

The Relationship between Social Media Addiction and Digital Footprint Awareness of Secondary School Students*

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Abstract

This research aims to examine the social media addiction and digital footprint awareness levels of secondary school students, and the relationship between these two variables. The study consisted of 1095 participants studying in secondary schools. Correlational survey model was used. The Personal Information Form, Social Media Addiction Scale for Adolescents, and Digital Footprint Awareness Scale were administered to the participants. In addition to descriptive statistics, independent samples t-test, ANOVA, and correlation analyses were conducted. The mean score for the students' social media addiction level was found to be $\bar{X}=2.08$. While social media addiction levels do not differ significantly according to gender or the type of device they use most often when using social media, they do show significant differences according to internet access, grade level, and average daily social media usage time. The students' mean digital footprint awareness score was calculated as $\bar{X}=3.55$. While digital footprint awareness did not differ significantly by gender, grade level, or average daily social media usage time. It did differ significantly by internet access and the type of device they use most often when using social media. Correlation results revealed a negative, weak, and significant relationship between social media addiction and digital footprint awareness.

Keywords: Digital footprint awareness, social media addiction, secondary school students, use of technology.

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Ortaokul Öğrencilerinin Sosyal Medya Bağımlılığı ve Dijital Ayak İzi Farkındalıkları Arasındaki İlişki*

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Öz

Bu araştırmanın amacı, ortaokul öğrencilerinin sosyal medya bağımlılığı ve dijital ayak izi farkındalık düzeylerini ve bu iki değişken arasındaki ilişkiyi incelemektir. Araştırma ortaokullarda öğrenim gören 1095 katılımcıdan oluşmaktadır. İlişkisel tarama modeli kullanılmıştır. Katılımcılara Kişisel Bilgi Formu, Ergenler İçin Sosyal Medya Bağımlılığı Ölçeği ve Dijital Ayak İzi Farkındalık Ölçeği uygulanmıştır. Betimsel istatistiklerin yanı sıra bağımsız örneklem t-testi, ANOVA ve korelasyon analizleri yapılmıştır. Öğrencilerin sosyal medya bağımlılık düzeyi puan ortalaması $\bar{X}=2,08$ 'dir. Sosyal medya bağımlılık düzeyleri cinsiyete veya sosyal medyayı en sık kullandıkları cihaza göre anlamlı bir şekilde farklılaşmazken, internet erişimine, sınıf düzeyine ve günlük ortalama sosyal medya kullanım süresine göre anlamlı bir şekilde farklılaşmaktadır. Öğrencilerin dijital ayak izi farkındalık puan ortalaması $\bar{X}=3,55$ 'tir. Dijital ayak izi farkındalığı cinsiyete, sınıf düzeyine ve günlük ortalama sosyal medya kullanım süresine göre anlamlı bir şekilde farklılaşmazken, internet erişimine ve sosyal medyayı en sık kullandıkları cihaza göre anlamlı bir şekilde farklılaşmaktadır. Korelasyon sonuçları sosyal medya bağımlılığı ile dijital ayak izi farkındalığı arasında negatif, zayıf ve anlamlı bir ilişki olduğunu ortaya koymuştur.

Anahtar Sözcükler: Dijital ayak izi farkındalığı, sosyal medya bağımlılığı, ortaokul öğrencileri, teknoloji kullanımı.

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Introduction

With the proliferation of mobile technologies in the digital world, the time individuals spend on online platforms is increasing. Social media platforms have become quite popular due to the features they offer. While this offers many advantages, such as information sharing and self-expression, it can also pose security, privacy, and health risks. Social media platforms are virtual communities where users can create individual profiles, interact with real-life friends, and meet others with shared interests (Kuss & Griffiths, 2011). Wook et al. (2019) explained social media as a digital communication environment in which individuals produce, share, and interact with data and ideas through virtual communities and networks. Content unconsciously exposed to on social media platforms affects individuals, and excessive use of these environments brings threats such as social media addiction (Deniz & Gürültü, 2018). Feeling the need to be online in these environments can lead to compulsive use of social networks, which, when overdone, can produce symptoms and consequences similar to substance addiction (Kuss & Griffiths, 2017). The intense excitement and interest that individuals constantly show towards certain objects, substances, and behaviors throughout their lives take the individual captive and lead to attachment (Ayhan & Köselören, 2019).

Some research has been conducted on the effects of social media addiction on individuals' lives. Acar (2024) concluded that social media addiction, like proactive substance and behavioral addictions, affects the brain and causes psychological and physical problems. Kuss and Griffiths (2011) stated that decreased participation in real-life social communities, decreased academic success, and problems in relationships are indicators of social media addiction. Furthermore, social media addiction can lead to interpersonal conflicts, sleep disturbances, psychosomatic symptoms, decreased self-esteem, decreased life satisfaction, and impaired work performance (Andreassen, 2015). Excessive use of social media can lead to some negative situations such as the formation of harmful emotional relationships, the onset of health problems, the emergence of asocial tendencies, the limitation of face-to-face communication, the decrease in academic success, cyber bullying and cyber victimization (Acar, 2024). Some studies have found a significant and negative relationship between students' social media addiction level and their academic success (Göksu & Gültekin, 2023; Özdemir, 2024; Sarkar, 2023).

The uncontrolled increase in social media use can have significant consequences for individuals not only psychologically but also in terms of the digital traces they leave in online environments. The traces left as a result of actions performed online or offline through digital tools and devices can be defined as digital footprints. (Koçyiğit & Özkul, 2023). A digital footprint refers to the data and information people create when they are online, either through passive recording or purposeful action (Alay & Deveciyan, 2023). There are generally two types of footprints: active footprints occur when users directly share location information through photos, messages, or sensor data, while passive footprints occur unknowingly because of interaction with infrastructures such as the mobile phone network (Girardin et al., 2008).

Digital footprint awareness is crucial for individuals' sensitivity to the risks and consequences of activities in virtual environments (Yılmaz Soylu et al., 2021). Digital footprints, which contain personal information about users, can lead to situations where they can be used against individuals (Karal & Kaçmaz, 2023). The effective and correct use of digital footprints, which can pose reputational and security risks, is a requirement of digital citizenship (Alay & Deveciyan, 2023). Because individuals cannot be completely prevented from leaving a mark in digital environments, awareness of leaving positive marks must be increased (Koçyiğit & Özkul, 2023).

Elçiçek (2025) found that secondary school students' digital footprint awareness levels were low. Karal and Kaçmaz (2023) found that high school students' digital footprint awareness levels were moderate. Sürmelioglu and Seferođlu (2019) found that university students' digital footprint awareness levels were high. Koçyiğit and Özkul (2023) found adults' digital footprint awareness to be high in their research. Taş and Bülbül (2021) found social media users' digital footprint awareness levels to be high.

Social media usage is increasing all over the world as well as in our country. According to the Digital 2024: Global Overview Report, published in collaboration with We Are Social and Meltwater, there were over 5 billion active social media users by the beginning of 2024. The report also highlighted that GWT's latest research revealed that a "typical" social media user worldwide spends 2 hours and 23

minutes a day on social media (We Are Social & Meltwater, 2024). According to the results of the Turkish Statistical Institute's (TurkStat) 2024 "Children's Information Technology Usage Survey," the internet usage rate among children aged 6-15 is 91.3%. The rate of children using social media is 66.1%. This rate is 53.5% in the 6-10 age group and 79.0% in the 11-15 age group. The most preferred platform is YouTube at 96.3%, followed by Instagram (41.5%) and TikTok (26.2%) (TurkStat, 2024). TurkStat's (2025) "Household Information Technologies Usage Survey" report states that the proportion of individuals using the internet is 90.9%, and the most frequently used social media and messaging applications are WhatsApp at 88.6%, YouTube at 72.9%, and Instagram at 68.1%

Secondary school students are one of the most prevalent users of social media platforms, whose use is increasing daily. Secondary school students' social media addiction is a multifaceted phenomenon shaped not only by individual factors but also by family and environmental factors. In today's world where digital technologies have penetrated every aspect of life, considering social media addiction and digital footprint awareness together is of great importance in understanding how students' behavior in the digital environment is shaped and in developing awareness studies for these processes. Digital footprints left by social media use can affect students' future careers or job opportunities (Wook et al., 2019). This research aims to reveal the status of secondary school students' social media addiction levels and digital footprint awareness; to analyze the relationship between them and to determine whether this relationship differs according to some variables. The problem of this research is: "What is the level of social media addiction and digital footprint awareness among secondary school students?" The sub-problems of the research are as follows:

- 1) Social media addiction of secondary school students:
 - a. What is the level?
 - b. Does it differ significantly according to gender, grade level, internet access status, average daily social media usage time, and the type of device they use most often when using social media?
- 2) Digital footprint awareness of secondary school students:
 - a. What is the level?
 - b. Does it differ significantly according to gender, grade level, internet access status, average daily social media usage time, and type of device they use most often when using social media?
- 3) Is there a significant relationship between social media addiction and digital footprint awareness of secondary school students?

Method

Research Design

This research was conducted using the relational survey model, a general survey method among quantitative research approaches. A general survey method involves conducting screening arrangements on the entire universe or a group, sample, or sampling taken from it to reach a general conclusion about the universe within a large number of elements (Karasar, 2009). A correlational survey model is research in which the relationship between two or more variables is examined without intervening in these variables in any way (Büyüköztürk et al., 2013). The study investigated participants' levels of social media addiction and digital footprint awareness, and whether they differed based on various variables. It also examined whether there was a relationship between digital footprint awareness and social media addiction.

Participants

The participants consist of 1095 secondary school students studying in 5th, 6th, 7th, and 8th grades in secondary schools in the 2024-2025 academic year. The students were selected using a convenience sampling method. Students who indicated they did not use any social media platforms were excluded from the study. A convenience sampling method avoids wasting time, money, and labor by utilizing the most accessible participants until a sufficiently large group is reached (Büyüköztürk et al., 2013). Demographic information of the study participants is provided in Table 1.

Table 1. *Demographic information of the participants*

Gender	N	%
Female	558	51
Male	537	49
Total	1095	100
Grade Level	N	%
5	242	22.1
6	273	24.9
7	219	20
8	361	33
Total	1095	100
Internet Access Status	N	%
Yes	1062	97
No	33	3
Total	1095	100
Average Daily Social Media Usage Time	N	%
Less than 1 hour	402	36.7
1-3 hours	460	42
More than 3 hours	233	21.3
Total	1095	100
Type of Device They Use Most often When Using Social Media	N	%
Computer	127	11.6
Smartphone	725	66.2
Tablet	243	22.2
Total	1095	100

When Table 1 is examined, it is seen that a total of 1095 secondary school students participated in the research. By gender, 51% were female, and 49% were male. While grades were generally similar, the highest participation rate was among 8th grade students (33%). It was determined that 97% of students had access to the internet. The average daily social media usage time was 1-3 hours (42%), 0-1 hour (36.7%), and more than 3 hours (21.3%). The type of device they use most often when using social media was smartphones (66.2%), tablets (22.2%), and computers (11.6%).

Research Instruments and Procedures

The Personal Information Form, the Social Media Addiction Scale, and the Digital Footprint Awareness Scale were used in the research.

Personal Information Form

This form includes demographic information about the participating students: gender, grade, internet access, daily social media usage time, and the type of device they use most often when using social media.

Social Media Addiction Scale for Adolescents

It is a Likert-type scale developed and validated by Özgenel et al. (2019) to determine students' social media addiction levels. As a result of factor analysis, it has a 9-item, single-factor structure. There are no reverse-biased items on the scale. Exploratory factor analysis was applied during the scale development process, and the 27 items in the first draft were evaluated in line with expert opinions and reduced to 9 items. The model's fit indices showed that the single-factor structure of the scale provided a good level of fitness with the data. The reliability of the scale was assessed with the Cronbach's Alpha internal consistency coefficient, which was calculated as $\alpha = .904$. Permission to use the scale was obtained from the researchers. The Cronbach's alpha of the scale is .825 in this study.

The Digital Footprint Awareness Scale

The Digital Footprint Awareness Scale developed by Sanin (2022) was used to determine the digital footprint awareness levels of the students. The scale, which consists of four sections, namely "Personal Data Sharing Awareness", "Personal Data Sharing Application", "Social Media Awareness",

and “Social Media Application,” and a total of 32 items, has a Cronbach's alpha internal consistency coefficient of .828 and a Standardized Cronbach Alpha internal consistency coefficient of .827. The McDonald's Omega (ω) coefficient for the entire scale is .832. The scale contains 5 reverse-biased items. Exploratory factor analysis was applied to evaluate the construct validity of the scale, and a four-factor structure was obtained. Confirmatory factor analysis was conducted, and the fit indices obtained as a result of the analysis showed that the four-factor structure of the scale fit the data well and its construct validity was supported. Permission to use the scale was obtained from the researchers. The Cronbach's alpha value of the scale is .876 in this research.

Institutional and ethics committee permissions were obtained. The scales were administered by distributing printed papers on a voluntary basis in secondary schools affiliated with the Ministry of National Education during the 2024-2025 academic year.

Data Analysis

SPSS 23 package program was used. Descriptive statistics, independent samples t-test, ANOVA, and correlation analysis were conducted. The kurtosis values of the research data ranged from -.417 to .919. Since these values ranged from +1 to -1, they were determined to exhibit a normal distribution (Büyükoztürk, 2010).

Ethical Procedures

Institutional permission and ethical permissions were obtained for the research. Ethics committee approval was received for this research from Kırşehir Ahi Evran University Social and Human Sciences Scientific Research and Publication Ethics Committee with the decision dated 10.07.2024 and numbered 2024/07/05.

Results

Social Media Addiction Levels of Secondary School Students

Descriptive statistical analyses were conducted to determine the social media addiction levels of students. The analysis results are shown in Table 2.

Table 2. Findings regarding social media addiction

Scale	N	$\bar{X}$	Sd
Social Media Addiction	1095	2.08	.79

The average score for students' social media addiction levels is $\bar{X}=2.08$. This can be interpreted as addiction levels being below average on a 5-point Likert-type scale. An independent samples t-test was conducted to examine whether students' social media addiction levels differed by gender and internet access status. The analysis results are shown in Table 3.

Table 3. T-test results of social media addiction according to gender and internet access status

Gender	N	$\bar{X}$	sd	df	t	p
Female	558	2.07	0.80	1093	-.415	.678
Male	537	2.09	0.77			
Internet Access Status	N	$\bar{X}$	sd	df	t	p
Yes	1062	2.09	0.79	1093	1.999	.046
No	33	1.81	0.77			

*p<.05

As seen in Table 3, there is no significant difference in students' social media addiction by gender ($p>.05$). Regarding internet access, those without internet access had significantly lower social media addiction levels than those with internet access ($p<.05$). One-Way ANOVA was used to examine whether students' social media addiction levels varied by grade level, average daily social media usage time, and type of device they use most often when using social media. The analysis results are shown in Table 4.

Table 4. ANOVA results of social media addiction according to grade level, average daily social media usage duration, and type of device they use most often when using social media

Grade level	N	$\bar{X}$	sd	df	F	p	Significant Difference
5	242	1.90	0.75	1094	9.745	.000	5-7, 5-8, 6-8
6	273	2.01	0.67				
7	219	2.11	0.79				
8	361	2.23	0.86				
Average daily social media usage time	N	$\bar{X}$	sd	df	F	p	Significant Difference
Less than 1 hour	402	1.70	0.58	1094	182.920	.000	Less than 1 hour-1-3 hours
1-3 hours	460	2.07	0.68				Less than 1 hour - More than 3 hours
More than 3 hours	233	2.77	0.82				1-3 hours - More than 3 hours
Type of device they use most often when using social media	N	$\bar{X}$	sd	df	F	p	Significant Difference
Computer	127	2.04	0.65	1094	1.063	.346	-
Smartphone	725	2.11	0.81				
Tablet	243	2.03	0.78				

*p<.05

As seen in Table 4, there is a significant difference in students' social media addiction according to grade level and average daily social media usage time ($p<.05$). The groups showing significant differences were examined with LSD post hoc tests. 5th graders had significantly lower social media addiction than 7th and 8th graders, and 6th and 8th graders had significantly lower social media addiction than 8th graders. It is observed that as the grade level increases, the level of social media addiction increases. Considering the average daily social media usage time, those who use less than 1 hour had significantly lower social media addiction levels than those who use 1-3 hours and more than 3 hours, and those who use 1-3 hours were significantly lower than those who use more than 3 hours. It is observed that as students' average daily social media usage time increases, their social media addiction level also increases. It is observed that there is no significant difference in students' social media addiction according to the type of device they use most on social media ($p>.05$).

Digital Footprint Awareness Level of Secondary School Students

Descriptive statistical analyses were conducted to determine the digital footprint awareness levels of students. The analysis results are shown in Table 5.

Table 5. Findings regarding digital footprint awareness

Scale Sub-Dimensions	N	$\bar{X}$	Sd
Personal Data Sharing Awareness	1095	3.62	.94
Personal Data Sharing Practice	1095	3.48	.68
Social Media Awareness	1095	3.71	.97
Social Media Practice	1095	3.35	.75
Overall Scale	1095	3.55	.67

When Table 5 is examined, the mean score for students' digital footprint awareness levels is $\bar{X}=3.55$. The personal data sharing awareness dimension is $\bar{X}=3.62$, the personal data sharing application dimension is $\bar{X}=3.48$, the social media awareness dimension is $\bar{X}=3.71$, and the social media application dimension is $\bar{X}=3.35$. It is noteworthy that the highest mean is in the social media awareness dimension. This can be interpreted as being above average on a 5-point Likert-type scale. Independent samples t-test was conducted to examine whether students' digital footprint awareness differed by gender and internet access status. The analysis results are shown in Table 6.

Table 6. *T-test results of digital footprint awareness according to gender and internet access status*

Gender	N	$\bar{X}$	sd	df	t	p
Female	558	3.58	0.65	1093	1.656	.098
Male	537	3.52	0.70			
Internet Access Status	N	$\bar{X}$	sd	df	t	p
Yes	1062	3.56	0.66	1093	2.132	<.001
No	33	3.31	0.96			

*p<.05

As seen in Table 6, there is no significant difference in students' digital footprint awareness by gender ($p>.05$). Regarding internet access, those with internet access had significantly higher digital footprint awareness levels than those without ($p<.05$). One-Way ANOVA was used to examine whether students' digital footprint awareness varied by grade level, average daily social media usage time, and the type of device they use most frequently for social media. The analysis results are shown in Table 7.

Table 7. *ANOVA results of digital footprint awareness according to grade level, average daily social media usage duration, and type of device they use most often when using social media*

Grade level	N	$\bar{X}$	sd	df	F	p	Significant Difference
5	242	3.60	0.71	1094	1.445	.228	-
6	273	3.51	0.67				
7	219	3.60	0.66				
8	361	3.52	0.66				
Average daily social media usage time	N	$\bar{X}$	sd	df	F	p	Significant Difference
Less than 1 hour	402	3.57	0.75	1094	.236	.790	-
1-3 hours	460	3.55	0.62				
More than 3 hours	233	3.53	0.63				
Type of device they use most often when using social media	N	$\bar{X}$	sd	df	F	p	Significant Difference
Computer	127	3.66	0.65	1094	4.314	.014	Smartphone-Computer Smartphone-Tablet
Smartphone	725	3.51	0.68				
Tablet	243	3.62	0.65				

*p<.05

As seen in Table 7, there was no significant difference in students' digital footprint awareness based on grade level and average daily social media usage time ($p>.05$). There was a significant difference in students' digital footprint awareness based on type of device they use most often when using social media ($p<.05$). Post Hoc tests were performed using LSD to examine the groups showing significant differences. Students who used social media mostly on smartphones had significantly lower digital footprint awareness levels than those who used social media mostly on tablets and computers.

The Relationship between Social Media Addiction and Digital Footprint Awareness

A Pearson correlation analysis was conducted to examine the relationship between social media addiction levels and digital footprint awareness. The results are shown in Table 8.

Table 8. *Relationship between social media addiction and digital footprint awareness*

Variables	1	2	3	4	5	6
1. Social Media Addiction	1					
2. Personal Data Sharing Awareness	-.077*	1				
3. Personal Data Sharing Implementation	-.043	.548**	1			
4. Social Media Awareness	-.108**	.646**	.559**	1		
5. Social Media Implementation	-.032	.363**	.490**	.414**	1	
6. Digital Footprint Awareness	-.083**	.868**	.837**	.822**	.595**	1

*p<0.05, **p<0.01

When Table 8 is examined, a negative, low-significant relationship was found between social media addiction and digital footprint awareness ($r=-.083$, $p<.001$). This result can be interpreted as students' digital footprint awareness increases, their social media addiction will decrease. The relationships between the sub-dimensions of digital footprint awareness and social media addiction were also revealed. Social media addiction had a negative, low-significant relationship ($r=-.108$, $p<.001$) with the awareness of personal data sharing sub-dimension ($r=-.077$, $p<.05$) and the social media awareness sub-dimension, but no significant relationship was found with the social media application sub-dimension ($r=-.032$, $p<.05$) and the application of personal data sharing sub-dimension ($r=-.043$, $p>.05$). A correlation coefficient between 0.70 and 1.00 is interpreted as a high relationship, a correlation between 0.70 and 0.30 is interpreted as a medium relationship, and a correlation between 0.30 and 0.00 is interpreted as a low relationship (Büyüköztürk, 2010).

Discussion, Conclusion and Recommendations

This study examined middle school students' social media addiction levels, digital footprint awareness levels, and the relationship between these two variables. Findings from descriptive and correlational analyses revealed that students' social media addiction levels were below average, while their digital footprint awareness levels were above average. Furthermore, a negative and low-level significant correlation was found between digital footprint awareness and social media addiction. It can be argued that as students' digital footprint awareness increases, their social media addiction will decrease.

The findings obtained within the scope of the first sub-problem of the study indicate that students' social media addiction levels are generally below average. This finding is consistent with some recent studies measuring social media addiction levels. Deniz and Gürültü (2018) found that social media addiction levels were moderate in a study conducted with high school students. Sarkar (2023) found that 53.4% of males had no social media addiction, 36.8% had a potential addiction, and 9.8% had a serious addiction. Among females, 50.4% had no social media addiction, 41.6% had a potential addiction, and 8% had a serious addiction.

The study found no significant difference in students' addiction levels based on gender. Students without internet access had significantly lower addiction levels than those with access. It was observed that addiction levels increased as grade levels increased. As students' daily social media usage duration increased, so did their addiction levels. This suggests that social media use increases the risk of addiction depending on the duration. Finally, no significant difference was found in students' addiction levels based on the type of device they most frequently use for social media. In studies with similar results, Ayas and Horzum (2013) found that internet addiction increased significantly as grade levels increased in secondary schools. However, Deniz and Gürültü (2018) found that social media addiction in high school students did not differ by grade level. Çam and İşbulan (2012) similarly found that seniors had significantly higher Facebook addiction than others, but they also found that boys had significantly higher Facebook addiction than girls. Sarkar (2023) also found that boys had significantly higher social media addiction than girls in his study.

The findings obtained within the scope of the second sub-problem of the research indicate that students' digital footprint awareness levels are generally above average. It was found that the awareness level was particularly high in the social media dimension and lowest in the application dimension. This can be interpreted as students' awareness of leaving a trace in the digital environment is higher than that of turning it into behavior. The results obtained are consistent with some studies in the literature on digital footprint awareness. For example, Sürmelioglu and Seferoğlu (2019) reported high digital footprint awareness levels in university students, Taş and Bülbül (2021) in social media users, and Koçyiğit and Özkul (2023) in adults. Karal and Kaçmaz (2023) found the digital footprint awareness levels of high school students to be moderate. However, the study by Elçiçek (2025) found the digital footprint awareness levels of secondary school students to be low.

It has been revealed that students' digital footprint awareness levels differ significantly according to some demographic and digital variables. Students' digital footprint awareness levels do not differ significantly according to gender, grade level, or daily social media use duration. However, the awareness levels of students with internet access are higher than those without access. This shows that

access to digital environments plays a determining role in digital awareness. The awareness levels of students using smartphones are significantly lower than those using computers and tablets. Similarly, Sürmelioglu and Seferoğlu (2019) found no difference in digital footprint awareness according to gender or time spent on digital media, but they found that awareness increases with increasing education level. As different results in the literature, there are studies finding that women's digital footprint awareness is higher than men (Elçiçek, 2025; Koçyiğit & Özkul, 2023; Uslu, 2021; Yılmaz Soylu et al., 2021). Elçiçek (2025) found that 8th-grade students had higher levels of digital footprint awareness than 5th-grade students, while Soylu et al. (2021) found that 5th-grade students had higher levels of digital footprint awareness in some dimensions than 6th- and 7th-grade students. A study by Subasi et al. (2023) found that students with less daily internet use had higher digital footprint awareness. These different results may be due to factors such as the characteristics of the sample group and digital education practices.

The results obtained within the scope of the third sub-problem of the study revealed a negative, weak, and significant relationship between social media addiction and digital footprint awareness. This finding suggests that as students' digital awareness increases, their tendency toward addiction to social media platforms decreases. At the sub-dimension level, the "Personal Data Sharing Awareness" and "Social Media Awareness" scales also showed a significant and negative correlation with social media addiction levels, while the application-focused sub-dimensions did not show a significant relationship. This suggests that digital awareness acquired at the cognitive level plays a role in reducing addiction levels. Research findings indicate that individuals with high awareness levels have lower addiction tendencies. Muhammad et al. (2024) found that individuals' levels of privacy and security concerns influence how they interact with social media and the risks of leaving a digital footprint. They found that cautious users are suspiciously cautious about sharing their digital footprints on social media platforms and are not inclined to exploit social media but instead avoid using it. This situation can be interpreted as digital footprint awareness can be a factor in preventing social media addiction.

This study can raise public awareness about internet and social media use. Ensuring students use social media healthily and are aware of the traces they leave behind in the digital environment is crucial for their personal development and digital citizenship. The findings can guide educators, parents, and policymakers in developing preventative and educational strategies to address students' digital behavior. They can also contribute to raising students' awareness of digital security, privacy, personal data protection, and social media use.

Based on the findings of this study, several recommendations can be offered for future research and practice. Using qualitative research methods to gain a more in-depth understanding of students' digital behavior will increase the scope and depth of the data obtained. Furthermore, studies focusing on the process by which digital footprint awareness translates into behavior can be expanded to include mediating variables such as digital ethics, online privacy perception, and digital self-efficacy. Longitudinal studies can be conducted to examine the long-term effects of digital awareness levels. Academics working in the fields of Educational Technologies and Psychological Counseling and Guidance can collaborate with teachers to organize practical seminars on digital awareness and social media addiction for students. Media literacy courses in middle schools can be restructured and enriched with themes of digital ethics, online privacy, and digital footprint awareness. Guidance documents can be prepared for teachers and used effectively in classroom activities on digital awareness and social media.

References

- Acar, N. (2024). Social media addiction: Origins, diagnosis criteria and treatment techniques. *The Turkish Online Journal of Design, Art and Communication*, 14(4), 1099–1114. <https://doi.org/10.7456/tojdac.1515522>
- Alay, H. K., & Taksi Deveciyan, M. (2023). Digital footprint management: Digital burial. *Neşşehir Hacı Bektaş Veli University Journal of ISS*, 13(3), 1446-1456. <https://doi.org/10.30783/nevsosbilen.1270853>
- Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current Addiction Reports*, 2(2), 175–184. <https://doi.org/10.1007/s40429-015-0056-9>
- Ayas, T., & Horzum, M. B. (2013). Internet addiction and internet parental style of primary school students. *Turkish Psychological Counseling & Guidance Journal*, 4(39), 46-57.

- Ayhan, B., & Köselören, M. (2019). Internet, online game and addiction. *Online Journal of Technology Addiction and Cyberbullying*, 6(1), 1-30.
- Büyüköztürk, Ş. (2010). *Sosyal bilimler için veri analizi el kitabı* [Handbook of data analysis for the social sciences]. Pegem Akademi.
- Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2013). *Bilimsel araştırma yöntemleri* [Scientific research methods]. Pegem Akademi.
- Çam, E., & İsbulan, O. (2012). A new addiction for teacher candidates: Social networks. *Turkish Online Journal of Educational Technology-TOJET*, 11(3), 14-19.
- Deniz, L., & Gürültü, E. (2018). High school students' social media addiction. *Kastamonu Education Journal*, 26(2), 355-367. <https://doi.org/10.24106/kefdergi.389780>.
- Elçiçek, M. (2025). Öğrencilerin bilişim etiği ve dijital ayak izi farkındalığı üzerine bir inceleme. *Bolu Abant İzzet Baysal University Journal of Faculty of Education*, 25(1), 446-459. <https://doi.org/10.17240/aibuefd.2025>.
- Girardin, F., Calabrese, F., Dal Fiore, F., Ratti, C., & Blat, J. (2008). Digital footprinting: Uncovering tourists with usergenerated content. *IEEE Pervasive Computing*, 7(4), 36-43.
- Göksu, H., & Gültekin, M. (2023). Examination of social media addiction of adolescents with the relation of academic success in terms of some variables. *Journal of Ministry of National Education*, 52(239), 1897-1912. <https://doi.org/10.37669/milliegitim.1193416>
- Karal, E., & Kaçmaz, Ş. (2023). Examination of digital footprint awareness levels and digital footprint experience status of high school students. *Journal of Social, Humanities and Administrative Sciences*, 6(7), 831-848. <https://doi.org/10.26677/TR1010.2023.1252>
- Karasar, N. (2009). *Bilimsel araştırma yöntemi: Kavramlar, ilkeler, teknikler*. [Scientific research method: Concepts, principles, techniques.] Ankara: Nobel Publishing.
- Koçyiğit, İ., & Özkul, A. S. (2023). A study on digital footprint awareness and management levels of individuals. *Süleyman Demirel University Visionary Journal*, 14(40), 1290-1310. <https://doi.org/10.21076/vizyoner.1219704>
- Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—a review of the psychological literature. *International Journal of Environmental Research and Public Health*, 8(9), 3528-3552. doi:10.3390/ijerph8093528
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 1-17. <https://doi.org/10.3390/ijerph14030311>
- Muhammad, S. S., Dey, B. L., Bala, H., Alwi, S. F. S., & Asaad, Y. (2024). A typology and model of privacy-and security-concerned users' attitudes toward digital footprints and the consequent influence on their social media adaptation. *Journal of the Association for Information Systems*, 25(5), 1240-1273. <https://doi.org/10.17705/1jais.00893>
- Özdemir, Ö. (2024). The relationship between social media addiction and academic motivation and academic achievement among imam hatip high school students. *Marife Turkish Journal of Religious Studies*, 24(1), 188-215. <https://doi.org/10.33420/marife.1458250>
- Sanin, E. (2022). *Examining the relationship between high school students' digital footprint awareness and information security awareness*. (Master Thesis). Hacettepe University, Institute of Educational Sciences, Ankara.
- Sarkar, N. (2023). Social media addiction and academic achievement of secondary level school students. *International Journal for Multidisciplinary Research (IJFMR)*, 5(5), 1-9. <https://doi.org/10.36948/ijfmr.2023.v05i05.7895>
- Subaşı, S. Korkmaz, Ö. & Cakir, R. (2023). Cyberbullying, digital footprint, and cyber security awareness levels of secondary school students. *International Journal of Technology in Education and Science (IJTES)*, 7(2), 129-151. <https://doi.org/10.46328/ijtes.471>
- Sürmelioglu, Y., & Seferoğlu, S. S. (2019). An examination of digital footprint awareness and digital experiences of higher education students. *World Journal on Educational Technology*, 11(1), 48-64.
- Taş, A., & Bülbül, H. İ. (2021). Digital footprint awareness of social media users. *Journal of Social, Humanities and Administrative Science*, 4(3), 205-216. Doi:10.26677/TR1010.2021.694

- Turkish Statistical Institute's (TurkStat). (2024). *Çocuklarda bilişim teknolojileri kullanım araştırması*. <https://data.tuik.gov.tr/Bulten/Index?p=Cocuklarda-Bilisim-Teknolojileri-Kullanım-Arastirmasi-2024-53638>
- Turkish Statistical Institute's (TurkStat). (2025). *Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması*. Erişim adresi: [https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-\(BT\)-Kullanım-Arastirmasi-2025-53925](https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanım-Arastirmasi-2025-53925)
- Uslu, M. (2021). The analysis of social media addiction and usage in Turkey. *Turkish Academic Research Review*, 6(2), 370-396. <https://doi.org/10.30622/tarr.933479>
- We Are Social & Meltwater (2024). *Digital 2024: 5 billion social media users*. Digital 2024 Global Overview Report. <https://wearesocial.com/uk/blog/2024/01/digital-2024-5-billion-social-media-users/>
- Wook, T. S. M., Mohamed, H., Noor, S. F. M., Muda, Z., & Zairon, I. Y. (2019). Awareness of digital footprint management in the new media amongst youth. *Jurnal Komunikasi: Malaysian Journal of Communication*, 35(3), 407-421. <https://doi.org/10.17576/JKMJC-2019-3503-24>
- Yılmaz Soylu, M., Demiröz, S., & Akkoyunlu, B. (2021). An investigation of the digital footprint awareness and experiences of secondary school students. *Journal of Computer and Education Research*, 9(17), 177–198. <https://doi.org/10.18009/jcer.838856>