Secondary School Students' Digital Literacy Skills, Social Media Addictions and Attitudes to Social Media Use

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Article Info	Abstract
	The aim of this study is to determine the digital literacy skills of secondary school students and their social media addictions and attitudes towards social media use. Descriptive survey model was used in the study. Convenient sampling method was used to determine the study group. The research was conducted on 327 volunteer middle school students within the borders of Amasya province in the 2022-2023 academic year. Data were collected using the digital literacy scale, social media addiction scale and social media attitude scale. Descriptive analysis, independent sample t test, one-way analysis of variance, correlation test and simple linear regression analysis were used in data analysis. According to the results of the analysis, it was seen that students' digital literacy skills and attitudes towards social media were at a medium level, and their social media addiction levels were at a low level. It was concluded that social media addiction was predicted by attitudes towards social media use and digital literacy skills.

Introduction

The capacity to recognize, utilize, manage, integrate, evaluate, and synthesize digital resources, produce new information, produce media expressions, and use digital technologies effectively for interpersonal communication is known as digital literacy (Martin, 2006). With digital literacy, it may be possible to achieve goals such as enabling individuals to understand not only how tools work, but also why they are useful in the real world and when to use them (Alexander, Adams Becker, & Cummins, 2016), enabling individuals to participate in social networks to create and share information, and supporting various computing skills (Joise, Fang, Chetty, Qigui, Gcora, & Wenwei, 2018). In addition, digital literacy can also help individuals benefit from information sources related to digital technology and prepare them to face the challenges of today's technology (Çam & Kıyıcı, 2015). It is possible that the concept of digital literacy has gained more importance, especially with the widespread use of social media.

Social media is a media platform that facilitates all kinds of activities of people and focuses on their presence (Chen, Sherren, Smit & Lee, 2021). It is also an internet-based application used to communicate with other people (Barton, Adams, Browne & Arrastia-Chisholm, 2021). It is also feasible to describe social media as online communities where users may build private or public profiles, communicate with friends in daily life, and associate with others based on shared interests (Kuss & Griffiths, 2011a). Social media, as a term, refers to the

wide range of online activities that people may engage in (Smith & Gallicano, 2015) and can be broadly described as programs, platforms, and other tools that let users produce, rearrange, and share material (Junco, 2014). In this framework, the abundance of opportunities provided by social media has led to a rapid increase in the number of users, especially among young people, and a tendency to spend a lot of time **(**Aini, Rahardja, Tangkaw, Santoso & Khoirunisa, 2020). Young people spend most of their time updating their connections and status on social media (Fox & Moreland, 2015). The usage of social media apps has increased as a result of people's sense of isolation, their need to connect with others, and their desire to spend time online (Andreassen, Torsheim, Brunborg & Pallesen, 2012). Naturally, this has brought excessive and inappropriate social media use to light. While some people use social media as much as they need to, others struggle to strike this balance and have challenges in their lives (Odabaşıoğlu, Öztürk, Genç & Pektaş 2007). Problematic and excessive usage affects young people's personal, social, and academic lives (Griffiths, Kuss & Demetrovics, 2014). Students often use social media, which raises the likelihood that they may develop an addiction owing to factors including exposure to social media's negative consequences and increased risk (Wilson, Fornasier & White, 2010). Due to people's excessive desire and attitude toward using social media, which is a sort of internet addiction, it can be exhibited (Starcevic, 2013; Kuss & Griffiths, 2012; Griffiths, 2000)**.** Social media addiction is described as mental, behavioral, and social deficits that are manifested by excessive worry about social media and the need to continually log in and trigger irrational impulses, as well as by spending an excessive amount of time and effort on social media activities. (Andreassen & Pallesen, 2014).

When the literature is examined, it is stated that social media use is high among students and that it can cause addiction due to excessive use and uncontrollable desire (Taş, 2017). It can be said that individuals who use social media too much and spend excessive time on it have a desire to be instantly informed about anything at any time under any circumstances. It is stated that social media addiction can cause many cognitive, affective, and behavioral problems such as preoccupation, emotional change, conflict and isolation (Tutgun-Ünal, 2015). Some users may neglect activities related to their lives because of social media. Due to such behaviors, individuals face many problems and psychological deterioration that progressively increase in their lives (Morahan & Schumacher, 2000). The popularity of social media and addiction to the virtual world may lead to an increase in the number of individuals whose lives are negatively affected and whose relationships are damaged by being isolated from real life (Eliphinston & Noller, 2011). These problems are defined as constantly thinking about social media, seeing non-social media time as meaningless, increasing the duration of use and getting out of control.

Excessive engagement with social media, difficulties in controlling use, inability to prevent access requests, spending more time on social media in any situation and wanting social media when not online are important problems (Çam & İşbulan, 2012; Young, 2007) and are important indicators of addiction. However, the psychometric process should be fully understood in order to assess the sharp rise in social media use as an addiction (Andreassen et al., 2012; Kuss & Griffiths, 2011b). Some studies have seen a concern with the rapid rise in social media usage, which is mostly based on time spent. Excessive social media use can cause addiction in people (Sussman, Liha, & Griffiths, 2011). From time to time, individuals may engage in various potentially addictive behaviors such as using social media intensively. However, these behaviors are not necessarily addictive, sometimes they can only be described as behaviors that lead to addiction**.** Social media addiction is

related to how an individual uses social media. Excessive use is the main factor that causes prolonged social media use, negative feelings when access is not available, and neglect behavior in social life (Arısoy, 2009). However, excessive usage of social media might be seen as normal if people can manage how much time they spend there.

With the ubiquitous accessibility of the Internet, the widespread use of technological tools and the increase in the number of digital platforms, students' interest in social media has increased and this has also affected their attitudes to the extent of addiction. Since social networks have rapidly gained popularity in the world, they attract a lot of attention and especially affect students' attitudes (Silius, Miilumaki, Huhtamaki, Tebest, Merilainen & Pohjolaine, 2010). Additionally, in recent years, these social networks have changed sharing, information, and communication (Espuny, Gonzalez, Lleixa & Gisbert, 2011). They have captured the interest of the younger generation and shaped their perspectives since they are interactive and multifaceted (Hamid, Chang & Kurnia, 2009). It is stated that individuals' use and acceptance of social networks and their attitudes have a direct effect on their level of using technology (Lee, Cho, Gay, Davidson & Ingraffe, 2003). A person's attitude is made up of cognitive and emotional elements that interact to shape how they perceive, experience, and act toward an object **(**Mellado & Hermida, 2021**).** People's experiences and their relationships with the environment and their use of technological tools play a role in the acquisition of attitudes. It is necessary to identify the behaviors that drive people to use social media and take it to the level of engagement and the attitudes that affect this. It is impossible to ignore the impact of social media on our society. It has changed people's behavior, feelings, thoughts, and attitudes in many ways **(**Lewis & Nichols, 2016**).** The use of technology as information, communication and socialization affects trust and trust in social media and requires examination in terms of attitudes and addiction (Papanastasious, 2008).

This study is expected to provide insight into how to help students become more digitally literate, access trustworthy information, stay safe online, learn to exercise self-control, use social media for intended purposes without becoming addicted to it, and form positive attitudes toward it. Numerous studies might benefit from learning more about the reasons why students use social media, how they manage their time on these sites, and how well-versed in digital literacy they are. The main problem of this research is to determine whether students' use of social media contributes to their digital literacy, attitudes towards these technologies, access to information, ensuring security, etc. In this framework, the study aims to examine students' digital literacy skills, social media addictions and attitudes towards social media use.

Problem

How are middle school students' digital literacy skills and their social media addictions and attitudes towards social media use?

Sub Problems

1. How are students' digital literacy skills, social media addictions and attitudes towards social media use in general?
2. Do students' digital literacy skills, social media addictions and attitudes towards social media use differ

according to gender?

3. Do students' digital literacy skills, social media addictions and attitudes towards social media use differ according to their grade levels?

4. Do students' digital literacy skills, social media addictions and attitudes towards social media use differ according to the frequency of internet use?

5. Is there a relationship between students' digital literacy skills and their social media addictions and attitudes towards social media use?

6. Do digital literacy skills and their social media addictions and attitudes towards social media use predict each other?

Method

The goal of the study was to employ a descriptive survey approach to assess secondary school students' views on social media use, their uses for social media, and their levels of digital literacy.

Working Group

The study group of the research consists of secondary school students studying in four secondary schools in Amasya province and four secondary schools in the districts connected to the center in the 2022-2023 academic year, and the research was conducted with the participation of 327 students. Convenient sampling method was used to determine the study group. Convenient sampling is a method that consists of voluntary individuals in terms of accessibility and provides the closest and appropriate response to the measurement tool in terms of covering the intended sample size (Robson, 2017). Demographic data of the study group are given in Table 1.

Table 1. Frequency and Percentage Distributions of Demographic Data for the Study Group

	Variables	N	%
Gender	Female	156	47.7
	Male	171	52.3
	Total	327	100
Grade	Grade 5	101	30.9
	Grade 6	65	19.9
	Grade 7	77	23.5
	Grade 8	84	25.7
	Total	327	100
Frequency of Internet use	Every day	185	56.6
	1-2 days a week	78	23.9
	3-5 days a week	46	14.1
	1-2 days a month	8	2.4
	3-5 days a month	10	3.1
	Total	327	100

Data Collection Tools

Digital Literacy Scale

'Digital Literacy Scale' developed by Şahin, Asal-Özkan and Turan (2022) was used. The scale consists of 16 items and 3 factors in 3-point Likert type. Factor 1, Intended Use, consists of 7 items, Factor 2, Technical Knowledge, consists of 5 items, and Factor 3, Privacy and Security Knowledge, consists of 4 items. The eigenvalue of the 1st factor is 4.005. Eigenvalue of the 2nd factor is 2.392. Eigenvalue of the 3rd factor is 1.256. The variance ratio of the 1st factor is 28.610. The variance ratio of the 2nd factor is 17.088. The variance ratio of the 3rd factor is 8.971. It was seen that it explained 54.66% of the total variance of the scale and the eigenvalue of each factor was greater than 1. The loading values of the items are between .582 and .808.

The Cronbach alpha value of the 1st factor is .803. Factor 2 has a Cronbach alpha value of .792. Factor 3 has a Cronbach alpha value of .765. The Cronbach alpha value of the scale for reliability is .842. In line with these data, it was revealed that the scale can make valid and reliable measurements.

Social Media Addiction Scale

'Social Media Addiction Scale for Adolescents' developed by Özgenel, Canpolat and Ekşi (2019) was used. It was calculated to get a minimum score of 9 points and a maximum score of 45 points from the scale consisting of 9 items and one factor in 5-point Likert type. A low score indicates a low level of social media addiction, and a high score indicates a high level of social media addiction. The factor loads of the scale items are between 0.690 and 0.790. The single-factor eigenvalue of the scale is 5.111 and the total explained variance is 56.787%. The Cronbach Alpha reliability coefficient of the scale is 0.904. In line with these data, it was revealed that the scale can make valid and reliable measurements.

Social Media Attitude Scale

'Social Media Attitude Scale' developed by Otrar and Argın (2014) was used. The scale consists of 23 items and 4 factors in five-point Likert type. Factor 1 consists of Need to Share 8 items, Factor 2 consists of Social Competence 6 items, Factor 3 consists of Social Isolation 6 items, and Factor 4 consists of Relationship with Teachers 3 items. The total variance explained by the four factors is 52.650. The explained variance of the 1st factor is 24.471. The explained variance of the 2nd factor is 13.355. The explained variance of the 3rd factor is 8.871. The explained variance of the 4th factor 5 is .953. It was seen that the scale was gathered in 4 factors with eigenvalues greater than 1 and all items had a reasonable loading value in the factor. The factor loadings of the items are between .892 and .476.

Cronbach's Alpha value of Factor 1 was .805, Cronbach's Alpha value of Factor 2 was .814, Cronbach's Alpha value of Factor 3 was .792, and Cronbach's Alpha value of Factor 4 was .814. The total Cronbach Alpha value of the scale is .852. In line with these data, it was revealed that the scale can make valid and reliable measurements.

Data Collection

The scales to be used in the study were used with the permission of the owners. After the necessary interviews with the administration in the schools where permission was obtained for data collection, parent permission forms were distributed to the relevant classes and voluntary participants were identified. The personal information form, digital literacy scale, social media attitude scale and social media addiction scale determined to obtain the data were applied face-to-face in April of the 2022-2023 academic year. The necessary information was given to the participants in the relevant classes and the application was carried out in approximately one lesson. For the application, the necessary permission was obtained from Amasya University Social Sciences Ethics Committee with the letter dated 06.02.2023 and numbered E-30640013-108.01-116008.

Data Analysis

In the data analysis process, firstly, the Kolmogorov-Smirnov test was performed to determine whether the data showed normal distribution or not and the results of the analysis are summarized in Table 2.

Table 2. Data Normality Test Analysis Results

Variables	Kolmogorov-Smirnov	df	P	Skewness Coefficient	Kurtosis Coefficient
Intended Use	.110		.000	-.501	-.158
Technical Information	.134		.000	-.565	-.400
Privacy and Security Information	.200		.000	-.770	-.199
Digital Literacy Scale (DLS)	**.100**		**.000**	**-.693**	**.365**
Social Media Addiction Scale (SMAD)	**.116**	327	**.000**	**.787**	**.014**
Social Competence	.081		.000	.233	-.559
Need to Share	.059		.007	-.239	-.162
Relationship with Teachers	.090		.000	-.010	-.907
Social Isolation	.083		.000	-.272	-.908
Social Media Attitude Scale (SMAS)	**.050**		**.044**	**-.071**	**.045**

When the results of the Kolmogorov-Smirnov test in Table 2 are examined, it is seen that the data collected in terms of both factors and total scores do not show normal distribution. However, if the skewness and kurtosis coefficient take a value between +1.50 and -1.50, it can be assumed that the scale shows normal distribution characteristics (Büyüköztürk, 2012). In this framework, since the kurtosis and skewness coefficients of the data collected in terms of both total score and factor scores were within this range, it was assumed that the data were normally distributed. In this framework, the data were obtained from the appropriate sample with the descriptive survey model. Descriptive statistics (frequency, percentage, standard deviation, and arithmetic mean) were used to analyze the data collected in the study. In addition, t, Anova, Pearson r Correlation test, simple linear regression analysis and Post-hoc (Tukey test) were used to analyze whether there is a significant difference between the demographic variables of the participating middle school students.

Findings

Findings regarding students' digital literacy and social media addiction and attitudes towards social media use are summarized in Table 3

Table 3. Students' Digital Literacy Skills and Levels of Social Media Addiction and Attitudes towards Social Media Use

Variables		N	$\bar{x}$	Min.	Max.	sd.
DLS	Intended Use	327	15.84	7.00	21.00	2.855
	Technical Knowledge		11.30	5.00	15.00	2.605
	Privacy and Security Information		9.55	4.00	12.00	2.112
	Total		36.70	16.00	48.00	5.895
SMAD	Total	327	18.91	9.00	40.00	6.976
SMAS	Social Competence	327	16.16	6.00	30.00	5.389
	Need to Share		25.01	8.00	40.00	6.636
	Relationship with Teachers		8.70	3.00	15.00	3.393
	Social Isolation		20.59	6.00	30.00	6.556
	Total		65.29	23.00	111.00	16.207

Table 3 shows that the total mean score for the digital literacy scale is $\bar{x}=36.70$, the total mean score for the factor measuring the intent of use is $\bar{x}=15.84$, the total mean score for the technical knowledge factor is $\bar{x}=11.30$, and the total mean score for the factor measuring the knowledge of privacy and security is $\bar{x}=9.55$. The social media addiction scale's overall mean score is $\bar{x}=18.91$. The social media attitude scale's mean total score is $\bar{x}=65.29$, the social competence factor's mean total score is $\bar{x}=16.16$, the need for sharing factor's mean total score is $\bar{x}=25.01$, the relationship with teachers' mean total score is $\bar{x}=8.70$, and the social isolation factor's mean total score is $\bar{x}=20.59$. As a result, it can be concluded that, overall, students have low levels of social media addiction and medium levels of digital literacy skills and attitudes about social media. The findings regarding the differentiation in the levels of digital literacy, social media addiction and attitudes towards social media use according to the gender of the students are presented in Table 4.

When Table 4 was examined, it was determined that there was a significant differentiation in terms of gender in terms of social media attitude total scores ($t_{(2-327)} =1.647$; $p<0.05$) and social competence factor ($t_{(2-327)} =4.406$; $p<0.05$), while there was no significant differentiation in terms of other factors and scale total scores. When the social competence factor and social media attitude scores were examined, it was determined that the differentiation was in favor of males. Accordingly, it can be said that male students have significantly higher social competence and social media attitudes than female students, whereas males and females are similar in terms of total scores and factors of digital literacy and total scores of social media addiction. descriptive statistics regarding the levels of digital literacy, social media addiction and attitudes towards social media use according to students' grade levels are summarized in Table 5**.**

Table 4. Differences in Digital Literacy, Social Media Addiction and Attitudes towards Social Media Use by Gender

Variables		Gender	N	x̄	sd	df	t	p
DLS	Intended Use	Female	156	16.04	2.715	327	1.234	.071
		Male	171	15.65	2.973			
	Technical Knowledge	Female	156	11.39	2.564	327	.607	.699
		Male	171	11.22	2.647			
	Privacy and Security Information	Female	156	9.72	2.168	327	1.349	.374
		Male	171	9.40	2.054			
	Total	Female	156	37.16	5.897	327	1.350	.952
		Male	171	36.28	5.878			
SMAD	Total	Female	156	18.10	6.779	327	2.011	.237
		Male	171	19.65	7.091			
SMAS	Social Competence	Female	156	14.83	4.799	327	4.406	.021
		Male	171	17.38	5.621			
	Need to Share	Female	156	25.21	6.557	327	.502	.876
		Male	171	24.84	6.722			
	Relationship with Teachers	Female	156	8.80	3.404	327	.499	.643
		Male	171	8.61	3.390			
	Social Isolation	Female	156	21.08	6.418	327	1.293	.588
		Male	171	20.15	6.666			
	Total	Female	156	63.76	14.427	327	1.647	.009
		Male	171	66.69	17.602			

Table 5. Students' Digital Literacy, Social Media Addiction and Attitudes towards Social Media Use by Grade Level

Variables		Grade	N	x̄	Sd.
DLS	Intended Use	5	101	15.87	2.917
		6	65	15.92	2.779
		7	77	15.46	2.658
		8	84	16.08	3.022
		Total	327	15.84	2.855
	Technical Knowledge	5	101	10.12	2.733
		6	65	11.89	2.513
		7	77	11.37	2.288
		8	84	12.20	2.285
		Total	327	11.30	2.605
	Privacy and Security Information	5	101	9.28	2.187

Variables		Grade	N	$\bar{x}$	Sd.
		6	65	9.52	2.187
		7	77	9.71	2.057
		8	84	9.77	2.008
		Total	327	9.55	2.112
		5	101	35.28	6.267
		6	65	37.33	5.312
	Total	7	77	36.55	5.454
		8	84	38.05	5.960
		Total	327	36.70	5.895
		5	101	18.45	6.697
		6	65	18.43	7.414
SMAD	Total	7	77	20.00	6.988
		8	84	18.85	6.963
		Total	327	18.91	6.976
		5	101	15.67	5.234
		6	65	17.04	5.594
	Social Competence	7	77	16.28	5.103
		8	84	15.97	5.669
		Total	327	16.16	5.389
		5	101	24.04	6.763
		6	65	25.49	6.680
	Need to Share	7	77	25.53	6.284
		8	84	25.34	6.756
		Total	327	25.01	6.636
		5	101	9.04	3.806
		6	65	8.83	2.966
SMAS	Relationship with Teachers	7	77	9.00	3.099
		8	84	7.94	3.370
		Total	327	8.70	3.393
		5	101	20.11	6.508
		6	65	19.49	6.047
	Social Isolation	7	77	20.51	6.715
		8	84	22.10	6.689
		Total	327	20.59	6.556
		5	101	64.65	17.419
		6	65	67.87	14.977
	Total	7	77	66.29	15.088
		8	84	63.15	16.535
		Total	327	65.29	16.207

According to their grade levels, students' averages for digital literacy, social media addiction, and attitudes about using social media differ from one another, as shown in Table 5. The analysis conducted to understand whether this difference in averages is significant or not is summarized in Table 6.

Table 6. Differentiation in Students' Digital Literacy, Social Media Addiction and Attitudes towards Social Media Use by Grade Level

Variables		Variance Sources	Sum of Squares	df	Mean Squares	F	P	Difference
DLS	Intended Use	Between G.	16.203	3	5.401	.660	.577	
		Within G	2641.528	323	8.178			
		Total	2657.731	326				
	Technical Knowledge	Between G.	230.209	3	76.736	12.498	.000	5th through 6th. 7th and 8th grade
		Within G	1983.210	323	6.140			
		Total	2213.419	326				
	Privacy and Security Information	Between G.	13.282	3	4.427	.992	.397	
		Within G	1441.305	323	4.462			
		Total	1454.587	326				
	Total	Between G.	384.900	3	128.300	3.786	.011	Between 5th and 8th grade
		Within G	10944.917	323	33.885			
		Total	11329.817	326				
SMAD	Total	Between G.	127.497	3	42.499	.872	.456	
		Within G	15739.274	323	48.728			
		Total	15866.771	326				
SMAS	Social Competence	Between G.	79.003	3	26.334	.906	.439	
		Within G	9390.746	323	29.074			
		Total	9469.749	326				
	Need to Share	Between G.	138.734	3	46.245	1.050	.370	
		Within G	14221.156	323	44.028			
		Total	14359.890	326				
	Relationship with Teachers	Between G.	68.807	3	22.936	2.011	.112	
		Within G	3684.593	323	11.407			
		Total	3753.401	326				
	Social Isolation	Between G.	294.443	3	98.148	2.311	.076	
		Within G	13718.077	323	42.471			
		Total	14012.520	326				
	Total	Between G.	937.222	3	312.407	1.191	.313	
		Within G	84699.005	323	262.226			
		Total	85636.226	326				

Table 6 shows that only the technical knowledge factor ($F_{(3\text{-}323)}$ =12.498; $p<0.05$) and the overall score of the digital literacy scale show a significant difference ($F_{(3\text{-}323)}$ =3.786; $p<0.05$). The difference between the grade levels was identified using the Tukey test. When Tukey analysis and averages are used to analyze the data, it becomes clear that the 5th grade differentiates favorably from the 6th, 7th, and 8th grades in terms of technical knowledge, according to the digital literacy scale. It was discovered that the 8th grade had a significant advantage over the 5th grade in terms of the mean of the digital literacy scale. As a result, it can be claimed that eighth graders have greater levels of digital literacy than all other grades, whereas fifth graders have lower levels than all other classes. The classes can also be stated to be at comparable levels in respect of other variables and scales. Table 7 summarizes the findings regarding the levels of digital literacy, social media addiction and attitudes towards social media use according to the frequency of students' internet use.

Table 7. Students' Digital Literacy, Social Media Addiction and Attitudes towards Social Media Use According to Frequency of Internet Use

Variables		Frequency of Internet Use	N	$\bar{x}$	df
DLS	Intended Use	Every day	185	16.29	2.690
		1-2 days a week	78	15.58	2.844
		3-4 days a week	64	14.84	3.076
		Total	327	15.84	2.855
	Technical Knowledge	Every day	185	11.72	2.387
		1-2 days a week	78	10.39	2.779
		3-4 days a week	64	11.20	2.738
		Total	327	11.30	2.605
	Privacy and Security Information	Every day	185	9.81	2.005
		1-2 days a week	78	9.21	2.135
		3-4 days a week	64	9.25	2.309
		Total	327	9.55	2.112
	Total	Every day	185	37.82	5.294
		1-2 days a week	78	35.20	5.882
		3-4 days a week	64	35.29	6.867
		Total	327	36.70	5.895
SMAD	Total	Every day	185	20.37	7.103
		1-2 days a week	78	16.79	6.035
		3-4 days a week	64	17.29	6.744
		Total	327	18.91	6.976
SMAS	Social Competence	Every day	185	16.77	5.151
		1-2 days a week	78	15.42	5.773
		3-4 days a week	64	15.32	5.439
		Total	327	16.16	5.389

Variables	Frequency of Internet Use	N	x̄	df
Need to Share	Every day	185	26.45	5.788
	1-2 days a week	78	22.60	7.159
	3-4 days a week	64	23.81	7.256
	Total	327	25.01	6.636
Relationship with Teachers	Every day	185	8.92	3.428
	1-2 days a week	78	8.24	3.461
	3-4 days a week	64	8.65	3.193
	Total	327	8.70	3.393
Social Isolation	Every day	185	20.97	6.452
	1-2 days a week	78	19.71	7.107
	3-4 days a week	64	20.57	6.140
	Total	327	20.59	6.556
Total	Every day	185	67.17	14.339
	1-2 days a week	78	62.55	18.911
	3-4 days a week	64	63.21	17.251
	Total	327	65.29	16.207

When examining the factor total and scale total averages to assess degrees of digital literacy, social media addiction, and attitudes toward social media usage in relation to frequency of internet use, it is clear from Table 7 that there are disparities between the averages of the students. In both factor total and scale total averages, it was found that daily internet use was quite prevalent. The analysis conducted to understand whether this difference in averages is significant is summarized in Table 8.

Table 8. Differentiation in Students' Digital Literacy, Social Media Addiction and Attitudes towards Social Media Use According to Frequency of Internet Use

Variables		Variance Sources	Sum of Squares	df	Mean Squares	F	P	Difference
DLS	Intended Use	Between G.	106.184	2	53.092	6.742	.001	Between those who enter every day and those who enter three to five days a week
		Within G	2551.547	324	7.875			
		Total	2657.731	326				
	Technical Knowledge	Between G.	97.440	2	48.720	7.460	.001	Between those who log in every day and those who log in one or two days a week
		Within G	2115.979	324	6.531			
		Total	2213.419	326				
	Privacy and	Between G.	26.914	2	13.457	3.054	.049	

Variables		Variance Sources	Sum of Squares	df	Mean Squares	F	P	Difference
	Security Information	Within G	1427.673	324	4.406			
		Total	1454.587	326				
	Total	Between G.	535.274	2	267.637	8.033	.000	Between those who enter every day and those who enter two to three to five days a week
		Within G	10794.542	324	33.316			
		Total	11329.817	326				
SMAD	Total	Between G.	911.428	2	455.714	9.873	.000	Between those who enter every day and those who enter two to three to five days a week
		Within G	14955.342	324	46.158			
		Total	15866.771	326				
	Social Competence	Between G.	156.137	2	78.068	2.716	.068	
		Within G	9313.613	324	28.746			
		Total	9469.749	326				
	Need to Share	Between G.	929.601	2	464.800	11.213	.000	Between those who enter every day and those who enter two to three to five days a week
		Within G	13430.289	324	41.452			
		Total	14359.890	326				
SMAS	Relationship with Teachers	Between G.	25.651	2	12.825	1.115	.329	
		Within G	3727.750	324	11.505			
		Total	3753.401	326				
	Social Isolation	Between G.	87.202	2	43.601	1.014	.364	
		Within G	13925.318	324	42.979			
		Total	14012.520	326				
	Total	Between G.	1515.529	2	757.765	2.919	.055	
		Within G	84120.697	324	259.632			
		Total	85636.226	326				

When Table 8 was examined, it was determined that the purpose of use ($F_{(2-324)}$ =6.742; $p<0.05$), technical knowledge ($F_{(2-324)}$ =7.460; $p<0.05$) and privacy and security knowledge factors ($F_{(2-324)}$ =3.054; $p<0.05$) and digital literacy total scores ($F_{(2-324)}$ =8.033; $p<0.05$) of the students regarding digital literacy differed significantly according to the frequency of internet use. There were also significant differences in terms of social media addiction total score ($F_{(2-324)}$ =9.873; $p<0.05$) and the need to share factor of the social media attitude scale ($F_{(2-324)}$ =11.213; $p<0.05$). According to the Tukey test results and averages, it was observed that there was a significant differentiation between those who log in every day and those who log in three to five days a week in favor of

those who log in every day in the purpose of use factor. In the technical knowledge factor, there is a significant differentiation between those who log in every day and those who log in one or two days a week, in favor of those who log in every day. In terms of digital literacy and social media addiction scores, it was observed that there was a significant difference between those who logged in every day and those who logged in once or twice a week and three to five days a week, in favor of those who logged in every day. In the need to share factor related to attitude, there was a significant difference between those who log in every day and those who log in one or two days a week in favor of those who log in every day, and between those who log in every day and those who log in three to five days a week in favor of those who log in every day.

In general, the frequency of internet use was found to be in favor of those who use the internet every day. It can be said that students who use the internet every day have higher levels of purpose of use, technical knowledge, digital literacy, social media addiction, and need to share. In terms of other factors and scale, it can be said that the frequency of internet use is like each other and at a similar level. Table 9 summarizes the findings regarding the relationship levels between students' digital literacy and social media addiction and attitudes towards social media use**.**

Table 9. The Relationship between Digital Literacy Skills, Social Media Addictions and Social Media Attitudes

Variable		Social Competence	Need to Share	Relationship with Teachers	Social Isolation	SMAS	SMAD
Intended Use		.021	*176***	.001	-.070	**.149***	**-.108**
Technical Knowledge		*131**	*289***	.071	.024	**.175****	**-.167****
Privacy and Security Information	r	.010	*201***	-.002	.046	**.016**	**-.067**
DLS		**.072**	**.285****	**.031**	**-.007**	**.155****	**-.150****

N=327, **p<0.05, **p<0.01

When Table 9 is examined, it is observed that there is a significant positive relationship between the purpose of use factor of digital literacy and both the total score of attitudes towards social media use (r=.149; p<0.05) and the need to share factor (r=.176; p<0.05). It was observed that there was a significant positive relationship between the technical knowledge factor related to digital literacy, the total score of attitudes towards social media use (r=.175; p<0.05), the social competence factor (r=.131; p<0.05), the need to share factor (r=.289; p<0.05) and social media addiction. It was observed that there was a significant positive relationship between the privacy and security knowledge factor related to digital literacy and the need to share factor (r=.201; p<0.05).

On the other hand, it was determined that there was a significant positive relationship between the total score of digital literacy and both the attitude towards social media use (r=.155; p<0.05) and the total score of social media addiction. As a result, it can be said that as students' digital literacy levels increase, their attitudes towards social media use increase, while their social media addiction levels decrease. findings regarding whether students' digital literacy and social media addiction and attitudes towards social media use predict each other are summarized in Table 10.

Table 10. The Prediction between Digital Literacy Skills and Social Media Addictions and Social Media Attitudes

Social Media Addiction	N	B	SHB	β	t	P	
Fixed		.238	.265		.896	.371	N=327
Digital Literacy Skills		.179	.103	.085	2.728	.045	R=.486
Social Media Attitude	327	.512	.054	.466	9.487	.00	R^2=.236
							F=50.083
							p<.01

When Table 10 is examined, it is seen that social media addiction is predicted by both digital literacy skills and social media attitude ($F_{(2\text{-}324)}$ =50.083, p<.01). Digital literacy levels and social media attitudes together show a high and significant relationship with social media addiction scores (R=0.486, R2=0.236). Together, these two variables explain approximately 24% of the total variance in social media addiction. On the other hand, social media attitude seems to be a stronger predictor of social media addiction.

Social Media Addiction=(.512 x Social Media Attitude +.179 x Digital Literacy Skills) + 0.238.

Discussion and Conclusion

It was found that students had low levels of social media addiction and somewhat good sentiments toward social media in terms of their digital literacy abilities and attitudes toward it. The literature may contain evidence that points in the same direction. For instance, high school students' views about social media were found to be moderate and favorable in the study done by Akyürek (2020), in which students' attitudes toward social media were evaluated. It was discovered that pupils had a moderately good attitude toward social media in the study by Sözen (2022), which examined social media addiction and attitudes of high school students. The digital literacy skills of secondary school pupils were evaluated in the study by Üstünda (2021), and it was discovered that students' views toward social media were moderate and favorable. It was discovered that teenagers' social media addiction was at a low level in the study done by Dorusever (2022), which looked at adolescents' social media addiction levels in terms of demographic characteristics. In a similar vein, Hou, Xiong, Jiang, Song, and Wang (2019) discovered that university students' levels of social media addiction were low. Thus, it can be said that students' views regarding social media and digital literacy abilities are similar, and on the plus side, social media addiction levels are low. Low levels of social media addiction may be caused by students' favorable views regarding using social media and their moderate levels of digital proficiency.

Male students were shown to have much greater social skills and attitudes about social media than female students. It follows that male students are more likely than female students to have favorable opinions regarding social media. On the other hand, it was found that the total scores, digital literacy variables, and social media addiction total scores of male and female students were comparable. The results were in line with those of earlier research. The degrees of social media addiction among teenagers were evaluated in the study by Dorusever (2021) in terms of demographic factors, and it was discovered that the levels of addiction were identical and did not differ based

on gender. Males had more positive attitudes regarding social media usage than females, according to Alican and Saban's (2013) study of secondary and high school students' attitudes toward social media use. In the study by Taşçı Ağaoğlu and Durmaz (2021), which studied secondary school students' social media usage and digital literacy in terms of several characteristics, it was found that the students' levels of digital literacy were equivalent and did not differ based on gender. Meena, Soni, Jain, and Paliwal (2015) discovered that young people's addiction to social media was gender neutral. Male students had more positive opinions about social media, according to the data collected and comparable earlier research, but gender does not distinguish between digital literacy and social media addictions. It may be assumed that pupils' levels of digital literacy proficiency and susceptibility to addiction are comparable.

It was determined that the digital literacy levels of fifth graders were lower than the other grades, and the levels of eighth graders were higher than all other grades. In addition, it was observed that the classes were at similar levels in terms of other factors related to digital literacy, attitude towards using social media and social media addiction. Similar evidence may be found in the literature. For instance, Baçecik's (2021) study on high school students' degrees of digital literacy during the pandemic found that students' levels of digital literacy varied according on their grade level. According to Üstünda (2021), middle school student's levels of digital literacy varied by grade, with seventh and eighth graders having higher levels of proficiency. According to the research on social media addictions among high school students by Deniz and Gürültü (2018) and Göksu (2019), there was no difference in the prevalence of addictions between grades. According to Otrar and Argın's (2014) study, there was no difference in students' opinions about the media based on their class level. In terms of class level, Afacan and Ozbek (2019) discovered that high school pupils' addictions to social media were comparable. The results collected reveal that while there is no difference in social media addiction and attitude between grade levels, students' digital literacy abilities positively influence their digital literacy skills as the grade level advances. This perspective suggests that student's digital literacy will advance as they become older and have more life experience. In terms of addiction and attitude, it can be claimed that students of all ages and grade levels who actively use social media do not vary from one another.

It was observed that the levels of digital literacy skills, social media addiction and attitudes towards social media use of secondary school students were higher than the levels of purpose of use, technical knowledge, digital literacy, social media addiction, and need for sharing of students who use the internet every day. It was concluded that the frequency of internet use in terms of privacy and security knowledge, attitude towards social media, social competence, relationship with teachers and social isolation were similar to each other. It is possible to find similar evidence in the literature. Pala and Başıbüyük (2020) found that as the frequency of students' internet use increases, their digital literacy will also increase. In the study conducted by Akyürek (2020) on high school students' social media use and attitudes towards social media, the rate of those who use the internet every day was found to be high. In the study on social media addiction conducted by Doğrusever (2021), it was found that there was a significant differentiation between the frequency of internet use and social media addiction, and it was determined that the more the internet is used, the more addiction will increase. Tutgun Ünal (2015) found that social media addiction of university students differed according to their frequency of internet use. Otrar and Argın (2014) found that there was no differentiation in the dimension of relationship with teachers, but there was

differentiation in terms of the need to share. Mythily, Qiu, and Winslow (2008) found that adolescents use the Internet excessively and that this daily use of the Internet can cause addiction in students. As a result, according to the frequency of internet use of the students, it shows that those who use the internet every day are in the majority and the digital literacy skills and social media addiction levels of those who use the internet every day are high, but it does not create a differentiation in their attitudes towards social media. Although their attitudes towards social media were similar, it was determined that students' using the internet every day improved their digital literacy skills but increased their addiction levels negatively.

It was determined that as students' digital literacy levels increased, their attitudes towards social media use increased, whereas their social media addiction levels decreased. Sözen (2022) revealed a somewhat favorable association between students' social media attitudes and their use of social media. In the study conducted by Alican and Saban (2013), it was found that as the duration of internet and social media use increases, the attitude towards social media will increase positively. According to the study conducted by Deniz and Gürültü (2018), it was found that as the use of social media increases, addiction will increase, and it was found to be directly proportional and parallel. Üstündağ (2021) stated in his study that when students have sufficient knowledge and awareness about privacy and security, technical and legal information, and usage, their digital literacy will also increase. Kurniawan, Warohmah, Wahin, Annisa, and Pratama (2021) found in their study that as students' social media use increases, they develop attitudes in this direction and that the increase in social media use causes them to move away from sociability and spend too much time on social media. As a result, it can be thought that if students' digital literacy increases, the risk of addiction may also decrease.

The variables of digital literacy and attitude towards social media use together explain approximately 24% of the total variance in social media addiction. On the other hand, social media attitude was found to be a stronger predictor of social media addiction. This finding is also consistent with the literature. In the study conducted by Sözen (2022), it was found that whether social media is used excessively or not is related to attitude towards social media use. Kurniawan et al. (2021) found that students develop attitudes towards social media use as their social media use increases and that the increase in social media use causes them to move away from sociability and spend too much time on social media. . Considering that social media addiction is a negative behavior, it can be said that social media addiction may decrease if digital literacy and attitudes towards social media use increase.

Within the framework of these results, it may be recommended to take measures to improve students' digital literacy skills, especially at an early age. In addition, it may be recommended to take measures to increase the awareness of students who frequently use social media about addiction. Based on the conclusion that social media addiction can be reduced by improving digital literacy skills and positive attitudes towards using social media, it may be recommended to take measures to further increase students' digital literacy and positive attitudes towards social media.

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