addiction Scale (IAS) and the Aggression Scale (AS) by gender

Variable		N	X	Ss	Sh _x	sd	t	p
IAS	Female	198	39.33	14.28	1.01	287	-1.75	.08
	Male	91	42.52	14.70	1.54			
IAS-Loss of control	Female	198	16.78	6.24	0.44	287	-.97	.33
	Male	91	17.57	6.83	0.71			
IAS-Desire for more online use	Female	198	7.50	3.58	0.25	287	-.53	.60
	Male	91	7.73	3.36	0.35			
IAS-Negative impact on social relationships	Female	198	15.05	6.40	0.45	155.88	-2.43	.01
	Male	91	17.21	7.31	0.76			
AS-Physical aggression	Female	198	14.52	6.65	0.47	157.36	-6.51	< .001
	Male	91	20.50	7.51	0.78			
AS-Verbal aggression	Female	198	12.68	3.79	0.27	153.92	-3.76	< .001
	Male	91	14.69	4.39	0.46			
AS-Anger	Female	198	19.90	5.33	0.38	287	-3.36	< .001
	Male	91	22.16	5.25	0.55			
AS-Hostility	Female	198	16.38	5.29	0.37	287	-2.82	< .001
	Male	91	18.26	5.17	0.54			
AS-Indirect aggression	Female	198	13.17	4.27	0.30	287	-2.71	< .001
	Male	91	14.58	3.64	0.89			
AS	Female	198	76.67	21.02	1.49	287	-5.06	< .001
	Male	91	90.20	21.29	2.23			

Table 2. ANOVA results of the sub-dimensions of the Internet Addiction Scale (IAS) and the Aggression Scale (AS) according to students' grade level

Variable	N	Source of Variance	Sum of Squares	df	Mean Square	F	p
AS	289	Between Groups	1517.07	3	4171.36	9.38	.08
		Within Groups	126797.68	285	444.90		
		Total	139311.75	288			
AS-Physical aggression	289	Between Groups	642.65	3	214.22	3.96	.33
		Within Groups	15404.98	285	54.05		
		Total	16047.63	288			
AS-Verbal aggression	289	Between Groups	278.88	3	92.96	5.83	.60
		Within Groups	4541.83	285	15.94		
		Total	4820.71	288			
AS-Anger	289	Between Groups	710.81	3	236.94	8.76	.01
		Within Groups	7705.56	285	27.04		
		Total	8416.37	288			
AS-Hostility	289	Between Groups	610.34	3	203.45	7.69	< .001
		Within Groups	7544.49	285	26.47		
		Total	8154.83	288			
AS-Indirect aggression	289	Between Groups	435.19	3	145.06	9.20	< .001
		Within Groups	4492.94	285	45.76		
		Total	4928.13	288			
IAS	289	Between Groups	2818.40	3	939.47	4.66	< .001
		Within Groups	57480.37	285	201.69		
		Total	60298.77	288			
IAS-Loss of control	289	Between Groups	552.40	3	184.13	4.62	< .001
		Within Groups	11370.32	285	39.90		
		Total	11922.72	288			
IAS-Desire for more online use	289	Between Groups	69.44	3	23.15	1.90	< .001
		Within Groups	3479.21	285	12.21		
		Total	3548.65	288			
IAS-Negative impact on social relationships	289	Between Groups	460.83	3	153.61	3.44	.02
		Within Groups	12727.66	285	44.66		
		Total	13188.48	288			

Similarly, a significant difference was found in total aggression scores across class levels: first year ($M = 91.87$, $SD = 23.13$), second year ($M = 89.90$, $SD = 23.70$), third year ($M = 75.10$, $SD = 18.90$), and fourth year students ($M = 78.32$, $SD = 21.01$; $F_{(3, 285)} = 9.38$, $p = .001$). The Tukey test revealed that this difference originated from comparisons between first- and both third- and fourth year students, as well as between second- and both third- and fourth year students ($p = .01$).

A significant difference was also observed in total internet addiction scores: first year ($M = 47.73$, $SD = 16.61$), second year ($M = 42.87$, $SD = 14.57$), third year ($M = 39.21$, $SD = 14.02$), and fourth-year students ($M = 37.70$, $SD = 13.33$; $F_{(3, 285)} = 4.66$, $p = .001$). The Tukey test indicated that the difference was between first year and both third- and fourth year students ($p = .02$).

In terms of loss of control scores, a significant difference was found among first year ($M = 20.43$, $SD = 7.64$), second year ($M = 18.06$, $SD = 6.57$), third year ($M = 16.41$, $SD = 6.08$), and fourth year students ($M = 16.00$, $SD = 5.95$; $F_{(3, 285)} = 4.62$, $p = .001$). According to the Tukey post-hoc test, this difference was due to the comparisons between first year and both third- and fourth year students ($p = .01$).

However, no significant difference was found in the excessive online use scores: first year ($M = 8.73$, $SD = 4.32$), second year ($M = 7.98$, $SD = 3.33$), third year ($M = 7.37$, $SD = 3.35$), and fourth year students ($M = 7.18$, $SD = 3.45$; $F_{(3, 285)} = 1.90$, $p = .13$).

Finally, a significant difference was found in the negative impact on social relationships subscale: first year ($M = 18.56$, $SD = 8.81$), second year ($M = 16.81$, $SD = 7.04$), third year ($M = 15.42$, $SD = 6.33$), and fourth year students ($M = 14.52$, $SD = 6.05$; $F_{(3, 285)} = 3.44$, $p = .02$). The source of this difference, according to the Tukey test, was between first year and fourth year students ($p = .02$).

The third finding of the study concerns the relationship between university students' levels of internet addiction and aggression and their families' monthly income levels. As shown in Table 3 shows that neither the total scores of the internet addiction and aggression scales nor the scores of their respective subscales differed significantly according to income level. The only significant difference was observed in the verbal aggression subscale of the aggression scale. Specifically, students from low-income families ($M=17.28$, $SD=4.34$) had

Table 3. ANOVA results of the sub-dimensions of the Internet Addiction Scale (IAS) and the Aggression Scale (AS) according to students' family income level

Variable	N	Source of Variance	Sum of Squares	df	Mean Square	F	p
AS	289	Between Groups	1241.29	2	620.85	1.29	.28
		Within Groups	138070.46	286	482.76		
		Total	139311.75	288			
AS-Physical aggression	289	Between Groups	79.97	2	39.98	.72	.49
		Within Groups	15967.67	286	55.83		
		Total	16047.63	288			
AS-Verbal aggression	289	Between Groups	113.10	2	56.55	3.44	.03
		Within Groups	4707.61	286	16.46		
		Total	4820.71	288			
AS-Anger	289	Between Groups	21.80	2	10.90	.37	.69
		Within Groups	8394.56	286	29.35		
		Total	8416.37	288			
AS-Hostility	289	Between Groups	112.37	2	56.19	2.00	.14
		Within Groups	8042.46	286	28.12		
		Total	8154.83	288			
AS-Indirect aggression	289	Between Groups	46.69	2	23.34	1.37	.26
		Within Groups	4881.44	286	17.07		
		Total	4928.13	288			
IAS	289	Between Groups	0.04	2	0.02	.00	1.00
		Within Groups	60298.73	286	20.83		
		Total	60298.77	288			
IAS-Loss of control	289	Between Groups	21.22	2	10.61	.26	.78
		Within Groups	11901.49	286	41.61		
		Total	11922.72	288			
IAS-Desire for more online use	289	Between Groups	22.43	2	11.21	.91	.40
		Within Groups	3526.22	286	12.33		
		Total	3548.65	288			
IAS-Negative impact on social relationships	289	Between Groups	77.35	2	38.68	.84	.43
		Within Groups	13111.13	286	45.84		
		Total	13188.48	288			

significantly higher verbal aggression scores compared to those from middle-income families ($M=13.26$, $SD=4.24$) and high-income families ($M=13.20$, $SD=3.97$; $F_{(2, 286)}=3.44$, $p=.03$).

The fourth and last finding of the study is related to explaining the correlational relationship between internet addiction and aggression levels of university students. As seen in Table 4, according to the Pearson correlation process, a positive significant relationship was found between the internet addiction total score and the aggression scale's physical aggression ($p < 0.001$, $r = 0.29$), verbal aggression ($p < 0.001$, $r = 0.15$), anger ($p < 0.001$, $r = 0.38$), hostility ($p < 0.001$, $r = 0.40$), indirect aggression ($p < 0.001$, $r = 0.33$) sub-dimensions, and total aggression ($p < 0.001$, $r = 0.38$) score. A positive significant relationship was found between the loss of control score, which is a sub-dimension of internet addiction, and the aggression scale's physical aggression ($p < 0.001$, $r = 0.22$), verbal aggression ($p < 0.001$, $r = 0.15$), anger ($p < 0.001$, $r =$

0.34), hostility ($p < 0.001$, $r = 0.33$), indirect aggression ($p < 0.001$, $r = 0.31$) sub-dimensions, and the total aggression score ($p < 0.001$, $r = 0.33$). A positive significant relationship was found between the score of the desire to stay online more, which is the sub-dimension of internet addiction, and the physical aggression ($p < 0.001$, $r = 0.20$), anger ($p < 0.001$, $r = 0.28$), hostility ($p < 0.001$, $r = 0.35$), and indirect aggression ($p < 0.001$, $r = 0.20$) sub-dimensions of the aggression scale and the total aggression score ($p < 0.001$, $r = 0.28$). No significant relationship was found in the verbal aggression sub-dimension of the aggression scale ($p > 0.05$).

A positive significant relationship was found between the score of negativity in social relationships, which is a sub-dimension of internet addiction, and the sub-dimensions of the aggression scale, such as physical aggression ($p < 0.001$, $r = 0.30$), verbal aggression ($p < 0.001$, $r = 0.13$), anger ($p < 0.001$, $r = 0.33$), hostility ($p < 0.001$, $r = 0.35$), indirect aggression ($p < 0.001$, $r = 0.30$), and the total aggression score ($p < 0.001$, $r = 0.35$).

DISCUSSION

In this section, the relationship between students' internet addiction and aggression levels and sociodemographic data is discussed and interpreted in the light of other studies. The first finding of the study shows that there is a significant difference in favor of men between men and women in terms of the total scores and sub-dimensions of the aggression scale. The aggression levels of male students are higher than those of female students. No significant difference was found between men and women in terms of the total scores and sub-dimensions of the Internet Addiction Scale. When evaluated in terms of aggression, Archer's (2004) findings support the findings obtained in this study. Archer (2004) emphasized that men have a higher level of aggression compared to women, especially in terms of physical aggression. In a similar study, Björkqvist et al. (1992) reported that men resort to physical and verbal aggression more. In the study conducted by Topçu and Erdur-Baker (2020) in the Turkish sample, it was stated that this was higher in boys than in girls and that this situation may be related to social learning processes. This aligns with Bandura's (1977) Social Learning Theory, which suggests that aggressive behaviors are often learned through observation and reinforcement, especially within culturally gendered expectations. All these findings are consistent with the findings of the study.

When evaluated in terms of internet addiction, Kuss et al. (2014) emphasized that different results can be obtained in different samples when the gender variable is taken into account, but as technology develops, these differences due to gender decrease. Yılmaz et al. (2014) reported that there was no difference due to gender in the study they conducted in Türkiye. The lack of gender differences in internet addiction may indicate a convergence in digital behavior patterns among men and women, particularly in countries with high internet penetration and access equality. These findings are consistent with the findings of the study.

The second finding of our study shows that there is a significant difference in the total score of the aggression scale and the scores of its sub-dimensions according to the grade levels of the students. The source of this difference is from the 1st and 4th grades and the 2nd and 4th grades. In terms of the total scores and sub-dimensions of the Internet Addiction Scale, a significant difference was observed in all scores except the sub-dimension of staying online more. The source of this difference is from the 1st and 4th grades. According to the findings of Kaynak (2013), the aggression level of 3rd grade students differs from that of 1st graders. This data does not match our findings. In the study conducted by Erşan et al. (2009), a difference was found between the scores of 2nd and 4th grade students. This difference is consistent with our findings. These results may be interpreted in light of developmental psychology, as older students may experience increased academic and social stress, which can contribute to both higher aggression and more problematic internet use. Additionally, it is possible that senior students use digital platforms more extensively for academic and social purposes, potentially increasing their risk of addiction.

The third finding of the study shows that there is no significant difference in the total score of the aggression scale and the scores of its sub-dimensions according to income levels. When literature is examined, it is possible to come across studies that support the findings. For example, Kaynak (2013) reported that the income status of university students did not affect their aggression. In similar studies, Kılınç (2012) and Şahin (2007) reached similar results. When evaluated in terms of internet addiction, Aslan and Yazıcı (2016) found that internet addiction did not differ according to income. Similarly, Aydoğan (2020) emphasized in his master's thesis that there was no relationship between income and internet addiction. However, in a study conducted in China, it was found that students with low socioeconomic status were more prone to internet addiction (Chen et al., 2025). Therefore, it can be said that this finding may be sensitive to culture and should be evaluated in different

Table 4. Correlational relationship table among the sub-dimensions of the Internet Addiction Scale (IAS) and the Aggression Scale (AS)

		AS-Physical aggression	AS-Verbal aggression	AS-Anger	AS-Hostility	AS-Indirect aggression	AS
IAS	r	.29**	.15**	.38**	.40**	.33**	.38**
IAS-Loss of control	r	.22**	.15**	.34**	.33**	.31**	.33**
IAS-Desire for more online use	r	.20**	.10**	.28**	.35**	.20**	.28**
IAS-Negative impact on social relationships	r	.30**	.13**	.33**	.35**	.30**	.35**

** = $p < .001$

societies. It is also important to consider the role of structural inequalities, such as digital access gaps or differing family expectations across socioeconomic groups, which may influence the manifestation of problematic internet use differently across cultures.

The fourth and final finding of the study revealed a correlational relationship between aggression and internet addiction. When the literature is examined, it is possible to come across studies that emphasize the positive relationship between the concepts and support the results obtained in this study. For example, Zhang et al. (2022) reported results that support the positive relationship between the two concepts. Mathew et al. (2024) also stated that internet addiction is a factor that can increase aggression and that there is a positive relationship between the two variables. In a study conducted in Türkiye, Şahin (2014) confirmed the correlational relationship between the two concepts. These studies support the fourth finding obtained from the study. This relationship may be bidirectional in nature, where higher aggression may lead to more impulsive internet use, while prolonged exposure to certain online environments (e.g., violent games or hostile social media discourse) can, in turn, reinforce aggressive tendencies. Future longitudinal research is recommended to better understand the causal direction and underlying mechanisms of this association.

Conclusion

Today, internet usage has reached the highest level. However, it is an indisputable fact that situations, games, images, and videos encountered on the internet affect individuals psychologically. It is generally thought that these situations encountered reveal the problem of aggression. In this study, the relationships between internet addiction levels and aggression tendencies of university students were examined in the light of various demographic variables. The findings revealed that there are significant and positive relationships between internet addiction and aggression. In particular, significant correlations were found between internet addiction sub-dimensions such as loss of control, staying online more, and negativity in social relationships and aggression sub-dimensions. This result shows that problematic internet use can negatively affect individuals' emotional and behavioral functioning. In addition, it was determined that male students' aggression levels were significantly higher than female students, and there were differences in both aggression and internet addiction scores depending on the grade level. On the other hand, it was observed that the family income level variable did not have a significant effect on the two variables. The findings obtained from the study reveal that the behavioral reflections of university students' internet usage habits should be monitored more closely. In line with the findings, it is recommended that protective and preventive psychoeducation programs be developed in universities that will raise awareness about the relationship between internet addiction and aggressive behavior. In addition, the use of qualitative methods in future studies, taking into account cultural contexts in different university groups, will allow for more in-depth analyses on the subject.

Ethical approval: The study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its following updates. Due to ethical restrictions and participant confidentiality agreements approved by the institutional review board, the dataset used in this study cannot be shared publicly.

Consent to participate: Informed consent was obtained from all the individual participants that were included in the study.

Availability of data: Data will be available on request.

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REFERENCES

- Anderson, C. A., & Bushman, B. J. (2018). Media violence and the general aggression model. *Journal of Social Issues*, 74(2), 386–413. <https://doi.org/10.1111/josi.12275>
- Archer, J. (2004). Sex differences in aggression in real-world settings: A meta-analytic review. *Review of General Psychology*, 8(4), 291–322. <https://doi.org/10.1037/1089-2680.8.4.291>
- Aslan, E., & Yazıcı, A. (2016). Üniversite öğrencilerinde internet bağımlılığı ve ilişkili sosyodemografik faktörler. *Klinik Psikiyatri Dergisi*, 19(3), 109-117.
- Aydoğan, S.S. (2020). Üniversite öğrencilerinde internet bağımlılığı sosyal destek ve öznel iyi oluş arasındaki ilişkinin araştırılması. *Yayınlanmamış Yüksek Lisans Tezi*, İstanbul Sabahattin Zaim Üniversitesi Sosyal Bilimler Enstitüsü.
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall.
- Björkqvist, K., Österman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. *Aggressive Behavior*, 18(2), 117–127. [https://doi.org/10.1002/1098-2337\(1992\)18:2<117::AID-AB2480180205>3.0.CO;2-3](https://doi.org/10.1002/1098-2337(1992)18:2<117::AID-AB2480180205>3.0.CO;2-3)
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452–459. <https://doi.org/10.1037/0022-3514.63.3.452>
- Can, S. (2002). Aggression questionnaire adlı ölçeğin türk popülasyonunda geçerlilik ve güvenilirlik çalışması. *Yayınlanmamış Uzmanlık Tezi*, T. C. Genel Kurmay Başkanlığı GATA Haydarpaşa Eğitim Hastanesi Ruh Sağlığı ve Hastalıkları servisi Şefliği, İstanbul.
- Chen, W., Gao, Y., Ren, R., Bi, Y., & Liao, Y. (2025). Socioeconomic status and internet addiction: Double-

- mediated moderation. *BMC Public Health*, 25, Article 48. <https://doi.org/10.1186/s12889-024-21153-w>
- Cheng, C., Lau, Y. C., Chan, L., & Luk, J. W. (2021). Prevalence of Internet addiction and its association with psychological distress and coping strategies among university students in Hong Kong: A cross-sectional study. *Frontiers in Psychiatry*, 12, 681483. <https://doi.org/10.3389/fpsy.2021.681483>
- Geçtan E. (2006). *Psikanaliz ve Sonrası. 12.Basım*. Metis yayıncılık, İstanbul.
- Hahn, A., & Jerusalem, M. (2001). Internetsucht—reliabilität und validität in der online-forschung. *Online-Marktforschung: Theoretische Grundlagen und praktische Erfahrungen*, 213-233.
- Kaynak, A. (2013). Eğitim Fakültesi Öğrencilerinin Duygusal Zekâ Düzeyleri ile Saldırganlık Düzeyleri Arasındaki İlişkinin Bazı Değişkenler Açısından İncelenmesi. *Yüksek Lisans Tezi*, Gaziantep Üniversitesi Eğitim Bilimleri Enstitüsü, Gaziantep.
- Kılınç, E. (2012). Genel Lise 9. Sınıf Öğrencilerinin Bazı Değişkenlere ve Sürekli Kaygı Düzeylerine Göre Saldırganlık Düzeylerinin İncelenmesi. *Yayınlanmamış Yüksek Lisans Tezi*, Gaziantep Üniversitesi Sosyal Bilimler Enstitüsü, Gaziantep.
- Ko, C. H., Yen, J. Y., Yen, C. F., Chen, C. S., & Chen, C. C. (2022). The association between internet addiction and psychiatric disorder: A review of the literature. *Frontiers in Psychiatry*, 13, 860700. <https://doi.org/10.3389/fpsy.2022.860700>
- Kuss, D. J., Griffiths, M. D., Karila, L., & Billieux, J. (2014). Internet addiction: A systematic review of epidemiological research for the last decade. *Current Pharmaceutical Design*, 20(25), 4026–4052. <https://doi.org/10.2174/13816128113199990617>
- Kütük, H. (2023). Investigating the role of resilience as a mediator in the link between internet addiction and anxiety. *Journal of Social and Educational Research*, 2(1), 14-21. <https://doi.org/10.5281/zenodo.8067150>
- Li, W., Garland, E. L., O'Brien, J. L., Tronnier, C. D., & Howard, M. O. (2021). Mindfulness and emotion regulation in Internet addiction among college students. *Journal of Behavioral Addictions*, 10(2), 272–282. <https://doi.org/10.1556/2006.2021.00018>
- Mathew, S. S., Thomas, A., & Chakrashali, S. B. (2024). Exploring the link between internet addiction and aggression in Mysore's adolescents: a gender perspective. *International Journal of Community Medicine and Public Health*, 12(1), 323–329. <https://doi.org/10.18203/2394-6040.ijcmph20244039>
- Montag, C., Wegmann, E., Sariyska, R., Demetrovics, Z., & Brand, M. (2021). How to overcome taxonomical problems in the study of Internet use disorders and what to do with "smartphone addiction"? *Journal of behavioral addictions*, 9(4), 908–914. <https://doi.org/10.1556/2006.8.2019.59>
- Shapira, N. A., Lessig, M. C., Goldsmith, T. D., Szabo, S. T., Lazoritz, M., Gold, M. S., & Stein, D. J. (2003). Problematic internet use: proposed classification and diagnostic criteria. *Depression and anxiety*, 17(4), 207–216.
- Şahin, C., & Korkmaz, Ö. (2011). İnternet bağımlılığı ölçeğinin Türkçe'ye uyarlanması. *Selçuk Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi Dergisi*, 32: 101-115.
- Şahin, E. S. (2007). Psikolojik İhtiyaçları Farklı Lise Öğrencilerinin Saldırganlık Düzeyleri. *Yayınlanmamış Yüksek Lisans Tezi*, Hacettepe Üniversitesi Sosyal Bilimleri Enstitüsü, Ankara.
- Şahin, M. (2014). Üniversite öğrencilerinde internet bağımlılığı ve saldırganlık. *Düşünen Adam*, 27(1), 43–52. <https://doi.org/10.5350/DAJPN2014270106>
- Taş, İ. (2018). Ergenlerde internet bağımlılığı ve psikolojik belirtilerin çeşitli değişkenler açısından incelenmesi. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi*, 6(1), 31-41. <https://doi.org/10.18506/anemon.310973>
- Topçu, Ç., & Erdur-Baker, Ö. (2010). The revised cyber bullying inventory (RCBI): Validity and reliability studies. *Procedia - Social and Behavioral Sciences*, 5, 660–664. <https://doi.org/10.1016/j.sbspro.2010.07.161>
- WHO (World Health Organization). (2020). *International Classification of Diseases 11th Revision (ICD-11): Gaming disorder*. Retrieved from <https://icd.who.int>
- Zhou, Z., Wang, M., Wang, Y., & Lei, L. (2020). Internet addiction and aggression among adolescents: A moderated mediation model. *Computers in Human Behavior*, 110, 106403. <https://doi.org/10.1016/j.chb.2020.106403>