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| Research Article / Araştırma Makalesi |

Examining Cyberbullying and Digital Citizenship of High School Students[1]

Lise Öğrencilerinin Siber Zorbalık ve Dijital Vatandaşlıklarının İncelenmesi

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Keywords
1. Cyberbullying
2. Digital citizenship
3. Cyber victimization
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Abstract

Purpose: This research aimed to determine the relationship between cyberbullying and digital citizenship of high school students. It also aims to reveal how cyberbullying and digital citizenship scores differ according to various sociodemographic variables and technology use.

Design/Methodology/Approach: The correlational survey model was used. The data for this study was collected in 2022 from 204 high school students (male = 103, female = 101) aged 13-18 from six schools in XXX city. The Cronbach Alpha reliability coefficient was calculated as .94 for cyberbullying and .79 for digital citizenship. Data were analyzed using correlation analysis, *t*-test, and one-way ANOVA.

Findings: According to the results, it was determined that there was no statistically significant relationship between students' cyberbullying and digital citizenship. Additionally, students' cyberbullying scores do not differ according to gender. However, it was revealed that female students' digital citizenship scores were statistically significantly higher than males. It has been determined that the cyberbullying level of students with higher family income levels is also higher, and digital citizenship does not differ according to income level. In addition, it was found that the digital citizenship scores of high school students who use phones are significantly higher than those who do not. The cyberbullying scores of those who use Facebook are significantly lower than those who do not use Facebook. The digital citizenship scores of students who use Twitter, Facebook, and Instagram are significantly lower than those who do not. Finally, WhatsApp users' digital citizenship scores were significantly higher than those who did not use WhatsApp.

Highlights: There is no statistically significant relationship between digital citizenship and cyberbullying. Additionally, cyberbullying does not differ by gender. However, female students' digital citizenship scores were higher than males. Cyberbullying scores of students with high family income were higher than those with low family income. The cyberbullying score of students who use Facebook is higher than those who do not. Finally, it was determined that the digital citizenship scores of those who use Facebook, Twitter, and Instagram are lower than those who do not.

Öz

Çalışmanın amacı: Bu araştırma lise öğrencilerinin siber zorbalıkları ile dijital vatandaşlıkları arasındaki ilişkiyi tespit etmeyi amaçlamaktadır. Ayrıca siber zorbalık ile dijital vatandaşlık puanlarının çeşitli sosyodemografik değişkenlere ve teknoloji kullanım durumuna göre nasıl farklılaştığını ortaya koymaktır.

Materyal ve Yöntem: Bu çalışmada ilişkisel tarama modeli kullanılmıştır. Bu çalışmanın verileri, 2022 yılında XXX ilinde altı farklı okuldan 13-18 yaşındaki 204 lise öğrencisinden toplanmıştır. Cronbach Alpha güvenirlik katsayısı siber zorbalık için .94, dijital vatandaşlık için .79 olarak hesaplandı. Veriler, korelasyon analizi, t-testi ve tek yönlü ANOVA kullanılarak analiz edilmiştir.

Bulgular: Bulgulardan elde edilen sonuçlara göre öğrencilerin siber zorbalıkları ile dijital vatandaşlıkları arasında istatistiki olarak anlamlı bir ilişki olmadığı tespit edilmiştir. Ayrıca öğrencilerin siber zorbalık puanları cinsiyete göre farklılaşmamaktır. Ancak kadın öğrencilerin dijital vatandaşlık puanlarının erkek öğrencilerden istatistiki olarak anlamlı düzeyde daha yüksek olduğu ortaya çıkmıştır. Aile gelir düzeyi daha yüksek olan öğrencilerin siber zorbalık düzeyinin de daha yüksek olduğu, dijital vatandaşlığın ise gelir düzeyine göre farklılaşmadığı tespit edilmiştir. Ayrıca telefon kullanan lise öğrencilerinin dijital vatandaşlık puanları kullanmayanlara göre anlamlı düzeyde daha yüksek olduğu bulunmuştur. Facebook kullananların siber zorbalık puanları, kullanmayanlara göre anlamlı düzeyde daha düşük çıkmıştır. Twitter, Facebook ve Instagram kullanan öğrencilerin ise kullanmayanlara göre dijital vatandaşlık puanları anlamlı düzeyde düşük çıkmıştır. Son olarak WhatsApp kullananların dijital vatandaşlık puanları kullanmayanlara göre anlamlı düzeyde daha yüksek bulunmuştur.

Önemli Vurgular: Dijital vatandaşlık ile siber zorbalık arasında istatistiki olarak anlamlı bir ilişki yoktur. Ayrıca siber zorbalık cinsiyete göre farklılaşmamaktadır. Ancak, kadın öğrencilerin dijital vatandaşlık puanları erkek öğrencilerden daha yüksek çıkmıştır. Aile geliri yüksek olan öğrencilerin siber zorbalık puanları, aile geliri düşük olanlardan daha yüksek çıkmıştır. Facebook kullanan öğrencilerin siber zorbalık puanları ise kullanmayanlardan daha yüksek çıkmıştır. Son olarak Facebook, Twitter ve Instagram kullananların dijital vatandaşlık puanlarının kullanmayanlardan daha düşük olduğu tespit edilmiştir.

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INTRODUCTION

As a result of the need for internet and information technologies, the fact that these technologies make life easier and are attractive to individuals, the time spent in the virtual environment is constantly increasing. According to Turkish Statistical Institute (TURKSTAT, 2021) data, the rate of households with access to the internet has reached 92%, and the rate of individuals using the internet has reached 82.6%. This increase is likely due to many reasons, such as the opportunities offered by technology, its use as an entertainment tool, its convenience in daily life, and the restrictions during the pandemic. According to research, there has been an increase in problematic internet usage rates with the pandemic (Baltacı et al., 2021). Adolescents spend 3-5 hours on the internet daily, and having an internet connection at home (86.3%) and on their mobile phones (88.6%) allows them to have easier access to the internet and information technologies (Sezer Efe et al., 2021). In the USA, it has been observed that there has been a significant increase in individuals' internet usage rates during the pandemic (Statista, 2021).

The increase in internet use may cause individuals who use the internet not to spend enough quality time with their social circle and to experience negative experiences such as cyberbullying (Korkmaz, 2016). Considering the developmental periods, it is seen that the most vulnerable age ranges against risks are late childhood and adolescence (Bayraktar, 2017) and that among adolescents who experience sudden emotional changes in their social environment during this period, aggression increases. Also, they become ruthless during these periods (Li, 2005). In recent research, internet use of more than three hours per day was associated with psychosocial symptoms (Li et al., 2023). Considering this evidence, understanding cyberbullying behavior is of great importance. In this context, this research focuses on the cyberbullying variable, how this variable is related to digital citizenship, and how these variables differ according to various sociodemographic variables and technology use.

Cyberbullying

Bullying is the intentional exposure of an individual to negative statements or actions by people who are stronger or more numerous (Olweus, 1993). Bullying includes actions such as verbal attacks, physical attacks, intimidation, threats, and exclusion. As students moved their social lives to the internet, bullying moved to the cyber environment. According to Smith et al. (2008), cyberbullying is usually defined as an aggressive, intentional act or behavior carried out repeatedly and over time by a group or an individual against a victim who cannot easily defend him or herself. Threats, insulting messages, social media posts, accusations, humiliating actions, or trying to take over someone's account are considered cyberbullying. It can be said that the opportunity to hide one's identity is a trigger for people who commit cyberbullying, and past experiences are also effective in cyberbullying (Arıcak, 2009; Erbiçer, 2017). Individuals' enjoyment of behaving aggressively, wanting to perform behaviors that they cannot express in real life in the virtual environment, and wanting to take revenge on people who mistreat them on the internet are some of the reasons for cyberbullying when the risk of being caught is less (Kowalski et al., 2012).

It is suggested that the increase in cyberbullying, problematic internet use, and risky internet behaviors are related to the duration of internet use (Ünver & Koç, 2017). Erbiçer (2017) concluded that males cyberbullied more than female students. Li et al. (2023)'s research conducted in China revealed that 37.5% of students aged 11-16 admitted that they were involved in cyberbullying. There are also studies indicating that cyberbullying varies depending on the type of school. It has been revealed that students studying in Anatolian high schools (high schools that implement both social and science curricula in Türkiye) engage in more cyberbullying behaviors and are exposed to more cyberbullying behaviors than students studying in Imam-Hatip or Vocational high schools (Özer & Şad, 2021). In another study, it was stated that cyberbullying increased due to the ability to hide one's identity in games and the deficiencies in server hosting services (Tang & Fox, 2016).

While some of those exposed to cyberbullying have the psychological resilience to reduce their anger, some of them may form negative thoughts and feel lonely (Ortega et al., 2009). It is also suggested that exposure to cyberbullying causes high fear and sadness in participants (Caravita et al., 2016). It can also be said that it causes serious problems such as anger, academic failure, loneliness, low self-esteem, and suicide (Beran & Li, 2005). Cyber victims may feel lonely because messages and photos can be easily captured, modified, and shared with people through various software (Storm & Storm, 2006). Cyberbullies can hide their identities, obtain information about the victim, and use that information to humiliate the cyber victim (Tokunaga, 2010). It is stated that the ability of the cyberbully to hide their identity increases the fear experienced by the cyber victim, and in case the bullying turns into sexual exploitation, it can prevent the cyber victim from sharing their experiences with others (Eroğlu, 2011). In a recent study, it has been suggested that bully-victims are the most vulnerable to psychosocial and psychosomatic symptoms (Li et al., 2023).

Studies on this subject show that cyberbullying and cyber victimization are universal problems and are not to be underestimated. Considering that the use of technology and the internet by high school students is increasing daily and the average age of technology and internet misuse is decreasing, it is clear that the issue of adolescents being cyber bullies or victims has become an essential factor. In order to avoid many adverse physical, cognitive, psychological, and social effects, the conscious use of technology, which has a facilitating role in many areas of life, and skills such as digital literacy and digital citizenship have become especially important for children and adolescents. In this context, determining the relationship between and digital citizenship is the focus of this study.

Digital Citizenship

The concept of digital citizenship, which is included in the literature on the correct and conscious use of online technologies by primary and high school students (Çubukçu & Bayzan, 2013), is defined as the responsible behavioral norms of individuals regarding the use of technology (Mossberger et al., 2007). Martin et al. (2020) define digital citizenship as using knowledge and skills to exhibit appropriate behavior in the online environment using digital technology. All individuals using the internet should be aware of the consequences of cyberbullying attempts made against them and should have digital citizenship skills (Horzum & Ayas, 2014). Ribble (2011) states that due to the decreasing age of using digital tools and the innovations and transformations brought by the age, the perception of digital citizenship should start from childhood. They discussed digital citizenship in nine dimensions: digital access, digital communication, digital commerce, digital etiquette, digital law, digital security, digital literacy, digital health and wellness, and digital rights and responsibilities (See Figure 1). In a recent systematic review, Shi et al. (2023) revealed four main factors (demographic, internet use, psychological, and social) affecting digital citizenship.

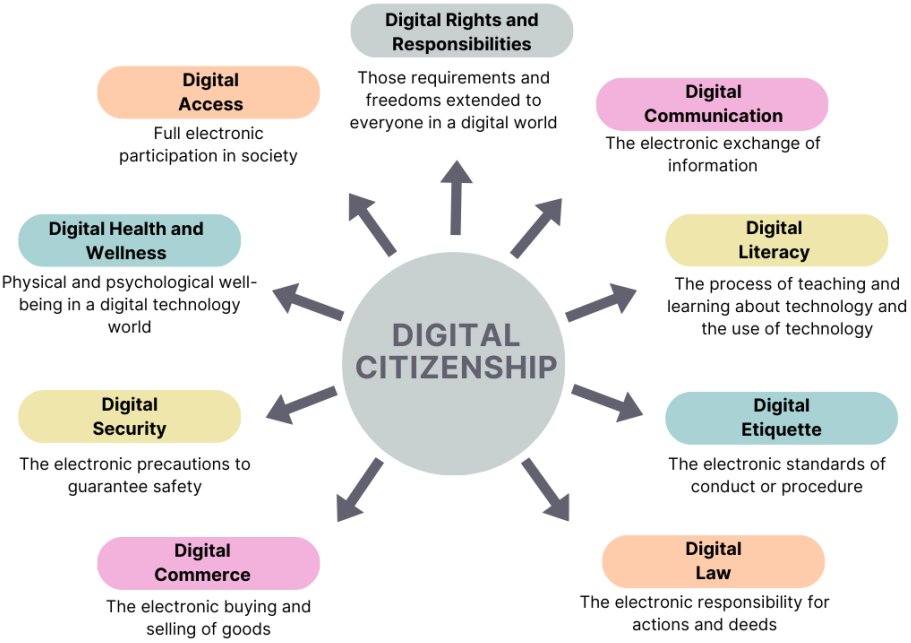

Figure 1. Digital citizenship dimensions

ISTE (The International Society for Technology in Education), an essential standard regarding digital citizenship, is an association in the USA that deals with using technology in education in the context of information security. In order to implement this unity in education and training, NETS (The National Educational Technology Standards) has created some norms. Many international companies produce applicable content regarding rules and guideline standards, ethical norms when accessing the internet, copyright law, and ensuring online privacy so that internet users can use the internet consciously and safely.

In recent years, the time spent in digital environments and the increase in the use of mobile devices have led individuals to share their private information. Therefore, developing digital citizenship skills will reduce cyberbullying. Existing research in the literature on this subject needs to be expanded. In this context, this study aims to determine high school students' cyberbullying and digital citizenship scores and the relationship between these variables. It also aims to examine whether high school students' cyberbullying and digital citizenship scores differ according to various sociodemographic variables and technology use. Technology use was discussed as the type of device used and preferred social media tools. When deciding on the social media tools to focus on, we chose the tools that we believed were frequently preferred for the relevant age group in Türkiye, based on the reports of Kemp (2023) and TURKSTAT (2023). The research questions are organized as follows:

1. Is there a statistically significant relationship between cyberbullying and digital citizenship of high school students?
2. Do high school students' cyberbullying and digital citizenship scores differ statistically significantly according to sociodemographic variables (age, gender, school type, family income)?
3. Is there a statistically significant difference according to the technology use of high school students (type of technological device they use [tablet, computer, phone], social media tools they use [Facebook, Instagram, Snapchat, Twitter, WhatsApp, YouTube])?

METHOD

Research Design

The correlational survey model, one of the quantitative research methods, was used in this research. The correlational survey model aims to determine how much change between two or more variables (Fraenkel et al., 2012). In the correlational survey

model, whether two or more variables differ together; If there is a difference, its degree is determined, and the relationships between the variables are determined and examined (Büyüköztürk et al., 2012; Karasar, 2011).

Participants

The data of the research were collected in the last months of 2022 from 204 high school students between the ages of 13-18 from six schools in XXX city. Maximum diversity was achieved by collecting data from different types of high schools and different grade levels. The demographic characteristics of the students participating in the research are presented in Table 1.

Table 1. Distribution of Participants According to Demographic Characteristics

Variables	Category	*f*	%
Gender	Female	101	49.5
	Male	103	50.5
Age	13	3	1.5
	14	43	21.1
	15	44	21.6
	16	70	34.3
	17	36	17.6
	18	8	3.9
School Type	Vocational	43	21.1
	Anatolian*	59	28.9
	Imam Hatip**	70	34.3
	Multi-Program***	27	13.2
	Other (Science, Social Sciences)	5	2.5
Family Income[a]	5.000 TL and below	40	19.6
	5.001 TL –10.000 TL	60	29.4
	10.001 TL-15.000TL	52	25.5
	15.001TL-20.000TL	26	12.7
	20.001 TL and above	26	12.7

Note. We considered the minimum wage in 2022 as the lowest group. We determined the other group range accordingly. * High school that implements a curriculum focused on Science and Social, ** High school that implements a religious education program in addition to science and/or social education program, *** High school that implements both Anatolian high school and vocational high school programs.

Data Collection Tools

The data of this study were collected using the Demographic Information Form (sociodemographic: age, gender, school type, family income level; technology use: type of technological device [tablet, computer, phone] used, social media tools [Facebook, Twitter, Snapchat, YouTube, Instagram, WhatsApp] used), Scale and Digital Citizenship Scale. The Cyberbullying Scale was developed by Garaigordobil (2015), and Eraslan Çapan et al. (2019) adapted to Turkish culture. The scale consists of 42 items and three sub-dimensions: cyberbullying, cyber victimization, and witnessing. The adaptation studies calculated internal consistency coefficient of the total score, bullying, victimization, and witnessing subscales as 0.94. In this study, according to the scale's total score, it was 0.94; according to the cyberbullying, cyber witnessing, and cyber victimization subscales, it was calculated as 0.78, 0.97, and 0.79, respectively. The Digital Citizenship Scale consists of 49 items and eight factors (digital communication, digital rights and responsibility, critical thinking, digital participation, digital security, digital skills, ethics, and digital commerce) developed by Kuş et al. (2017). The original study stated that the internal consistency coefficient of the scale was 0.73-0.83. This study calculated the Cronbach Alpha reliability coefficient as 0.79 according to the digital citizenship total score.

Data Analysis

We analyzed the data with correlation analysis and comparison tests to find answers to the research questions. Skewness and Kurtosis values were calculated for the normality test to determine whether the cyberbullying and digital citizenship scores were normally distributed. The Skewness and Kurtosis coefficients range between -1.5 and 1.5 and can be used as acceptable limit values for normal distribution (Tabachnick & Fidell, 2013). In this context, Pearson Correlation analysis was preferred since Skewness and Kurtosis values were in the relevant range (cyberbullying [Skewness = 1.39; Kurtosis = 1.27], digital citizenship [Skewness = .11; Kurtosis = -.56]), and the data were normally distributed. Additionally, *t*-test and one-way ANOVA analyses revealed how cyberbullying and digital citizenship differ according to technology use and various sociodemographic variables. The data showed normal distribution according to the relevant subgroups. Finally, post-hoc tests such as Tukey and Dunnett's T3 were used to determine which group caused the significant difference in income level. Additionally, Bonferroni correction was made to prevent Type-1 error in multiple group comparisons. If the number of groups compared was five, we took the *p* value as 0.05/10 (e.g., 1↔2, 1↔3, 1↔4, 1↔5, 2↔3, 2↔4, 2↔5, 3↔4, 3↔5, 4↔5) = 0.003, and if the number of groups was six, we took it as 0.05/15.

FINDINGS

Relationship Between Cyberbullying and Digital Citizenship

Correlation analysis was performed to determine whether there is a relationship between cyberbullying and digital citizenship. The results are given in Table 2.

Table 2. Findings on the Correlation Between Cyberbullying and Digital Citizenship

Variables	n	$\bar{X}$	SD	1	2
1. Digital Citizenship	204	3.41	.37	1	-.126
2. Cyberbullying	204	1.25	.32	-.126	1

When Table 2 is examined, it is seen that there is non-significant relationship between the students' cyberbullying ($\bar{X}$ = 1.25, SD = .32) and digital citizenship ($\bar{X}$ = 3.41, SD = .37). This finding shows that as high school students' digital citizenship skills increase, their cyberbullying scores decrease and vice versa; However, it indicates that this increase and decrease did not occur at a significant level.

Cyberbullying and Digital Citizenship According to Various Sociodemographic Variables

We conducted *t*-test and one-way ANOVA analyses to test whether high school students' cyberbullying and digital citizenship scores differ according to age, gender, school type, and family income level. The findings obtained are presented under subheadings.

Cyberbullying and Digital Citizenship of Students by Age

A one-way ANOVA test was conducted to examine the cyberbullying and digital citizenship of the students according to their age. The findings obtained are presented in Table 3.

Table 3. Comparison of Students' Cyberbullying and Digital Citizenship by Age

Age	n	$\bar{X}$	SD		Sum of Squares	Mean Square	F	*p*
Cyberbullying								
13	3	1.07	.08	Between groups	.192	.038	.368	.870
14	43	1.22	.34	Within groups	20.646	.104		
15	44	1.26	.28	Total	20.838			
16	70	1.26	.31					
17	36	1.28	.36					
18	8	1.20	.22					
Digital Citizenship								
13	3	3.39	.36	Between groups	1.670	.334	2.527	.030*
14	43	3.31	.31	Within groups	26.178	.132		
15	44	3.41	.36	Total	27.849			
16	70	3.38	.41					
17	36	3.57	.32					
18	8	3.60	.34					

Note. Bonferroni correction was made for post hoc analyses, *p <.003.

Table 3 shows that the students' cyberbullying (p = .87) and digital citizenship scores (p = .03) do not differ statistically according to age.

Cyberbullying and Digital Citizenship of Students by Gender

The findings obtained from the independent samples *t*-test conducted to determine whether there is a significant difference in the students' cyberbullying and digital citizenship scores according to their gender are given in Table 4.

Table 4. Comparison of Students' Cyberbullying and Digital Citizenship by Gender

Variables	Gender	n	$\bar{X}$	SD	t	df	*p*
Cyberbullying	Female	101	1.25	.29	-.231	202	.818
	Male	103	1.26	.34			
Digital Citizenship	Female	101	3.52	.37	4.114	202	.000*
	Male	103	3.31	.34			

* p < .01

According to Table 4, the average score for cyberbullying is 1.26 for male students and 1.25 for female students; the average score for digital citizenship is 3.31 for male students and 3.52 for female students. This difference between the scores is not statistically significant in terms of cyberbullying ($t_{(202)}$ = -.231; p > 0.05). A significant difference was detected in terms of digital citizenship ($t_{(202)}$ = 4.114; p < 0.05). These findings show that the cyberbullying scores of high school students do not differ statistically according to gender, and the cyberbullying scores of male and female students are close to each other. It is also understood that the digital citizenship scores of female students are statistically significantly higher than male students.

Cyberbullying and Digital Citizenship of Students by School Type

One-way ANOVA test was applied to determine whether students' cyberbullying and digital citizenship scores differ according to school type. The findings obtained are presented in Table 5.

Table 5. Comparison of Students' Cyberbullying and Digital Citizenship by School Type

School Type	n	$\bar{X}$	SD		Sum of Squares	Mean Square	F	p
Cyberbullying								
Vocational	43	1.25	.33	Between groups	1.021	.255	2.564	.040*
Anatolian	59	1.27	.30	Within groups	19.816	.100		
Multi-Program	27	1.41	.35	Total	20.838			
Imam Hatip	70	1.19	.29					
Other (Science, Social Sciences)	5	1.16	.15					
Digital Citizenship								
Vocational	43	3.38	.31	Between groups	1.221	.305	2.280	.062
Anatolian	59	3.44	.37	Within groups	26.628	.134		
Multi-Program	27	3.45	.39	Total	27.849			
Imam Hatip	70	3.26	.33					
Other (Science, Social Sciences)	5	3.70	.36					

Note. Bonferroni correction was made for post hoc analyses, *p < .005.

According to Table 5, it can be seen that students' cyberbullying (p = .04) and digital citizenship scores (p = .062) do not differ statistically according to school type.

Cyberbullying and Digital Citizenship of Students by Family Income Levels

One-way ANOVA test was applied to examine students' cyberbullying and digital citizenship scores according to their family income. The findings obtained are presented in Table 6.

Table 6. Comparison of Students' Cyberbullying and Digital Citizenship by Family Income Levels

Income Level**	n	$\bar{X}$	SD		Sum of Squares	Mean Square	F	p
Cyberbullying								
5.000 TL and below	40	1.17	.23	Between groups	3.398	.850	9.694	.000*
5.001 TL –10.000 TL	60	1.17	.22	Within groups	17.440	.088		
10.001 TL-15.000 TL	52	1.19	.27	Total	20.838			
15.001TL-20.000 TL	26	1.42	.45					
20.001 TL and above	26	1.52	.36					
Digital Citizenship								
5.000 TL and below	40	3.49	.33	Between groups	1.990	.498	3.829	.005*
5.001 TL –10.000 TL	60	3.52	.36	Within groups	25.859	.130		
10.001 TL-15.000 TL	52	3.31	.33	Total	27.849			
15.001TL-20.000 TL	26	3.41	.39					
20.001 TL and above	26	3.29	.42					

Note. Bonferroni correction was made for post hoc analyses, *p <.005, **We considered the minimum wage in 2022 as the lowest group. We determined the other group range accordingly.

Regarding cyberbullying scores, since the variances of the groups were not homogeneous according to the Levene test result (p = .000), the Dunnett's T3 test was applied and the findings are presented in Table 6. Accordingly, the cyberbullying scores of students whose family income is 5.000 TL and below, 5.001-10.000 TL, and 10.001-15.000 TL, differ significantly from those of students whose family income is 20.001 TL and above. This finding shows that students with higher family income levels have higher scores of cyberbullying.

In the analyses regarding digital citizenship, since the variances of the groups were homogeneous according to the Levene test (p = .490), the Tukey test was applied and the findings presented in Table 6. The results showed that there is no significant difference between the digital citizenship scores of students' according to family income level (p = .005).

Cyberbullying and Digital Citizenship According to Technology Use

In this study, students' use of technology is discussed according to their preference for technological devices and whether they use social media tools. Subgroups in terms of device type show a normal distribution; Comparison tests were made for the variables of phone, tablet, computer, and social media tools such as Facebook, Twitter, Instagram, SnapChat, WhatsApp, and YouTube, and the findings are presented below.

Cyberbullying and Digital Citizenship of Students According to the Type of Technological Devices They Used

The findings obtained as a result of the independent samples t-test conducted according to the usage status of technological devices (used/not used) are presented in Table 7.

Table 7. Comparison of Students' Cyberbullying and Digital Citizenship by Device Type

Device Type	Usage (Yes/No)	Cyberbullying						Digital Citizenship					
		n	$\bar{X}$	SD	*df*	*t*	*p*	n	$\bar{X}$	SD	*df*	*t*	*p*
Smartphone	Y	177	1.27	.32	202	1.821	.070	177	3.45	.35	202	3.397	.001**
	N	27	1.15	.27				27	3.19	.37			
Tablet	Y	34	1.35	.42	39.62	1.53	.132	34	3.32	.42	202	-1.59	.113
	N	170	1.23	.29				170	3.43	.35			
Computer	Y	57	1.34	.38	81.75	2.31	.023*	57	3.44	.33	202	.623	.534
	N	147	1.22	.28				147	3.40	.38			

* p < .01

According to Table 7, while students' cyberbullying scores do not differ depending on whether they use a phone or not, their digital citizenship scores differ in favor of those who use a phone. In addition, students' cyberbullying and digital citizenship scores do not differ depending on whether they use a tablet or not. Finally, cyberbullying scores of computer users are higher than those who do not use computers, while their digital citizenship scores do not differ. These findings show that the digital citizenship scores of high school students who use phones are significantly higher. It is also understood that the cyberbullying scores of students who use computers are significantly higher than those who do not use.

Cyberbullying and Digital Citizenship of Students According to the Social Media Tools They Used

The findings obtained as a result of the independent samples t-test conducted to reveal whether there are differences in the cyberbullying and digital citizenship scores according to the social media tools preferred by high school students are presented in Table 8.

Table 8. Comparison of Students' Cyberbullying and Digital Citizenship Scores by Social Media Tools

Usage (Yes/No)		Cyberbullying						Digital Citizenship					
		n	$\bar{X}$	SD	df	*t*	*p*	n	$\bar{X}$	SD	df	*t*	*p*
Instagram	Y	152	1.28	.33	202	1.89	.060	152	3.38	.35	202	-2.35	.020*
	N	52	1.18	.27				52	3.52	.40			
Youtube	Y	108	1.27	.32	202	.70	.484	108	3.46	.33	202	1.73	.085
	N	96	1.23	.31				96	3.37	.40			
Twitter	Y	101	1.27	.32	202	.89	.373	101	3.30	.33	202	-4.69	.000**
	N	103	1.23	.31				103	3.53	.37			
Facebook	Y	38	1.37	.42	45.17	2.08	.043*	38	3.26	.31	63.90	-3.21	.002**
	N	166	2.22	.28				166	3.45	.37			
Snapchat	Y	27	1.26	.27	202	.21	.829	27	3.39	.31	202	-.36	.717
	N	177	1.25	.32				177	3.42	.37			
WhatsApp	Y	132	1.24	.32	202	-.86	.390	132	3.49	.35	202	4.44	.000**
	N	72	1.28	.30				72	3.26	.34			

* p < 0.05, ** p < 0.01

According to Table 8, there is no statistically significant difference in the cyberbullying scores of high school students who use Instagram, YouTube, Twitter, Snapchat, or WhatsApp compared to students who do not. However, the cyberbullying scores of high school students who use Facebook are significantly lower than those who do not use. When the findings regarding digital citizenship were examined, it was seen that there was no significant difference in the digital citizenship scores of students who used Snapchat and YouTube compared to those who did not use it. The digital citizenship scores of students who use Twitter,

Facebook, and Instagram are significantly lower than those who do not use. The digital citizenship scores of students who use WhatsApp are significantly higher than those who do not use WhatsApp.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This research aimed to determine the relationship between high school students' digital citizenship and cyberbullying. In this study, the correlational survey model was used. In addition, cyberbullying and digital citizenship scores of high school students were examined according to various sociodemographic variables and technology usage status. The results were obtained as a result of correlational analysis and comparison tests. The findings obtained as a result of the correlation analysis showed that there was no relationship between high school students' digital citizenship and cyberbullying. In their research with secondary school students, Öztürk (2019) concluded that there was a low positive relationship between digital citizenship and cyberbullying. In their research with university students, Kaptangil and Çalışır (2023) found a statistically significant positive relationship between digital citizenship behavior and cyberbullying attitude. They found a negative relationship between the digital security and ethics sub-dimensions of digital citizenship. Zhong et al. (2021) found a negative relationship between university students' digital citizenship and cyberbullying but found that there was no relationship with cyber exposure. Similar studies conducted with young people found a negative relationship between digital citizenship, cyberbullying, and cyber victimization (Hussain & Shah, 2021; Verma & Garg, 2023). According to the results of another study conducted with adults, it was observed that there was a significant negative relationship between cyberbullying and digital citizenship (Karakuş & Turan, 2022). Sakallı (2015) concluded that there was a positive, moderate, and statistically significant relationship between cyberbullying tendencies and digital citizenship scores of classroom teacher candidates. Considering the results we obtained in the study and the existing evidence in the literature, it is noticeable that there are different results (negative, positive, or no correlation) regarding the relationship between digital citizenship and cyberbullying. These different results in the literature show that new research is still needed. Meta-analysis can be conducted to combine all these different results in the literature and reveal more apparent evidence regarding the relationship. Additionally, experimental research can be conducted based on various digital citizenship education programs as the independent variable and cyberbullying as the independent variable.

Another finding obtained in this study is that the cyberbullying scores of high school students do not differ according to gender and age. Many similar studies are showing that the gender variable does not have a significant effect on cyberbullying. Kozan and Bulut-Özek (2019) concluded that there is no difference in digital citizenship and cyberbullying sensitivities according to the gender variable. Similarly, Balakrishnan (2015) revealed that cyberbullying behaviors do not differ according to gender and age. Contrary to these studies, Wright and Wachs (2023) found that male students are more likely to cyberbully and are exposed to cyberbullying than female students in primary school but that females witness cyberbullying more often than males in university. On the other hand, Mohamad's (2023) study with young people found that cyberbullying differed according to gender in favor of males. In the research conducted by Karakuş and Turan (2022), cyberbullying behavior showed significant differences according to age and gender. According to relevant research, males have higher scores of cyberbullying than females, and cyberbullying decreases as age increases. Therefore, although there is strong evidence that males bully more than females, this may vary depending on age and cultural differences, and therefore, generalizations should be avoided.

Another finding we obtained in our study is that cyberbullying and digital citizenship do not differ according to high school type. Similarly, Öztürk (2019) revealed that there was no significant difference in students' cyberbullying tendencies according to school type and monthly income variables. Since socioeconomic level is a factor that may affect access to technological devices and the internet, it is important to examine its relationship with cyberbullying. When the findings regarding family income were examined, it was revealed that the cyberbullying of students with higher family income levels was higher, and the digital citizenship scores of the group with the highest family income level were significantly lower than the students with relatively lower family income levels. The high rate of cyberbullying among students with high family incomes may be related to the individuals' access easier to the internet and technological devices, which may have reduced the level of digital citizenship. Balakrishnan (2015) found that internet frequency significantly predicts cyberbullying. However, we need more convincing scientific information on this subject. Therefore, in-depth qualitative research to be conducted with high school students with high family income and their parents can reveal why digital citizenship is low, and cyberbullying is high in the relevant individuals. Identifying the causes can contribute to the prevention of cyberbullying.

The study also examined the digital citizenship levels of high school students in terms of various variables such as gender, age, school type, and family income. It was observed that there was a significant difference in favor of females according to gender, but there was no difference according to school type. A systematic review revealed that individuals' age and gender factors predict digital citizenship (Shi et al., 2023). In another systematic review, Ali et al. (2023) revealed that a significant portion of the relationships identified regarding sociodemographic variables affecting digital citizenship were insignificant. Hollandsworth et al. (2017) emphasize that educators and administrators should develop digital citizenship awareness at an earlier age. According to some studies, gender does not affect digital citizenship behavior (Er Türküresin, 2022; Akcil & Bastas, 2021; Kabataş, 2019). Some studies reach similar results to this study and show that the effect of gender on digital citizenship is in favor of females (Korucu & Totan, 2020; Tanoğlu, 2019). Therefore, although we concluded in our study that digital citizenship does not differ by gender, there is also evidence to the contrary. Also, the conclusions of systematic reviews are not consistent in this context. As a result, we can say that stronger evidence is needed to claim that digital citizenship differs by gender.

In this study, it was determined that whether high school students use smartphones in daily life does not create a significant difference in their cyberbullying scores. However, it creates a significant difference in their digital citizenship scores. In addition, it was observed that whether they used a tablet or not did not make a significant difference in cyberbullying and digital citizenship. It was observed that computer users had a significantly higher rate of cyberbullying than those who did not use computers. However, there was no significant difference in terms of digital citizenship. According to the findings regarding social media tools, which are one of the critical factors determining technology usage, the cyberbullying scores and digital citizenship scores of high school students who use Facebook are significantly lower than those who do not use Facebook. The digital citizenship scores of students who use Twitter and Instagram are significantly lower than those who do not. The digital citizenship scores of students who use WhatsApp are significantly higher than those who do not use WhatsApp. As the rate of using social media increases, cyberbullying and cyber victimization may also increase. Kırlı (2020) revealed that social media has a high impact on high school students regarding cyberbullying, and exposure to cyberbullying isolates students and negatively affects their emotional and social communication.

Longitudinal studies can be conducted to examine the interests and tendencies of students who are intertwined with the digital world and use technology intensively. For example, cyberbullying, digital citizenship levels, and technology usage habits can be measured at the beginning of each academic year for four years in universities, high schools, or secondary schools. In this context, in new studies, the effects of cyberbullying and the reflection of digital citizenship skills on individuals' behavior can be addressed from different perspectives. For this and similar studies, it is important to re-examine the variables in question with larger samples to obtain more convincing results. While some studies show that students are connected to the digital world and are at risk, it is clear that there is a need to increase the participation of schools in raising globally responsible digital citizens. It is also clear that schools should integrate digital citizenship into their educational programs (Capuno et al., 2022). Research shows that approximately half of the students' internet/social media usage is monitored by their parents, and approximately two-thirds of the students are not taught digital citizenship in their schools (Martin et al., 2020). Therefore, providing students with in-depth information on internet usage is essential in the context of opportunities and risks. It should be taken into consideration that cyberbullying and digital citizenship are critical issues for students at all grade levels, and all relevant organizations must include more conferences, seminars, and similar events in their activities.

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Statements of publication ethics

I/We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

Researchers' contribution rate

The study was conducted and reported with equal collaboration of the researchers.

Ethics Committee Approval Information

Ethics Committee Approval Document of this research was provided by Mardin Artuklu University in 16.03.2022 by Ethics Committee with number 2022-3, 31.05.2022-49232.

REFERENCES

Akcil, U., & Bastas, M. (2021). Examination of university students' attitudes towards e-learningduring the COVID-19 pandemic process and the relationship of digital citizenship. *Contemporary Educational Technology, 13*(1), ep291. https://doi.org/10.30935/cedtech/9341

Ali, I., Butt, K., & Warraich, N. F. (2023). Factors effecting digital citizenship in education sector: A systematic review and future direction. *Education and Information Technologies*. https://doi.org/10.1007/s10639-023-11811-8

Arıcak, O. T. (2009). Psychiatric symptomatology as a predictor of cyberbullying among university students. *Eurasian Journal of Educational Research*, 34, 167-184.

Balakrishnan, V. (2015). Cyberbullying among young adults in Malaysia: The roles of gender, age and internet frequency. *Computers in Human Behavior, 46*, 149-157. https://doi.org/10.1016/j.chb.2015.01.021

Baltacı, Ö., Akbulut, Ö. F., & Yılmaz, E. (2021). A current risk factor in problematic internet use: The covid-19 pandemic. *Humanistic Perspective, 3*(1), 97-121. https://doi.org/10.47793/hp.872503

Bayraktar, F. (2017). Online risks and parental mediation strategies comparison of Turkish children/adolescents who live in Turkey and Europe. *Education and Science, 42*(190), 25-37. https://doi.org/10.15390/EB.2017.6323

Beran, T., & Li, Q. (2005). Cyber-harassment: A study of a new method for an old behavior. *Journal of Educational Computing Research, 32*(3), 265-277. https://doi.org/10.2190/8YQM-B04H-PG4D-BLLH

Büyüköztürk, Ş., Çakmak, E., Akgün, Ö., Karadeniz, Ş., & Demirel, F. (2012). *Bilimsel araştırma yöntemleri [Scientific Research Methods]*. Pegem Akademi.

Capuno, R., Suson, R., Suladay, D., Arnaiz, V., Villarin, I., & Jungoy, E. (2022). Digital citizenship in education and its implication. *World Journal on Educational Technology: Current Issues, 14*(2), 426-37.

Caravita, S., Colombo, B., Stefanelli, S., & Zigliani, R. (2016). Emotional, psychophysiological and behavioral responses elicited by theexposition to cyberbullying situations: Two experimental studies. *Psicologia Educativa, 22*(1). 49-59. https://doi.org/10.1016/j.pse.2016.02.003

Çubukçu, A., & Bayzan, Ş. (2013). Perception of digital citizenship in Turkey and methods of increasing this perception by using the internet conscious, safe and effective. *Middle Eastern & African Journal of Educational Research, 5*(148), 148-174.

Er Türküresin, H. (2022). Cinsiyetin dijital vatandaşlık davranış düzeyi üzerindeki etkisinin meta analiz yöntemiyle araştırılması [Investigation of the effect of gender on digital citizenship behaviour level through meta-analysis method]. *Journal of Bayburt Education Faculty (BAYEF), 17*(35), 898-916. https://doi.org/10.35675/befdergi.799791

Eraslan Çapan, B., Bakioğlu, F., & Kırkteke, S. (2020). Adaptation of Cyber Bullying Scale to Turkish culture: Psychometric properties. *Anatolian Journal of Psychiatry, 21*(Suppl.1), 39-47. https://doi.org/10.5455/apd.57705

Erbiçer, E. S. (2017). *Üniversite öğrencilerinin siber zorbalık ve siber mağduriyet düzeylerinin sosyal uyuma ve bazı kişisel değişkenlere göre incelenmesi [Examination of cyber bullying and cyber victimization among university students according to social adjustment and certain personal variables]* (Doctoral dissertation). Yıldız Teknik University.

Eroğlu, Y. (2011). *Koşullu öz-değer, riskli internet davranışları ve siber zorbalık/mağduriyet arasındaki ilişkinin incelenmesi [The investigation relationships among contingencies of self-worth, risky internet behaviors, and cyberbullying/cybervictimization]* (Master's Thesis). Sakarya University.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education*. McGraw-hill.

Garaigordobil, M. (2017). Psychometric properties of the cyberbullying test, a screening ınstrument to measure cybervictimization, cyberaggression, and cyberobservation. *Journal of Interpersonal Violence, 32*(23). 3556-3576. https://doi.org/10.1177/0886260515600165

Hollandsworth, R., Donovan, J., & Welch, M. (2017). Digital citizenship: You can't go home again. *TechTrends, 61*, 524-530. https://doi.org/10.1007/s11528-017-0190-4

Horzum, M. B., & Ayas, T. (2014). Orta öğretim öğrencilerin psikolojik belirtilere göre sanal zorba ve sanal mağdur düzeylerinin yordanması [Prediction of cyberbully and cyber victimization levels of secondary school students according to psychological symptoms]. *Online Journal of Technology Addiction and Cyberbullying, 1*(2), 21-36.

Hussain, F., & Shah, S. A. A. (2021). Understanding the perception of digital citizenship and its impact on cyber bullying among Pakistani Youth. *Pakistan Review of Social Sciences (PRSS)*, *2*(2), 7-18.

Kabataş, S. (2019). Öğretmen adaylarının dijital vatandaşlık algılarının yaşam boyu öğrenmetutumları ve e-öğrenmeye hazır bulunuşluğu açısından değerlendirilmesi [Evaluation of teacher candidates' perceptions of digital citizenship in terms of lifelong learning attitudes] (Master's Thesis]. Bartın University.

Kaptangil, K., & Çalışır, İ. K. (2023). *The mediating role of social media addiction in the relationship between digital citizenship and cyber bullying.* IV. ASC-2022/Fall Congress Hosted by-Change & Shaping the Future: Proceeding Book (p.44). Holistence Publications.

Karakuş, S., & Turan, S. G. (2022). Yetişkinlerin siber zorbalık davranımları ile dijital vatandaşlık becerileri arasındaki ilişkinin incelenmesi [Examining the relationship between adults' cyber bullying behaviors and digital citizenship skills]. *Pamukkale University Journal of Social Sciences Institute*, 48, 409-427.

Karasar, N. (2011). Bilimsel araştırma yöntemi. Nobel Yayınevi.

Kemp, S. (2023, Feb 18). *Digital 2023: Turkey.* We are Social. Retrieved from https://datareportal.com/reports/digital-2023-turkey on 28 Dec 2023.

Kırlı, E. S. (2020). Sosyal medya ortamlarında siber zorbalık: Lise öğrencilerinin siber zorbalık deneyimlerinin incelenmesi [Cyber bullying in social media platforms: examination of cyberbullying experiences among high school students]. *e-Journal of New Media, 4*(1), 24-39.

Korkmaz, A. (2016). Siber zorbalık: Fizikselden sanala yeni şiddet [Cyber bullying: new violence from physical to virtual]. *Kurgu, 24*(2), 74-85.

Korucu, A. T., & Totan, H. N. (2019). Researching into a course of ınformation technologiesand software in the context of digital citizenship through student opinions. *Participatory Educational Research, 6*(1), 84-97.

Kowalski, R., Limber, S., & Agatston, P. (2012). *Cyberbullying: Bullying in the digital age*. John Wiley & Sons.

Kozan, M., & Bulut-Özek, M. (2019). Böte bölümü öğretmen adaylarının dijital okuryazarlık düzeyleri ve siber zorbalığa ilişkin duyarlılıklarının incelenmesi [Examination of department of CEIT teacher candidates' digital literacy levels and cyberbullying sensitivities]. *Fırat University Journal of Social Sciences, 29*(1), 107-120.

Kuş, Z., Güneş, E., Başarmak, U. & Yakar, H. (2017). Gençlere yönelik dijital vatandaşlık ölçeğinin geliştirilmesi: geçerlik ve güvenirlik çalışması [Development of a Digital Citizenship Scale for youth: A validity and reliability study]. *Journal of Computer and Education Research, 5*(10), 298-316. https://doi.org/10.18009/jcer.335806

Li, J., Wu, Y., & Hesketh, T. (2023). Internet use and cyberbullying: Impacts on psychosocial and psychosomatic wellbeing among Chinese adolescents. *Computers in Human Behavior*, 138, 107461. https://doi.org/10.1016/j.chb.2022.107461

Li, Q. (2005). New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior, 23*(4), 1777-1791. https://doi.org/10.1016/j.chb.2005.10.005

Martin, F., Hunt, B., Wang, C., & Brooks, E. (2020). Middle school student perception of technology use and digital citizenship practices. *Computers in the Schools*, *37*(3), 196-215. https://doi.org/10.1080/07380569.2020.1795500

Mohamad, A. (2023). The relationship between youth cyber bullying and their addiction to the internet. *Journal of Aswan Faculty of Arts*. https://doi.org/10.21608/mkasu.2023.193972.1130

Mossberger, K., Tolbert, C. J., & McNeal, R. S. (2007). *Digital Citizenship: The Internet, Society, and Participation*. MIT Press.

Olweus, D. (1993). *Bullying at school: What we know and what we can do?* Blackwell Publishers.

Ortega, R., Elipe, P., Mora-Merchan, J. A., Calmaestra, J., & Vega, E. (2009). The emotional impact on victims of traditional bullying and cyberbullying: A study of Spanish adolescents. *Journal of Psychology, 217*(4), 197-204. https://doi.org/10.1027/0044-3409.217.4.197

Özer, N., & Şad, S. N. (2021). Lise öğrencilerinde siber zorbalık, siber mağduriyet ve okul tükenmişliği [Cyberbullying, cybervictimization, and school burnout among high school students]. *Milli Eğitim Dergisi, 50(*229), 393-417.

Öztürk, C. (2019). 8. sınıf öğrencilerinin dijital vatandaşlık düzeyleri ile siber zorbalık eğilimleri arasındaki ilişki [The investigation of relation between digital citizenship levels and tendencies to cyberbullying of 8th grade students] (Master's Thesis), Sakarya University.

Ribble, M. (2011). *Digital Citizenship in Schools*. The International Society for Technology in Education (ISTE).

Sakallı, H. (2015). *Sınıf öğretmeni adaylarının dijital vatandaşlık düzeyleri ile siber zorbalık eğilimleri arasındaki ilişkinin incelenmesi [The investigation of the relation between digital citizenship levels and tendencies to cyber bullying of primary preservice teachers]* (Master's thesis), Adnan Menderes University.

Sezer Efe, Y., Erdem, E., & Vural, B. (2021). Cyberbullying and internet addiction in high school students. *Journal of Dependence, 22*(4), 465-473. https://doi.org/10.51982/bagimli.936930

Shi, G., Chan, K. K., & Lin, X. F. (2023). A systematic review of digital citizenship empirical studies for practitioners. *Education and Information Technologies, 28*(4), 3953-3975. https://doi.org/10.1007/s10639-022-11383-z

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of child psychology and psychiatry*, *49*(4), 376-385. https://doi.org/10.1111/j.1469-7610.2007.01846.x

Statista. (2021). *Coronavirus: Impact on online usage in the U.S.* Retrieved from https://www.statista.com/topics/6241/coronavirus-impact-on-online-usage-in-the-us/ on 26 Sep 2023.

Storm, P. S., & Storm, R. D. (2006). Cyberbullying by adolescents: A preliminary assessment. *The Educational Forum, 70*(1), 21-36. https://doi.org/10.1080/00131720508984869

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Pearson.

Tang, W. Y., & Fox, J. (2016). Men's harassment behavior in online video games: Personality traits and game factors. *Aggressive Behavior Journal, 42*(6), 513-521. https://doi.org/10.1002/ab.21646

Tanoğlu, Ş. (2019). *Resim iş öğrencilerinin dijital vatandaşlık düzeyleri ile dijital teknolojiye yönelik tutumları arasındaki ilişkinin incelenmesi [Examining the relationship between painting-grafts education students digital citizenship levels and their attitudes towards digital technology]* (Master's Thesis), Erzincan Binali Yıldırım University.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in human behavior, 26*(3), 277-287. https://doi.org/10.1016/j.chb.2009.11.014

TURKSTAT. (2021, Aug 26). *Hanehalkı bilişim teknolojileri (BT) kullanım araştırması, 2021 [Information and Communication Technology (ICT) Usage in Households, 2021].* Retrieved from https://data.tuik.gov.tr/Bulten/Index?p=Survey-on-Information-and-Communication-Technology-(ICT)-Usage-in-Households-and-by-Individuals-2021-37437 on 26 Sep 2023.

TURKSTAT. (2023, Aug 29). *Hanehalkı bilişim teknolojileri (BT) kullanım araştırması, 2023 [Information and Communication Technology (ICT) Usage in Households, 2023].* Retrieved from https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2023-49407 on 28 Dec 2023.

Ünver, H., & Koç, Z. (2017). Siber zorbalık ile problemli internet kullanımı ve riskli internet davranışı arasındaki ilişkinin incelenmesi [The investigation of the relationship among cyber bullying, problematic internet use and risky internet behaviors]. *The Journal of Turkish Educational Sciences, 15*(2), 117-140.

Verma, S., & Garg, N. (2023). Exploring the psychometric properties of the digital citizenship scale among Indian students. *Online Information Review*. https://doi.org/10.1108/OIR-05-2022-0279

Wright, M. F., & Wachs, S. (2023). Cyberbullying involvement and depression among elementary school, middle school, high school, and university students: the role of social support and gender. *International journal of Environmental Research and Public Health*, *20*(4), 2835. https://doi.org/10.3390/ijerph20042835

Zhong, J., Zheng, Y., Huang, X., Mo, D., Gong, J., Li, M., & Huang, J. (2021). Study of the influencing factors of cyberbullying among Chinese college students incorporated with digital citizenship: from the perspective of individual students. *Frontiers in Psychology*, *12*, 621418. https://doi.org/10.3389/fpsyg.2021.621418