



Digital literacy levels of nomophobic individuals in the age of doomscrolling

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ABSTRACT

This article comprehensively examines the relationship between digital literacy and anxieties associated with online media use. The study focuses on two phenomena: nomophobia—the distress experienced when separated from mobile devices—and doomscrolling—the compulsive consumption of negative online content. The impact of digital literacy on anxiety and compulsive media use remains unclear. Survey data were collected from 779 undergraduate students across seven regions of Turkey, a society undergoing rapid digitalization. Analyses of validated measures of digital literacy, nomophobia, and doomscrolling indicate that literacy does not automatically function as a protective factor. Findings show that even individuals with high levels of digital competence remain vulnerable to anxiety-inducing engagement. The results also suggest that digital literacy should be considered beyond technical skills. Drawing on the Turkish context, these findings offer a new perspective on the relationship between digital literacy and digital anxieties in international literature, contributing to a deeper understanding of user behavior in globally connected environments. Based on the findings, future research should consider digital literacy not only in terms of technical competence, but also with respect to its emotional and psychosocial dimensions.

Keywords: nomophobia, doomscrolling, digital literacy, digital addiction

INTRODUCTION

With the advancements and developments in communication technologies, the increasing use of digital media has begun to inevitably influence individuals' lives. The term doomscrolling first came into use in 2018, and gained wider recognition after journalist Karen Ho referenced it in a Twitter post (Garcia-Navarro, 2020). In its basic sense, doomscrolling refers to the behavior of social media users persistently scrolling through negative content in their news feeds, and is defined as the excessive consumption of predominantly negative and depressive news or information (Arne & Moe, 2021; Jennings, 2020; Sharma et al., 2022, p. 1; Watercutter, 2020). Consumers who engage in doomscrolling often feel a compulsive urge to follow such news and stories, which negatively impacts their emotional well-being (Price et al., 2022). Despite being aware of the emotional toll, individuals tend to spend more time consuming negative news on digital devices following traumatic events such as pandemics, earthquakes, or wars (Rodrigues, 2022). This is largely due to the algorithmic structure of reels and swipeable videos, which are designed to captivate users by presenting a continuous flow of interconnected content. As a result, even in the absence of an initial motivation to scroll, compulsive scrolling behavior may emerge among social media users (Sharma et al., 2022).

With the integration of internet technology, the use of mobile phones has given rise to new addictions, considered unique to the modern era, which have psychological, physiological, social, and even economic consequences. One of these is nomophobia, a form of anxiety that individuals experience when they cannot receive a signal on their mobile phones, when the battery runs out, when they forget to turn on their phone, or when they only receive calls, emails, and notifications for a certain period of time (King et al., 2013, p. 30). What differentiates nomophobia from other phobias or anxiety disorders is that it stems from the fear of losing connection with one's smartphone (Dixit et al., 2010, p. 339; Hessari et al., 2024, p. 25934; King et al., 2013, p. 141; Liang, 2024, p. 6; Nikhita et al., 2015, p. 6). Recognized as a 21st century disorder, nomophobia is regarded as a pathological condition that manifests as a fear experienced when individuals are disconnected from technology and is increasingly viewed as a reflection of a virtualized societal dysfunction in the digital age (King et al., 2010, p. 52). For example, "spending excessive time on a mobile phone, owning multiple devices, always carrying a charger, feeling anxious or tense when the phone is not nearby or out of service range, constantly checking the phone screen, keeping the phone on 24/7, even sleeping with it, and incurring debt or overspending due to phone usage are all considered clinical features of nomophobia" (Bragazzi & Puente, 2014, pp. 156-157).

Mobile phones are considered the most widespread non-substance addiction of the 21st century (Shambare et al., 2012, p. 573). Nomophobia, which predominantly affects young people between the ages of 18 and 24, is a type of phobia that, at advanced levels, can present with physical side effects such as panic attacks, shortness of breath, trembling, sweating, increased heart rate, joint pain in the hands, and pain in the neck and back (Kanmani et al., 2017, p. 6). Although technological innovations and inventions promote communication among individuals or groups, they have also introduced concepts into the literature such as the mobile phone paradox, similar to the internet paradox, which leads to a decrease in social participation, loneliness, and an increase in depression (Kraut et al., 1998).

While benefiting from advancing communication technologies is important for individuals in the digital age, it has become necessary for individuals to acquire new skills in order to prevent problems caused by the misuse of these tools or to minimize their negative effects. In this context, many countries around the world have started offering training in various types of literacy such as media literacy, social media literacy, news literacy, and digital literacy. Barton (2001, p. 100), who refers to these initiatives as "new literacies," states that in the modern world, all daily activities are carried out through literacy. These activities are increasingly conducted through online interaction (Davies & Merchant, 2009, p. 83), and new forms of communication are emerging alongside new forms of language and new applications (Miller & Slater, 2000). The concept of literacy encompasses more than just the acts of reading and writing (Barton, 2001, p. 98). Therefore, being able to use digital tools is not equivalent to using them appropriately. In order to protect oneself from the negative effects of these tools, it is essential to "read, consume, and interpret content consciously, critically, and analytically," (Ata & Yıldırım, 2019, p. 2), which is the foundation of being digitally literate. The concept of digital literacy was first introduced in 1997 by Paul Gilster in his book "Digital literacy." In the same year, during an interview titled "A new literacy", he defined the concept as "the ability to evaluate and integrate information in multiple formats that a computer can present" and emphasized the critical importance of being able to interpret information (Bawden, 2001, p. 246; Pool, 1997). Lanham, on the other hand, preferred to use the concept of digital literacy synonymously with "multimedia literacy," defining it as the ability to read and comprehend hypertexts and multimedia texts. He also emphasized that it entails the ability to decipher not only complex images and sounds in the digital world but also the syntactic nuances of words (Lanham, 1995, p. 198).

Digital technology is creating its own modes and enabling individuals to manage multiple modalities simultaneously (Kress & Leeuwen, 2001, p. 92; Lankshear & Knobel, 2003). Pahl (2007), emphasizes that digital literacy should be understood as the ability to produce meaningful communication by combining elements such as images, fonts, language, gestures, symbols, and experiences, through the use of new digital technologies. Paul Gee (2008, p. 2), on the other hand, highlights that literacy should be examined from a variety of perspectives, including cognitive, social, interactional, cultural, political, institutional, economic, ethical, and historical contexts. Similarly, in the European Commission's (2003, p. 3) report "E-learning: Better e-learning for Europe," it is stated that creativity, innovation, and entrepreneurship have become

prerequisites in relation to digital literacy, and that without digital literacy, citizens can neither fully participate in society nor acquire the knowledge and skills necessary to live in the 21st century.

The dynamic development of technology and its increasing significance in daily life compared to the past has been observed for many years (Cicha et al., 2021, p. 2). In particular, during the COVID-19 pandemic, concerns about individuals' health and safety, restrictions on daily routines, and the risks posed by the virus contributed to a noticeable increase in both traditional and social media usage (Price et al., 2020). For these and similar reasons, individuals turned to digital tools in search of information about COVID-19 and other health-related issues and were confronted with an overwhelming amount of content regarding the progression of the disease, treatment processes, mortality risks, and more. Since the ability to identify accurate information within this overload depends on one's level of digital literacy, it has become essential for individuals living in this era to receive education on how to use communication tools accurately and effectively.

The concept of doomscrolling has garnered increasing attention in recent years, particularly in studies conducted within the context of COVID-19 (Price et al., 2022; Ytre-Arne & Moe, 2021). Beyond this context, there are also studies focusing on the psychological outcomes of doomscrolling behavior (Yang et al., 2024), as well as its relationship with negative brand news and social media (Mandliya et al., 2024). When reviewing studies related to nomophobia, a questionnaire measuring nomophobia has been developed by determining and defining the dimensions of nomophobia (Yildirim & Correia, 2015), and psychology-based studies on the effect of nomophobia on daily behaviors and mental disorders, as well as the conditions under which nomophobia causes stress, stand out (Bragazzi & Del Puente, 2014; King et al., 2013; Tams et al., 2018). Studies concerning education have investigated the effect of nomophobic individuals using their phones in class during lessons on learning (Mendoza et al., 2018; Yildirim et al., 2015). A study examining the concepts of nomophobia and phubbing, as well as the effects of age and gender on smartphone use among the younger generation, draws attention to social behavioral disorders (Anshari et al., 2016). In this regard, there are studies in many fields such as health, education, social media, finance, and economics based on the concept of new literacy.

In line with the existing literature, this study aims to identify the tendencies of university students in Turkey to exhibit nomophobic behavior and engage in doomscrolling, considering certain variables within the context of their digital literacy levels. Although there are studies related to doomscrolling in Turkey, most of these appear to have been conducted in the field of psychology in relation to the 2023 earthquakes (Cengiz & Peker, 2024; Koçyiğit et al., 2024; Satici et al., 2022). Similarly, it is understood that studies on nomophobia have generally focused on its psychological outcomes. The concept of digital literacy, on the other hand, has emerged as an umbrella term that has been explored across various disciplines within the social sciences, educational sciences, and natural sciences. This study specifically examines the interaction between the concepts of nomophobia, doomscrolling, and digital literacy. It holds originality and significant implications as the first study to address all three variables simultaneously. The study is expected to contribute to the literature particularly by revealing the relationship between digital literacy levels, smartphone addiction, and doomscrolling behavior. Therefore, the findings of this research may serve as a guide for future studies.

In this context, the following research questions were posed regarding students in faculties of communication:

1. Does the level of "digital literacy" affect whether or not someone is "nomophobic"?
2. Does the level of "digital literacy" affect "doomscrolling" behavior?
3. Does being "nomophobic" affect "doomscrolling" behavior?

To answer the research questions, an online survey was conducted in Turkey to measure participants' digital literacy, nomophobia, and doomscrolling. The data were analyzed using both descriptive and inferential statistics.

METHODOLOGY

Universe and Sample

The study consists of a total of 779 students, including 441 women and 338 men, studying at the faculties of communication of public and foundation universities in seven different geographical regions of Turkey during the 2024-2025 academic year. Turkey is divided into seven geographical regions, and to ensure the consistency, validity, and reliability of the collected data, at least one university from each region was included in the study. The study was conducted using the maximum variation sampling method, one of the purposive sampling techniques. This method allows for understanding how a particular phenomenon (in this study, digital literacy level, nomophobia and doomscrolling tendencies) emerges in different contexts (Palinkas et al. 2015; Patton, 2002; Yıldırım & Şimşek, 2018). The maximum variation sampling method was employed to capture diverse profiles of digital literacy, nomophobia, and doomscrolling across the seven regions, and data were analyzed using correlations, independent-samples t tests, and analysis of variance (ANOVA) to examine relationships and group differences. Data were collected via an online survey form between December 1, 2024, and January 30, 2025. The survey, which emphasized principles of confidentiality and voluntariness during data collection, was structured through the Google Forms platform. Ethical approval was obtained from the relevant public university, and informed consent was obtained from all participants prior to data collection. The sample size of 779 provided 80% power to detect an effect size of $r = .10$ or greater in independent-samples t tests and ANOVA with a 5% false-positive rate.

Data Collection Tools

In the study, three different measurement tools were used to assess participants' levels of digital literacy, nomophobia tendencies, and doomscrolling behaviors. The selected scales have been tested for validity and reliability in the relevant literature, adapted into Turkish, and their applicability has been confirmed in university student samples. The survey form consists of four main sections: a demographic information form, the digital literacy scale, the doomscrolling tendency scale, and the nomophobia questionnaire scale.

Digital literacy scale

To determine participants' digital literacy levels, the digital literacy scale developed by Ng (2012) and adapted into Turkish by Üstündağ et al. (2017) consists of a total of 10 items on a 5-point Likert scale. It is categorized into dimensions of technical competence, information literacy, and social awareness. The construct validity of the scale was tested through exploratory and confirmatory factor analyses. Accordingly, it was determined that factor loadings were above .40 and the model fit indices were at an acceptable level. The Cronbach's alpha internal consistency coefficient was calculated as .89.

Doomscrolling tendency scale

To measure individuals' tendency to spend excessive time online among negative and anxiety-inducing content, the doomscrolling tendency scale developed by Bright and Logan (2022) and adapted into Turkish by Satici et al. (2022) was used. The scale, which consists of 15 items and is unidimensional, was originally a 5-point Likert scale but was applied as a 7-point Likert scale to evaluate participants' attitudes more thoroughly.

It was determined that the model demonstrated a good level of fit ($\chi^2/df = 1.92$, CFI = .96, RMSEA = .055). In the adaptation of the 7-point form, the same structure was maintained, with factor loadings of the items ranging between .61 and .84. The calculated Cronbach's alpha coefficient was found to be .89.

Nomophobia questionnaire scale

To measure nomophobic tendencies, the Nomophobia Questionnaire (NMP-Q), developed by Yıldırım and Correia (2015) and adapted into Turkish by Yıldırım et al. (2016), with established validity and reliability, was used. It consists of a total of 20 items and four dimensions; the anxiety level experienced by participants when deprived of their mobile phones was assessed using a 5-point Likert scale. The categories include the dimensions of fear of inability to retrieve information, losing online connectedness, inability to communicate, and giving up convenience. The total score obtainable from this scale, which has a 7-point Likert rating, ranges from 20 to 140. Higher scores indicate a higher level of nomophobia. Confirmatory factor analysis of the

Table 1. Normal distribution indicators: Skewness, kurtosis, and z-scores

	Skewness		zSkewness	Kurtosis		zKurtosis
	Score	Standard error		Score	Standard error	
Digital literacy scale	-.436	.388	-1.12	.872	.775	1.13
Doomscrolling scale	.765	.388	1.97	.082	.775	.11
Nomophobia questionnaire scale	-.039	.388	-.10	-.716	.775	-.92

Turkish adaptation showed that the original scale structure was preserved and that the model demonstrated a good level of fit (CFI = .94, RMSEA = .062). The total Cronbach's alpha coefficient of the scale was reported as .92. This value indicates that the scale is a highly reliable measurement tool.

Data Analysis

The data obtained within the scope of the research were analyzed using the IBM SPSS Statistics 22.00 software package. In the statistical process, which included both descriptive and comparative analyses, the normality of the data distribution was checked, and then parametric and non-parametric test techniques were applied. A t-test, one-way ANOVA, and Bonferroni post-hoc test were performed.

In order to determine whether the data conformed to a normal distribution, Skewness-Kurtosis analyses were conducted. For the digital literacy scale, the zSkewness was -1.12 and the zKurtosis was 1.13; for the doomscrolling scale, zSkewness was 1.97 and zKurtosis was .011; and for the nomophobia questionnaire scale, zSkewness was -.010 and zKurtosis was -.092. The results of the skewness and kurtosis analyses of the data are presented in **Table 1**. Skewness and kurtosis values falling within the range of +1.96 to -1.96 are considered indicative of normal distribution (George & Mallery, 2010). In this context, it can be stated that all scale values exhibit normal distribution.

FINDINGS

Information on Demographic Characteristics

The distribution of communication faculty students based on their demographic characteristics is presented in **Table 2**.

Table 2. Findings related to the characteristics of the students included in the study (n = 779)

Variable		Frequency (N)	Percentage (%)
Gender	Female	441	56.6
	Male	338	43.4
Age	Between 17-22	513	65.9
	Between 23-28	181	23.2
	Between 29-35	32	4.1
	36 years old and above	53	6.8
Universities	Universities located in the Eastern Anatolia Region	247	31.7
	Universities located in the Marmara Region	138	17.7
	Universities located in the Southeastern Anatolia Region	66	8.5
	Universities located in the Aegean Region	57	7.3
	Universities located in the Black Sea Region	72	9.2
	Universities located in the Central Anatolia Region	121	15.5
Level of education attained	Universities located in the Mediterranean Region	78	10.0
	1 st grade	189	24.3
	2 nd grade	252	32.3
	3 rd grade	133	17.1
Department of study	4 th grade	205	26.3
	Radio, television, and cinema	413	53.0
	Journalism	153	19.6
Social media platforms used (*)	Public relations and advertising	213	27.3
	Twitter (X)	9	1.3
	Instagram	83	11.9
	Telegram	2	0.3
	YouTube	21	3.0
Facebook	1	0.1	

Table 2 (Continued).

Variable		Frequency (N)	Percentage (%)
	Instagram + YouTube	141	20.1
	Twitter (X) + Instagram + YouTube	216	30.9
	Twitter (X) + Instagram + Telegram + YouTube	81	11.6
	Twitter (X)+ Instagram + YouTube + Facebook	45	6.4
	Twitter (X) + Instagram + Telegram + YouTube + Facebook	101	14.4
Frequency of smartphone use per day	1-3 hours	154	19.8
	4-5 hours	331	42.5
	6-7 hours	197	25.3
	8 hours and more	97	12.5
Frequency of following negative news (war, earthquake, flood, murder, etc.)	Never	37	4.7
	Once a week	115	14.8
	Twice or three times a week	225	28.9
	Every day	402	51.6

* More than one option has been selected

Table 3. Arithmetic mean and standard deviation values for digital literacy scale, doomscrolling scale, and nomophobia questionnaire scale scores

	Arithmetic mean	Standard deviation
Digital literacy scale	36.94	6.11
Doomscrolling scale	40.80	20.72
Dimension of inability to retrieve information	17.00	6.95
Dimension of giving up convenience	20.25	8.70
Dimension of inability to communicate	26.51	11.27
Dimension of losing online connectedness	16.17	8.86
Nomophobia questionnaire scale	79.94	30.51

Table 4. Nomophobia status of students included in the study

	Frequency (N)	Percentage (%)
None	15	1.9
Mild	190	24.4
Moderate	369	47.4
Severe	205	26.3

As seen in **Table 2**, 56.6% of the students from the faculty of communication participating in the study were female, and 43.4% were male. Additionally, 65.9% of the students were between the ages of 17 and 22. Regarding the region variable, 31.7% of the students were enrolled in universities located in the Eastern Anatolia region, while 17.7% were in universities in the Marmara Region. Furthermore, 32.3% of the students were in their second year, 53% were studying in the radio, television, and cinema department, 27.3% in the public relations and advertising department, and 19.6% in the journalism department.

Regarding social media platform usage, 30.9% of the participants use Twitter (X), Instagram, and YouTube, while 14.4% use Twitter (X), Instagram, Telegram, YouTube, and Facebook. In terms of smartphone usage, 25.3% use their phones for 6-7 hours daily, and 12.5% use them for 8 hours or more per day. Additionally, 28.9% of the students follow negative news every day, whereas 4.7% do not follow negative news at all.

The demographic characteristics of the communication faculty students participating in the study, along with the arithmetic mean and standard deviation values of the digital literacy, doomscrolling, and nomophobia scales, are presented in **Table 3**.

It can be stated that the students from the faculty of communication who participated in the study had high levels of digital literacy, low levels of doomscrolling, below-average levels of fear of inability to retrieve information, moderate levels of fear of giving up convenience, above-average levels of fear of inability to communicate, and below-average levels of fear of losing online connectedness (see **Table 4**).

The results revealed that 47.4% of students experienced moderate levels of nomophobia, 26.3% severe, 24.4% mild, and only 1.9% reported no symptoms of nomophobia.

Table 5. Correlation values related to the relationship between nomophobia questionnaire scale scores and digital literacy scale and doomscrolling scale scores

		Digital literacy scale	Doomscrolling scale
Dimension of inability to retrieve information	r	.112*	.375*
	p	.002	.000
Dimension of giving up convenience	r	-.002	.311*
	p	.946	.000
Dimension of inability to communicate	r	.049	.260*
	p	.173	.000
Dimension of losing online connectedness	r	.020	.378*
	p	.587	.000
Nomophobia questionnaire scale	r	.049	.380*
	p	.176	.000
Doomscrolling scale	r	.001	-
	p	.977	

* p < 0.05

Table 6. Differences in doomscrolling scores based on students' nomophobia status

	N	Mean	Standard deviation	F	p	Difference
None	15	20.73	8.83	34.598	.000	Severe > none-mild-moderate Moderate > None-mild
Mild	190	31.88	17.06			
Moderate	369	40.95	18.72			
Severe	205	50.24	23.16			

Table 7. Differences in digital literacy scores based on students' nomophobia status

	N	Mean	Standard deviation	F	p
None	15	37.20	8.42	1.843	.138
Mild	190	36.85	5.88		
Moderate	369	36.52	6.19		
Severe	205	37.76	5.95		

Analysis of the Relationship Between Nomophobia, Digital Literacy, and Doomscrolling

Pearson correlation analysis was applied to determine whether there was a relationship between nomophobia questionnaire scale scores and digital literacy scale and doomscrolling scale scores (Table 5).

The correlation between the scores of the digital literacy scale and the fear of inability to retrieve information dimension was found to be positive and statistically significant at the $p < 0.05$ level. Similarly, the correlations between the scores of the doomscrolling scale and the fear of inability to retrieve information, fear of giving up convenience, fear of inability to communicate, fear of losing online connectedness dimensions, as well as the overall nomophobia scale scores, were also found to be positive and statistically significant at the $p < 0.05$ level.

As a result, it was detected that as the scores on the digital literacy scale increased, the scores on the fear of inability to retrieve information dimension also increased. Additionally, as the scores on the doomscrolling scale increased, the scores on the fear of inability to retrieve information, fear of giving up convenience, fear of inability to communicate, fear of losing online connectedness dimensions, as well as the overall nomophobia scale scores, also increased.

In order to determine whether there was a difference in doomscrolling scores based on students' levels of nomophobia, a one-way ANOVA was conducted, and the F value for the differences was found to be statistically significant at the $p < .05$ level. It was observed that individuals with severe nomophobia engaged in doomscrolling more frequently than those with no nomophobia, mild, or moderate levels of nomophobia. Additionally, individuals with moderate levels of nomophobia were found to engage in doomscrolling more than those with no or mild levels of nomophobia (Table 6).

In order to observe whether there was a difference in digital literacy scores based on students' nomophobia status, a one-way ANOVA was performed, and the F value for the differences was found to be

Table 8. Differences in digital literacy, doomscrolling, and nomophobia scores based on students' gender

		N	Mean	Standard deviation	t	p
Digital literacy scale	Female	441	36.22	5.91	-3.808	.000
	Male	338	37.88	6.25		
Doomscrolling	Female	441	41.59	20.60	1.222	.222
	Male	338	39.76	20.85		
Nomophobia	Female	441	86.70	29.53	7.301	.000
	Male	338	71.11	29.53		

Table 9. Differences in digital literacy, doomscrolling, and nomophobia scores based on students' ages

		N	Mean	Standard deviation	F	p
Digital literacy scale	17-22 years old	513	36.62	5.98	3.229	.022
	23-28 years old	181	38.03	5.76		
	29-35 years old	32	37.75	5.91		
	36 years old and above	53	35.79	7.96		
Doomscrolling	17-22 years old	513	42.16	19.69	5.711	.001
	23-28 years old	181	40.94	21.74		
	29-35 years old	32	33.44	23.25		
	36 years old and above	53	31.55	22.51		
Nomophobia	17-22 years old	513	82.66	29.39	4.264	.005
	23-28 years old	181	75.33	31.53		
	29-35 years old	32	76.03	29.57		
	36 years old and above	53	71.66	35.08		

Table 10. Differences in digital literacy, doomscrolling, and nomophobia scores based on students' educational levels

		N	Mean	Standard deviation	F	p
Digital literacy scale	1 st grade	189	36.27	6.147	5.356	.001
	2 nd grade	252	36.12	6.199		
	3 rd grade	133	37.79	5.890		
	4 th grade	205	38.02	5.904		
Doomscrolling	1 st grade	189	38.76	19.655	2.084	.101
	2 nd grade	252	40.46	21.020		
	3 rd grade	133	44.53	22.312		
	4 th grade	205	40.66	20.045		
Nomophobia	1 st grade	189	77.89	29.151	.989	.387
	2 nd grade	252	78.96	31.090		
	3 rd grade	133	83.39	29.111		
	4 th grade	205	80.78	31.861		

insignificant at a significance level of $p > .05$. It can be said that there was no difference in digital literacy status based on individuals' nomophobia status (Table 7).

A t-test was applied to determine whether there were differences between students' digital literacy, doomscrolling, and nomophobia scores based on gender. It was detected that men were more digitally literate than women, that men and women had similar levels of doomscrolling, and that women were more nomophobic (Table 8).

In order to analyze whether there were differences in digital literacy, doomscrolling, and nomophobia scores based on age, a one-way ANOVA was performed. After Bonferroni tests, it was noted that those aged 23-28 were more digitally literate than those aged 17-22, that those aged 17-22 and 23-28 engage in more doomscrolling than those aged 36 and older, and that those aged 17-22 are more nomophobic than those aged 23-28 (Table 9).

A one-way ANOVA was applied to determine whether there were differences in digital literacy, doomscrolling, and nomophobia scores among students based on their grade levels. Following Bonferroni post-hoc tests, it was found that 4th grade students were more digitally literate than 1st and 2nd grade students, and that all age groups were similar in terms of doomscrolling and nomophobia (Table 10).

A one-way ANOVA was applied to determine whether there were differences in digital literacy, doomscrolling, and nomophobia questionnaire scale scores among students based on their departments.

Table 11. Students' digital literacy, doomscrolling, and nomophobia scores by department of study

		N	Mean	Standard deviation	F	p
Digital literacy scale	Radio, television, and cinema department	413	37.29	6.04	1.485	.227
	Journalism department	153	36.40	5.80		
	Public relations and advertising department	213	36.66	6.44		
Doomscrolling	Radio, television, and cinema department	413	40.30	20.75	4.488	.012
	Journalism department	153	37.65	18.36		
	Public relations and advertising department	213	44.01	21.87		
Nomophobia	Radio, television, and cinema department	413	77.62	30.77	3.741	.024
	Journalism department	153	85.44	27.25		
	Public relations and advertising department	213	80.48	31.80		

Following the Bonferroni post-hoc tests, it was concluded that students' digital literacy scores were similar across all departments, students in the public relations and advertising department engaged in more doomscrolling than students in the journalism department, and students in the journalism department exhibited higher levels of nomophobia than students in the radio, television, and cinema department (Table 11).

DISCUSSION

The primary aim of this study is to examine the relationship between university students' levels of digital literacy and their tendencies toward nomophobia and doomscrolling.

Within the scope of research question 1, the question, "Does the level of digital literacy affect whether an individual is nomophobic?" was addressed. The findings indicate a limited positive relationship between digital literacy levels and nomophobia; in other words, digital literacy does not directly reduce nomophobia. This suggests that individuals' demands for information access and the compulsion to remain constantly connected in their interaction with technology may change alongside psychological anxiety. This finding parallels the study by Yildirim et al. (2016), which highlighted a positive relationship between digital addiction and information access anxiety. Digital literacy enables individuals to interact more effectively with technology, while also potentially increasing the demands for constant connection and access to information; this may parallel shifts in nomophobic tendencies (Fuchs, 2017; Van Dijk & Van Deursen, 2014). Moreover, the study by Twenge and Campbell (2019) demonstrates that social media use can increase levels of depression and anxiety; in this context, students with high levels of digital literacy may experience increased exposure to negative content and higher anxiety levels, which parallels nomophobic behaviors.

Within the scope of research question 2, the question, "Does the level of digital literacy affect doomscrolling behavior?" was addressed. The findings indicate a limited positive relationship between increasing levels of digital literacy and individuals' tendency to be exposed to negative online content and spend more time on such content. Bright and Logan (2022) noted that increased digital skills help individuals analyze online content more effectively; however, they emphasized that this does not prevent exposure to negative content. Zhao and Hu (2025) and Cicha et al. (2021) demonstrated that the algorithms of digital media platforms guide users toward consuming negative content. Therefore, the relationship between digital literacy and doomscrolling can be explained by the combined effects of platform algorithms and individual skills.

Within the scope of research question 3, the question, "Does being nomophobic affect doomscrolling behavior?" was addressed. The findings indicate that nomophobic individuals exhibit a higher tendency toward doomscrolling behavior. Davies (2020) noted that digital addiction can increase individuals' habits of consuming negative content.

Our study indicates that individuals with severe nomophobia exhibit a higher tendency toward doomscrolling compared to those with mild or moderate levels of nomophobia. These findings are consistent with Przybylski and Weinstein (2013), who stated that digital addiction can increase individuals' time spent on digital media, with parallel changes in anxiety levels. Individuals with moderate nomophobia show a higher tendency for doomscrolling compared to those without nomophobia or with mild levels; these findings support a positive and parallel relationship between nomophobia and doomscrolling behavior.

Analyses considering demographic factors reveal different aspects of the relationships among digital literacy, doomscrolling, and nomophobia. Independent sample t-test results indicate that male students have higher levels of digital literacy compared to female students, whereas females exhibit higher nomophobia tendencies. These findings align with gender differences reported in the literature (Valkenburg et al., 2021). Moreover, demographic factors such as age and academic year have significant effects on individuals' digital media usage and digital literacy levels (Jenkins, 2009; Yıldırım et al., 2016).

CONCLUSION

The study was conducted during the 2024-2025 academic year and included 779 students from communication faculties of public and foundation universities across seven different geographical regions in Turkey. The sample consisted of 441 female and 338 male students. Data collection was carried out using a maximum variation sampling method, one of the purposive sampling techniques, through an online survey. Ethical approval was obtained from the relevant public university, and informed consent was provided by all participants. This sample size allowed the detection of effect sizes of $r = .10$ or higher with 80% power using independent-samples t-tests and ANOVA.

The study aimed to examine the levels of nomophobia and doomscrolling behaviors among individuals with digital literacy education, as well as the relationships between these behaviors. In this context, the study can be considered the first to address three distinct variables—nomophobia, doomscrolling, and digital literacy—while also measuring the varying levels of relationships among them.

Research findings indicated that as nomophobia levels increased, doomscrolling behaviors also increased proportionally. In line with the research questions, the impact of digital literacy on nomophobia and doomscrolling was investigated. The results revealed that although participants exhibited high levels of digital literacy, this did not reduce nomophobia or doomscrolling behaviors. Regarding whether the level of nomophobia affects doomscrolling behavior, the study found that individuals with higher nomophobia were more prone to engage in doomscrolling. Additionally, no significant differences were observed in digital literacy, doomscrolling, and nomophobic behaviors based on age. However, higher educational levels were associated with increased awareness. Overall, while digital literacy appeared to provide some level of awareness, it was still not effective in preventing doomscrolling behavior or nomophobia.

Theoretical Implications

As the level of nomophobia increases, doomscrolling behaviors also increase proportionally, indicating that smartphone addiction and digital behaviors may reinforce each other. Although participants exhibited high levels of digital literacy, it did not directly reduce nomophobia or doomscrolling behaviors; this suggests that digital literacy, when limited to technical knowledge, is insufficient to produce behavioral change. While higher educational levels are associated with increased awareness, this awareness alone is not effective in preventing smartphone addiction or engagement with negative content.

Practical Implications

Digital literacy education should not be limited to technical knowledge alone; it should also incorporate psychosocial skills such as critical thinking, content evaluation, digital awareness, and digital detox strategies. Such programs can contribute to individuals' awareness of content manipulation, guidance, and information pollution; however, they cannot completely eliminate nomophobia or doomscrolling behaviors. The findings also highlight the importance of raising awareness among parents and educators regarding the promotion of healthy digital habits and content limitations.

Recommendations for Future Research

The effects of digital literacy on nomophobia and doomscrolling can be examined by considering different age groups, educational and cultural levels, and socio-economic conditions. Such studies can reveal the impacts of these variables through detailed comparative analyses.

The effectiveness of digital literacy programs that go beyond providing technical knowledge—incorporating psychosocial skills such as critical thinking, content evaluation, digital awareness, and digital detox—can be investigated.

Parents and educators should be made aware of strategies to promote healthy digital habits, implement content restrictions, and manage nomophobia. Digital literacy should be recognized as a constitutional citizenship right and disseminated through state-supported programs. These programs should be designed to protect individuals against content manipulation, guidance, and information pollution.

The relationship between smartphone addiction and doomscrolling behaviors and social media algorithms or content recommendation systems can be examined. Content analyses can more clearly reveal the effects of algorithms on individual behaviors.

The long-term relationships between digital literacy, psychological well-being, social connectedness, and awareness of information manipulation can be studied. Additionally, interactions between different types of technology addictions (e.g., gaming and social media) and nomophobia or doomscrolling can be investigated to identify common and distinct underlying mechanisms.

Limitations

The findings of the study should be interpreted in light of certain limitations. The sample was limited to students from communication faculties, and only two universities from each region were included, which restricts representativeness. As data were collected via an online survey, some loss of control and potential external influences may have occurred. In addition, nomophobia and doomscrolling were assessed using self-report measures, meaning that the responses reflect participants' perceptions. Finally, the cross-sectional design prevents the direct examination of temporal changes and causal relationships.

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