Investigation of the Relationship Between Nomophobia and Social Studies Teachers' Social Network Use

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ABSTRACT

The smartphones we use in every aspect of our lives can be accessed anywhere without the limitation of physical space. This situation has led to excessive use of smartphones. Individuals, when unable to access their smartphones, experience anxiety and distress, revealing their nomophobic tendencies. Additionally, the availability of internet access on smartphones has increased the use of social networks. In this context, the research aims to determine the relationship between social studies teachers' purposes for using social networks and nomophobia. In the study, a quantitative research model called the correlational survey model was employed to determine the relationship between social studies teachers' purposes for using social networks and their levels of nomophobia. The sample of the research consists of 330 social studies teachers working in state schools affiliated with the Ministry of National Education in Turkey. The data of the research were collected using the "Personal Information Form," "Nomophobia Scale," and "Social Media Usage Purpose Scale." According to the research findings, there was no significant relationship between the gender of social studies teachers and their use of social networks or nomophobic perceptions. However, a statistically significant relationship was found between the use of social networks and nomophobic perceptions of social studies teachers based on factors such as unlimited internet use, education level, seniority, age, and internet usage duration. A weak significant relationship was determined between social studies teachers' usage of social networks and their nomophobic perceptions.

Keywords: *Social studies teachers, nomophobia, social network, smartphone, internet*

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INTRODUCTION

Today's technology, which develops rapidly, influences our lives and behaviors (Argumosa-Villar, Boada-Grau, Vigil-Colet, 2017; Lee, Kim, Mendoza, McDonough, 2018). Developments in information and communication technologies have become an inseparable part of life, leaving a significant mark on human life. Information technologies have become a necessity in our lives (Kaviani, Young and Koppel, 2022; Salehan and Negahban, 2013). With the concept of information technology, several technological tools that establish connection between individuals' virtual environment and the outside world are emphasized. These technological tools include computers, tablets and smart devices (King, Valença, Silva, Sancassani, Machado and Nardi, 2014). With the developments in information technologies, mobile internet, cloud systems and social networking services have expanded the usage areas of mobile phones (Arpacı, 2019; Gutiérrez-Puertas, Márquez-Hernández and Aguilera-Manrique, 2016). Today, mobile phones have transformed into smartphones by changing their content. The concept of "smartphone" has been used instead of mobile

phones (Ramos-Soler, López-Sánchez, Quiles-Soler, 2017; Yıldırım and Correira, 2015).

Lately, smartphones allow many activities to be performed more easily. Individuals can do many things with smartphones such as accessing social networks and internet, taking photos, listening to music, playing games, doing homework, shopping, banking, transportation and reservation transactions (Başarmak, 2018; Gezgin and Çakır, 2016; Sırakaya, 2018). In addition, nowadays smartphones are important in meeting needs such as communication, personal ability, entertainment, safety, information and human relations (Kang and Jung, 2014; Nagpal and Kaur, 2016). With the development of internet infrastructure, wireless network technology that provides the internet infrastructure in smartphones has also developed. This has led to an increase in the use of smartphones and social networks by individuals. More than half of world's population has access to the internet. More than half of the world's population owns a smartphone. Nearly half of this population use social networks. More than half of the population use social networks by connecting to the internet from smartphones (hoosuite.com). In Turkey, at the beginning of the 2000s, nearly half of the population was using the internet, and recently this rate has increased to 99% (tuik.gov.tr).

Smartphones, that have influenced all areas of life, also influence individuals psychologically. The psychological effect of smartphones on individuals reveals a new concept, "nomophobia". The concept of nomophobia derives from the words No Mobile Phobia. Its meaning is defined as the fear experienced by individuals when they cannot reach mobile devices (King et al., 2014; Yıldırım and Correra, 2015). The concept of nomophobia was first mentioned in a study conducted in England in 2008. With the increase in the use of social networks, the perception of nomophobia has spread. The development in mobile technologies not only facilitates access to social networks and communication, but also fulfills different functions (Gezgin, Şahin and Yıldırım, 2017). Producing content on mobile devices, sharing pictures, sharing a favorite situation and playing games has become a part of life in terms of social networks. Those situation exposes individuals to the internet and smartphone relationship and causes individuals to express themselves and to meet their needs in life in the virtual environment (Çömlekçi and Başol, 2019; Tess, 2013).

Smartphones, one of the mobile technologies of which importance has increased due to the development of the internet can be used everywhere without physical space and location restrictions. Excessive use of smartphones results in “problematic mobile phone use” (Martinotti, Villella, Di Thiene, Di Nicola, Bria, Conte, Cassano, M, Petruccelli, Corvasce, Janiri, & La Torre, 2011; Smetaniuk, 2014) (Zheng & Lee, 2016). It is a fact that, alongside the numerous advantages brought into our lives by smartphones, they have also created a range of negative impacts on individuals and society (King et al., 2014). These negative effects encompass various social and psychological aspects such as changes in behavior, shifts in habits, and influences on one's character. According to a study by Tavolacci, Meyrignac, Richard, Dechelotte and Ladner (2015), mobile phones can inadvertently generate a perceived need in individuals, thereby potentially detrimentally affecting their lives. Such behaviors can evolve into dependencies over time. Feelings such as stress, anxiety and restlessness experienced in the absence of technological devices are referred to as "nomophobia" (Peters and Malesky, 2008).

The "problematic use of mobile phones", which has become widespread today, has been added to the literature as a scientific concept under the name of nomophobia (Zheng & Lee, 2016). This widespread phenomenon has attracted the attention of researchers and some researchers have focused on the concept of nomophobia. The concept of nomophobia has become widespread in this era when virtual communication technologies are developed. It is a disease that is not only specific to a certain region but has become widespread all over the world (Olivencia-Carrión, Ferri-García, Rueda, Jiménez-Torres and López-Torrecillas, 2018). The concept of nomophobia has been defined in different ways in the literature. Nomophobia is defined as being dependent to a mobile phone (Dixit, Shukla, Bhagwat, Bindal, Goyal, Zaidi, & Shrivastava, 2010; Lee, Kim, Ha, Yoo, Han, Jung, & Jang, 2016), smartphone addiction (Salehan & Negahban, 2013; Forgays, Ira, Hyman, & Schreiber, 2014; Nagpal & Kaur, 2016; Kuss & Griffiths, 2017) or the fear of not having a smart phone or losing the phone when it is not being used (King et al., 2014; Yıldırım & Correra, 2015). King et al. (2014) defined nomophobia as fear symptoms that occur when it is not possible to access the internet and communicate via mobile phone. Bragazzi and Del Puente (2014) define nomophobia as psychological disorders such as depression, anxiety, personality disorder, panic attack, addiction and obsessive

compulsiveness. Kuss and Griffiths (2017) explain nomophobia with the relationship of social interaction online and in social networks.

Smartphone addiction is increasing due to instant communication with smartphones and the fact that individuals can stay connected any moment. In this case, when individuals cannot reach their smartphones or do not have them, stress, distress and pathological attacks occur (Cheever, Rosen, Carrier and Chavez, 2014; Yıldırım and Correira 2015; Samaha and Hawi, 2016). Symptoms of nomophobia are; spending a lot of time on the phone, having more than one mobile phone, feeling anxious and stressed because of low battery or not having a mobile phone, checking the phone frequently to see the messages and calls, keeping the mobile phone on all the time and sleeping with the mobile phone in bed, interacting with people experiencing stress and anxiety spending a lot of money to use mobile phones (Bragazzi & Del Punte, 2014).

With the developments of Web 2.0 tools, different social networking platforms have started to be used. With Web 2.0 technology, people had the opportunity to share their information in the virtual environment by interacting socially in social networks (Argumosa-Villar et al., 2017; Akar and Karayel, 2008; Karal and Kokoç, 2010). Social networks are expressed as "social networking sites". Social network users enable to transfer their skills, creativity, digital identity creation process and the content they create to others through networks (Pittman & Reich, 2016). Social networks are web-based application areas that allow users to create profiles, develop content, communicate with others, and share messages (Boyd & Ellison, 2007). Social networks allow individuals to access the content shared by other individuals and to get feedback by communicating with these individuals (Pempek, Yermolayeva, & Calvert, 2009).

The use of social networks on smartphones helps individuals to communicate, socialize, enter social places and make new friends (Ayar, Özalp, Özdemir, & Bektaş, 2018; Kara, 2014; Çakır & Mete, 2020). For this reason, the use of social media on smartphones will not isolate the individuals but help them with communication in their environment. In case of communication breakdown, the individual will be in a feeling of unease and will tend to be in contact with his or her social environment as soon as possible. Individuals use social networks to spend time, join groups, chat and attract attention. In this respect, social networks are very suitable as places for individuals to express themselves (Al-Menayes, 2015; Park, Kee, & Valenzuela, 2009; Seidman,2013). Individuals commonly develop their virtual lives and social relations in social networks. Moreover, thanks to social networks, people can communicate with acquaintances, colleagues and family members. In this way, digital identity and values are shaped by interacting with different cultures (Copaja-Corzo, Arag´on-Ayala and Taype-Rondan, 2022; Rojas-Jara, Henríquez, Sanhueza, Núñez, Inostroza, Solís and Contreras, 2018; Yu, Tian, Vogel and Kwok, 2010).

Social networks have both positive and negative aspects. Individuals who spend most of their time on social networking sites have trouble focusing on their jobs. Sharing content such as inappropriate pictures and videos on social networks negatively affects young people and children (Boyd & Ellison, 2007). Sharing on social networking sites causes the violation of individuals' private lives and weakens social ties (Siddiqui & Singh, 2016). Social networks are grouped as; social networks (Facebook, LinkedIn, MySpace etc.), blogs (Company blogs etc.), video sharing networks (YouTube, Dailymotion etc.), photo sharing networks (Photocommunity, Photosig etc.), wiki style information sharing networks (Wikipedia etc.), microblogging sharing networks (Twitter) and interactive gaming networks (Hazar, 2011; Throuvalaa, Griffiths, Rennoldson, & Kuss, 2019).

YouTube, Facebook, Twitter and Instagram are the mostly used social networking sites nowadays. Developments in mobile technology have increased the use of social networks on smartphones. For example, almost all individuals who use social networks actively connect to these networks with a smartphone or tablet (hoosuite.com). The use of smartphones is increasing, especially among young people. The use of social networks, together with smartphones, has increased among adolescent (18-29 years old) individuals to establish and develop friendships, to share certain feelings and to reflect attitudes (Goldsworthy, Lawrence and Goodman, 2006; Johansson, Petersson, Saveman and Nilsson, 2012; Pittman and Reich, 2016; Salehan and Negahban, 2013; Throuvalaa et al, 2019).

There are studies in different fields regarding social media and nomophobia in the literature. In a study

conducted by Salehan and Negahban (2013) regarding students' social media use, it was concluded that social media use was a predictor of mobile phone addiction. In the study conducted by Şumuer, Gezgin, and Yıldırım (2018), it was concluded that there is a relationship between nomophobia levels of university students and the level of mobile phones usage for purposes other than learning, and this relationship is moderately positive. Gezgin, Çakır, and Yıldırım (2018) investigated the relationship between students' nomophobia levels and internet addiction. In the study, it was concluded that nomophobia levels of the students were high, female students had higher nomophobia behavior development levels compared to male students, and nomophobia behaviors of the students were higher if the internet addiction of the students was higher. In the study of Anshari, Alas, and Sulaiman (2019) on university students, it was concluded that there is a positive relationship between nomophobia and the use of social media. According to this, individuals experiencing nomophobia perception use social media to socialize and express themselves. It is important for these people to know how much their post is seen on social media. People who experience nomophobia perception try to be the first person on social media. Such individuals are afraid of missing instant messages on social networks and desire immediate feedback on messages. When this situation does not happen, they become anxious and worried.

Buctot, Kim, and Kim (2021) state that there is a relationship between smartphone use and nomophobia, and that smartphones have a negative effect on students' academic achievement. In order to increase this negative awareness, families and educators must provide guidelines for smartphone use in the student environment. Essel, Vlachopoulos, Tachie-Menson, Nunoo, and Johnson (2022) concluded that pre-service teachers mostly have nomophobia. At the beginning of the nomophobia concerns is the anxiety of being unable to access information and communication. According to the results of the research, gender, daily sleep time, and economic status affect the nomophobia levels of students differently. Smartphone usage duration, internet service quality, and number of smartphones also have a significant effect on students' nomophobia perceptions. In the study of Al-Mamun, Mamun, Prodhan, Muktarul, Griffiths, Muhit, and Sikder (2023), in which university students' use of smartphones, the relationship between Facebook addiction and nomophobia was investigated, it was concluded that there was a relationship between nomophobia and daily smartphone use and psychoactive substance use. It was concluded that nomophobia was significantly associated with smartphone addiction; Facebook addiction was associated with insomnia and depression and it mediated the relationship between smartphone and Facebook addiction and at a significant level. In their study, Saputro and Pratikto (2023) aimed to investigate the relationship between loneliness and nomophobia in students of Z generation. In the study, it was concluded that there is a significant relationship between loneliness and nomophobia in students of Z generation. González-Cabrera, León-Mejía, Pérez-Sancho, and Calvete (2017) and Vagka, Gnardellis, Lagiou, and Notara (2023) aimed to reveal the relationship between students' nomophobia and self-esteem in their study. As a result of the research, students with low self-anxiety have higher nomophobia perceptions. In addition, the author stated that more studies are needed to investigate the relationship between these two concepts.

The use of smartphones does not have age limit and smartphones are used in all age groups. They are used in every age group because they have an important place in our lives since they provide access to social networks. Teachers also benefit from the use of smartphones and social networks. For this reason, since teachers are also interested in this issue, it is aimed to investigate the relationship between social studies teachers' use of social media and nomophobia in this study. Considering the literature, no study was conducted on teachers regarding the subject. In this context, the study is important as it is the first study on teachers. In addition, it is important in terms of its contribution to the literature and being a source for studies regarding the relationship between nomophobia and social media.

RESEARCH METHOD

Research Model

The relationship between social studies teachers' use of social networks and their levels of nomophobia was investigated in the research. The details and analyses of the study conducted on social studies teachers working in public schools in Turkey are attempted to be explained in the methodology

section. In this context, the research was carried out using the relational survey model, which is one of the general survey models. Survey models involve collecting data from broader populations. In survey models, researchers delve into the sources of opinions and characteristics, addressing a larger sample and how this situation is grounded. In the relational survey model, the aim is to describe events or phenomena as they are and to reveal the nature and quantity of the relationship between multiple variables (Fraenkel and Wallen, 2009; Karasar, 2020; Vanderstoep and Johnston, 2009).

Participants

The population of the research consisted of social studies teachers working in public schools in Turkey. The sample of the research consisted of 330 social studies teachers who use smartphones and have a presence on social networks. Information about social studies teachers participating in the research is indicated in Table 1.

Table 1. *Information Regarding Social Studies Teachers Participating in the Research*

Information		f	%
Gender	Male	202	61.21
	Female	128	38.79
Age	20-30 years	52	15.75
	31-40 years	162	49.10
	41 and more	116	35.15
Education	Associate Degree	11	3.33
	Bachelor's Degree	297	90.00
	Master Degree	22	6.67
Seniority	0-10 years	175	53.03
	11- 20 years	102	30.91
	21 years and more	53	16.06
Total		330	100

Data Collection Tool

The data of the research was collected online through the "Google forms" in the first semester of the 2022-2023 academic year. The data was accessible between 01.10.2022 and 01.11.2022, and teachers were allowed to participate in the survey between these dates. "Participant Information Form, Usage Purposes Scale of Social Networks (UPSS) and Nomophobia Scale" were used to collect the data of the study.

The Participant Information Form that was created by the researcher and collects information about the introductory characteristics (gender, age, education, seniority year, internet use with a smart phone, and duration of internet use with a smart phone) of social studies teachers who participated in the research.

Usage Purposes Scale of Social Networks was developed by Usluel, Demir and Çınar (2014). The scale consists of 26 items in total and is 7-point Likert type. The scale consists of 7 sub-dimensions. Sub dimensions; "research (questions 1-3)", "cooperation (questions 4-9)", "starting communication (questions 10-12)", "communicating (questions 13 and 14)", "maintaining communication (questions 15-18)", "sharing content (questions 19-23)" and "entertainment (questions 24-26)". Minimum 26 and maximum182 points can be scored from the scale. The scores obtained indicate the social network usage status of individuals. Usluel et al., (2014) found the Cronbach alpha reliability coefficient of the scale as 0.92.

The Nomophobia scale was developed by Yıldırım and Correira (2015) to measure the smartphone addiction status of individuals. The validity and reliability of the scale in Turkey was conducted by Yıldırım and Correira (2015). The scale consists of 20 items, and it is 7-point Likert type. The scale was converted into a 5-point Likert type by Erdem, Türen, and Kalkın (2017). In this study, the 5-point Likert type of the scale was used. The scale consists of 4 sub-dimensions. Sub dimensions: "unable to access information (questions 1-4)", "absence of device (questions 5-9)", "loss of communication (questions 10-15)" and "not being online (questions 16-20)" form. Minimum 20 and maximum 100 points can be scored from the scale. The scores obtained indicate social nomophobia condition of the individuals. Erdem et al. (2017) found the Cronbach

alpha reliability coefficient of the scale as 0.92.

Data Analysis

SPSS 20.0 package program was used in the analysis of the research data. In the statistical analyzes conducted in the package program, “t-test for independent groups, Pearson correlation analysis, ANOVA (Tukey HSD test) and Cronbach Alpha reliability analysis” were used. Mean and standard deviation scores are also given in the data. The significance level of statistical analyzes was accepted as $p<0.05$.

Factor analysis of UPSS and Nomophobia scales was conducted. The reliability of the scales was conducted with Cronbach Alpha test, and the validity of the scales was conducted by explanatory factor analysis (EFA). The factor load value for each factor item was expected to be 0.45-0.50 or higher. Each factor item that has a load of 0.50 means a suitable criterion for selection (Ursavaş, Şahin, & McIlroy, 2014).

“Nomophobia Scale” was used in the study to determine the nomophobia condition of social studies teachers. In the factor analysis of the scale, it was determined that there were four sub-dimensions such as "absence of device, not being online, loss of communication and unable to access information". Kaiser-Mayer-Olkin (KMO) and Bartlett's Test of Sphericity analyzes were conducted to determine the scale's suitability for factor analysis. Findings related to the analyzes are given in Table 2.

Table 2. *Findings Related to the Suitability of Nomophobia Scale with Factor Analysis*

Kaiser-Mayer-Olkin (KMO)	0.873
Bartlett's Test of Sphericity	X^2=2987,942 df=150 p=0.000
(p<0.01)	

When Table 2 is observed it was found that, KMO= 0.873, Bartlett's Test of Sphericity value= 2987,942 df=150, p=0.000 for “Nomophobia Scale” in the study. For the sample size to be suitable for factor analysis, KMO was expected to be above 0.60 and the result of Barlett's test sphericity analysis was expected to be statistically significant (Büyüköztürk, 2011; Costello & Osborne, 2005). KMO value is close to 1 and Bartlett values being significant indicates that "Nomophobia Scale" is suitable for factor analysis.

Table 3. *Distribution Results of Factor Loads for “Nomophobia Scale”*

Items	Ave	Std.	Factor Loads	Variance	Cronbach’s Alpha
Unable to Access Info				%16.12	0.81
I1	3.58	1.12	0.747		
I2	3.76	1.06	0.799		
I3	3.69	1.14	0.766		
I4	3.63	1.18	0.636		
Absence of Device				%10.71	0.78
I5	3.29	1.30	0.713		
I6	3.22	1.36	0.739		
I7	3.37	1.27	0.509		
I8	3.45	1.26	0.580		
I9	3.46	1.16	0.499		
Loss of Communication				%14.92	0.79
I10	3.77	1.13	0.689		
I11	3.86	1.12	0.728		
I12	2.77	1.30	0.658		
I13	3.79	1.11	0.830		
I14	3.29	1.30	0.516		
I15	3.85	1.14	0.751		
Not Being Online				%18.68	0.78
I16	2.61	1.28	0.723		
I17	2.87	1.29	0.698		
I18	2.70	1.32	0.667		

I19	2.55	1.30	0.695		
I20	3.45	1.33	0.512		
Total Variance				%60.43	
Total Cronbach's Alpha					0.89

In Table 3, it is seen that the factor loads of "Nomophobia Scale" are between 0.499 and 0.830. As a result of explanatory factor analysis, it was determined that there was no item that did not fit the scale. In this context, no item was removed from the scale. It was seen that the scale explained 60.43% of the total variance and provided construct validity. Cronbach's α internal consistency coefficient was checked for the reliability of the scale. Cronbach α total score of "Nomophobia Scale" was calculated as 0.89. In addition, when Cronbach α scores of the sub-dimensions of the scale are observed, "unable to access information" was 0.83, "absence of device" was 0.79, "loss of communication" was 0.81, and "unable to be online" was 0.79. In the literature, the reliability intervals of Cronbach's α coefficient were generally considered as; less than 0.40 is unreliable, 0.40-0.59 is considered low reliable, 0.60-0.79 is highly reliable, and 0.80-1.00 is highly reliable (Özdamar, 2002). Accordingly, the sub-dimension of "unable to access information" is highly reliable; sub-dimensions of "loss of communication", "absence of device " and "unable to be online" seem quite reliable.

In the research, "UPSS Scale" was used to determine the social studies teachers' use of social networks. In the factor analysis of the scale, it was determined that there were seven sub-dimensions of "research", "cooperation", "starting communication", "communicating", "maintaining communication", "sharing content" and "entertainment". Kaiser-Mayer-Olkin (KMO) and Bartlett's Test of Sphericity analyzes were performed to determine the scale's suitability for factor analysis. Findings related to the analyzes are given in Table 4.

Table 4. *Findings Regarding the Suitability of the UPSS Scale to Factor Analysis*

Kaiser-Mayer-Olkin (KMO)	0.842
Bartlett's Test of Sphericity	X^2=41568,642 df=285 p=0.000
(p<0.01)	

When Table 4 is observed, it was found that KMO= 0.842, Bartlett's Test of Sphericity value= 41568,642 df=285, p=0.000 for "UPSS Scale" in the study. Significant KMO and Bartlett values indicate that UPSS Scale is suitable for factor analysis.

Table 5. *Distribution Results of Factor Loads for "UPSS Scale"*

Items	Ave.	Std.	Factor Loads	Variance	Cronbach's Alpha
Research				%12.19	0.82
I1	4.68	1.70	0.812		
I2	5.20	1.63	0.848		
I3	4.97	1.71	0.753		
Cooperation				%11.70	0.82
I4	4.96	1.67	0.661		
I5	4.14	1.82	0.644		
I6	4.27	1.78	0.774		
I7	3.72	1.94	0.812		
I8	4.07	1.82	0.782		
I9	4.95	1.69	0.509		
Starting Communication				%6.68	0.78
I10	2.72	1.88	0.517		
I11	2.50	1.87	0.806		
I12	2.87	1.99	0.825		
Communication				%13.40	0.78
I13	5.16	1.82	0.788		
I14	5.26	1.73	0.781		

Maintaining Communication				%5.75	0.79
I15	3.98	2.00	0.683		
I16	4.27	1.90	0.555		
I17	4.81	1.75	0.781		
I18	4.68	1.73	0.745		
Sharing Content				%10.55	0.79
I19	4.50	1.77	0.538		
I20	4.16	1.91	0.548		
I21	3.58	1.99	0.786		
I22	3.05	1.93	0.843		
I23	2.95	1.91	0.736		
Entertainment				%6.33	0.71
I24	4.60	1.88	0.737		
I25	4.31	1.99	0.788		
I26	3.12	2.01	0.499		
Total Variance				%66.60	
Total Cronbach's Alpha					0.88

In Table 5, it is seen that factor loads of "UPSS Scale" are between 0.509 and 0.848. As a result of explanatory factor analysis, it was determined that there was no item that did not fit the scale. In this context, no item was removed from the scale. It was seen that the scale explained 66.60% of total variance and provided construct validity. Cronbach's α internal consistency coefficient was checked for the reliability of the scale. Cronbach α total score of "UPSS Scale" was calculated as 0.88. In addition, when Cronbach α scores of sub-dimensions of the scale are observed; "research" 0.82, "cooperation" 0.82, "starting communication" 0.78, "communicating" 0.78, "maintaining communication" 0.79, "sharing content" 0.79 and "entertainment" 0.71. Accordingly, "research" and "cooperation" sub-dimensions are highly reliable; sub-dimensions of "starting communication", "communicating", "maintaining communication", "sharing content" and "entertainment" are quite reliable.

FINDINGS

In the study, it was aimed to investigate the relationship between social studies teachers' use of social networks and their nomophobia levels. This part of the research, the findings and comments obtained from "Participant Information Form", "Nomophobia Scale" and "UPSS Scale" are included.

Table 6. *Findings Regarding the Scores of Social Studies Teachers' "Usage Purposes Scale of Social Networks" and "Nomophobia Scale"*

Nomophobia Scale Sub-Dimensions	Mean	Standard Deviation
Absence of Device	3.20	0.92
Unable to be Online	2.83	0.95
Loss of Communication	3.55	0.84
Unable to Access Info	3.66	0.91
Nomophobia Total	3.31	0.73
UPSS Scale Sub-Dimensions		
Research	13.41	4.42
Cooperation	25.22	7.90
Starting Communication	6.70	4.36
Communicating	8.87	3.06
Maintaining Communication	17.53	5.73
Sharing Content	17.25	7.03
Entertainment	11.61	4.30
UPSS Total	110.59	24.78

When Table 6 is observed, it is seen that total mean score of "Nomophobia Scale" of social studies teachers was found 3.31, and standard deviation value is 0.73. In lower dimensions, "absence of device" mean score is 3.20, standard deviation value is 0.92; "not being online" mean score is 2.83, standard deviation value is 0.95; mean score of "loss of communication" was 3.55, standard deviation was 0.84, and

mean score of "unable to access information" was 3.66, and standard deviation was 0.91. Total mean score of "UPSS Scale" of social studies teachers was found 110.59, and standard deviation value was 24.78. In lower dimensions; “research” mean score was 13.41, standard deviation was 4.42; “cooperation” mean score was 25.22, standard deviation was 7.90; “starting communication” mean score was 6.70, standard deviation value was 4.36, “communicating” mean score was 8.87, standard deviation value was 3.06, “maintaining communication” mean score was 17.53, standard deviation value was 5.73, “sharing content” mean score was 17.25, standard deviation value was 7.03 and “entertainment” mean score was 11.61, standard deviation was 4.30.

Table 7. *Distribution of Social Studies Teachers' Characteristics According to UPSS Scale and Nomophobia Scale Total Scores*

Scale	Feature				
	Gender	Mean	Standard Deviation	t	p
UPSS	Male	110.48	25.02	0.073	0.890
	Female	110.39	25.12		
Nomophobia	Male	3.15	0.72	0.809	0.388
	Female	3.08	0.75		
	Unlimited Internet Use				
UPSS	Yes	106.58	24.45	1.198	0.046
	No	112.89	26.24		
Nomophobia	Yes	3.12	0.69	2.254	0.013
	No	3.28	0.70		
	Age			F	p
UPSS	20-30 years	3.60	0.72		
	31-40 years	3.58	0.71	-2.128	0.033
	40 years and more	3.05	0.74		
Nomophobia	25-30 years	112.06	27.14		
	31-40 years	108.17	28.16	8.521	0.000
	40 years and more	101.29	27.56		
	Education				
UPSS	Associate Degree	102.23	28.12		
	Bachelor’s Degree	105.16	27.41	-2.165	0.038
	Master Degree	103.65	27.26		
Nomophobia	Associate Degree	3.20	0.69		
	Bachelor’s Degree	3.78	0.68	7.265	0.000
	Master Degree	3.51	0.71		
	Seniority				
UPSS	0-10 years	108.87	27.44		
	11- 20 years	107.98	26.85	7.456	0.021
	21 years and more	101.75	28.01		
Nomophobia	0-10 years	3.84	0.67		
	11- 20 years	3.79	0.69	8.963	0.000
	21 years and more	3.48	0.70		
	*Internet Use Duration/day/hour				
UPSS	0-2 hours	114.52	28.36		
	2-4 hours	112.98	27.26	-2.156	0.035
	4-6 hours	108.86	28.65		
	6 hours and more	100.95	28.31		
Nomophobia	0-2 hours	3.64	0.73		
	2-4 hours	3.53	0.70	14.987	0.000
	4-6 hours	3.31	0.69		
	6 hours and more	3.10	0.72		

*Average internet usage duration: 3.98

In Table 6, no statistically significant relationship was found between total mean scores of "UPSS Scale" and "Nomophobia Scale" according to gender status of social studies teachers ($p>0.05$). However, a statistically significant relationship was found between total mean score of "UPSS Scale" and "Nomophobia Scale" according to social studies teachers' unlimited use of Internet, education, seniority, age and duration of internet use ($p<0.05$). The mean score of "UPSS Scale" (112.89) of social studies teachers who stated that they did not use internet unlimitedly was higher than social studies teachers who stated that they used internet unlimitedly (106.58) ($p<0.05$). Likewise, "Nomophobia Scale" mean score of social studies teachers who stated that they did not use internet unlimitedly (3.28) was higher than social studies teachers who stated that they used internet unlimitedly (3.12) ($p<0.05$). A statistically significant relationship was also found between duration of social studies teachers' internet use and total score of "UPSS Scale" and "Nomophobia Scale" ($p<0.05$).

Tukey HSD test was conducted to check the source of the difference between “UPSS Scale” and duration of internet use. According to Tukey HSD test, difference results from the group which is between 0-2 and 2-4, 4-6 and more than 6 hours; 2-4 and 4-6 hours and more than 6 hours and 4-6 to 6 hours and more. According to “Nomophobia Scale” Tukey HSD test, difference results from the group which is between 0-2 and 2-4, 4-6 and more than 6 hours; 2-4 and 4-6 hours and more than 6 hours and 4-6 and 6 hours and more. A statistically significant relationship was also found between education level of social studies teachers and total scores of "UPSS Scale" and "Nomophobia Scale" ($p<0.05$). Tukey HSD test was conducted to check the source of difference between “UPSS Scale” and educational status. According to Tukey HSD test, the difference results from associate degree and bachelor’s degree, master’s degree; bachelor’s degree and master’s degree group. According to “Nomophobia Scale” Tukey HSD test, the difference results from associate degree and bachelor’s degree, master’s degree; bachelor’s degree and master’s degree group. A statistically significant relationship was also found between age status of social studies teachers and total scores of "UPSS Scale" and "Nomophobia Scale" ($p<0.05$). Tukey HSD test was conducted to check the source of difference between “UPSS Scale” and age status. According to Tukey HSD test, the difference results from the group whose age is between 20-30 years, 31-40 years, 41 and more; 31-40 years and 41 years and more. According to “Nomophobia Scale” Tukey HSD test, the difference results from the group whose age is between 20-30 years and 31-40, 41 and more; 31-40 years and 41 and more. A statistically significant relationship was also found between seniority of social studies teachers and total scores of "UPSS Scale" and "Nomophobia Scale" ($p<0.05$). Tukey HSD test was conducted to observe the source of the difference between “UPSS Scale” and seniority status. According to Tukey HSD test, the difference results from the group between 0-10 years and 11-20, 21 years and more; 11-20 years and 21 years and more. According to “Nomophobia Scale” Tukey HSD test, the difference results from the group between 0-10 years and 11-20, 21 years and more; 11-20 years and 21 years and more.

Table 8 indicates the results of correlation analysis between mean scores of "UPSS Scale" and "Nomophobia Scale". According to Table 8, there is a weak relationship Nomophobia Scale "absence of device" and "UPSS Scale total score" and "starting communication"; it was determined that there was a weak significant relationship between Nomophobia Scale "not being online" and UPSS Scale "starting communication" and "sharing content" ($p<0.05$). A low level of significant correlation was found between nomophobia scale “loss of communication” and “UPSS scale total score” and “research”, “starting communication”, “sharing content” and entertainment ($p<0.05$). A low-level significant relationship was found between Nomophobia Scale "unable to access information" and "UPSS Scale total score" and "research", "cooperation", "communicating", "maintaining communication", "sharing content" and "entertainment" ($p< 0.05$). In addition, a low-level significant relationship was found between “Nomophobia total score” and “UPSS total score” and “starting communication”, “sharing content” and “entertainment” ($p<0.05$).

Table 8. *Correlation Analysis between Total Scores of "Usage Purposes Scale of Social Networks" and "Nomophobia Scale"*

Variable/ Sub-Dimension	1	2	3	4	5	6	7	8	9	10	11	12	13
Research Cooperation	1												
Starting Communication	0.51*	1											
Communication	-0.03	0.17*	1										
Maintaining Communication	0.37	0.37	0.16	1									
Sharing Content	0.33*	0.44*	0.30*	0.63	1								
Entertainment	0.33*	0.47*	0.45*	0.34*	0.48*	1							
UPSS Total	0.24*	0.35*	0.26*	0.36*	0.45*	0.48*	1						
Absence of Device	0.60*	0.77*	0.48*	0.64*	0.75*	0.79*	0.65*	1					
Not Being Online	0.06	0.06	0.16*	0.07	0.06	0.09	0.10	0.07*	1				
Loss of Communication	0.04	0.05	0.16*	0.04	0.02	0.10*	0.08	0.07	0.62*	1			
Unable to Reach Info	0.08*	0.02	0.08*	0.12	0.13	0.05*	0.12*	0.11*	0.57*	0.56*	1		
Nomophobia	0.12*	0.11*	0.09	0.11*	0.08*	0.08*	0.12*	0.15*	0.64*	0.47*	0.46*	1	
	0.08	0.06	0.14*	0.73	0.67	0.12*	0.14*	0.15*	0.88*	0.83*	0.79*	0.80*	1

*p<0.05

Table 9. *Regression Analysis Results regarding the Effect of Social Networking on Absence of Device*

Dependent Variable	Independent Variable	β	t	p	F	Model (p)	R	R^2
Absence of Device	Starting Communication	0.025	2.321	0.011*	4.653	0.006	0.142	0.012
	UPSS Total	0.000	0.508	0.512				

In the table, it was determined that there was a statistically significant (R=0.142; p<0.05) relationship between "starting communication" and "absence of device". This relationship is significant and positive (β=0.025; p<0.05). Absence of device is explained at the rate of 1.2% by starting communication (R2=0.012). Accordingly, it can be interpreted that the increase in social studies teachers' efforts to start communication causes the condition of absence of device.

Table 10. *Regression Analysis Results regarding the Effect of Social Networking on Not Being Online*

Dependent Variable	Independent Variable	β	t	p	F	Model (p)	R	R^2
Not Being Online	Starting Communication	0.149	2.841	0.002*	7.068	0.001	0.172	0.029
	Sharing Content	0.040	0.816	0.391				

In Table 10, it was determined that there was a statistically significant (R=0.172; p<0.05) relationship (β=0.149; p<0.05) between "starting communication" and "not being online". Not being online was explained at the rate of 2.9% by starting communication (R2=0.029). Accordingly, it can be interpreted that the increase in social studies teachers' efforts to start communication increases the situation of not being online.

Table 11. *Results of Regression Analysis regarding the Effect of Social Network Use on Loss of Communication*

Dependent Variable	Independent Variable	β	t	p	F	Model (p)	R	R^2
Loss of Communication	Research	0.024	1.724	.079	2.038	0.052	0.148	0.011
	Starting Communication	0.018	1.698	0.065				
	Sharing Content	-0.002	-0.009	0.089				
	Entertainment	0.017	1.694	0.084				
	UPSS Total	-0.004	-0.634	0.417				

In Table 11, it was determined that there was no statistically significant (R=0.148, R2=0.011) relationship between “research”, “starting communication”, “sharing content”, “entertainment” and “UPSS total” (F=2.038; p> 0.05). Accordingly, it can be interpreted that "research", "starting communication ", " sharing content ", "entertainment" and "UPSS total" variables do not influence "loss of communication".

Table 12. *Regression Analysis Result regarding the Effect of Social Network Use on Unable to Access Information*

Dependent Variable	Independent Variable	β	t	p	F	Model (p)	R	R^2
Unable to Access Info	Research	0.020	1.701	0.078	2.145	0.042	0.146	0.015
	Cooperation	0.002	0.056	0.899				
	Communication	0.014	0.584	0.498				
	Maintaining Communication	-0.005	-0.398	0.634				
	Sharing Content	-0.002	-0.029	0.912				
	Entertainment	0.020	9.989	0.056				

In Table 12, it was determined that there was not statistically significant (R=0.146, R2=0.015) relationship between “research”, “cooperation”, “communication”, “maintaining communication”, “sharing content” and “entertainment” (F= 2.145; p>0.05). Accordingly, it can be interpreted that the variables "research", "cooperation", "communication", "maintaining communication", "sharing content" and "entertainment" do not influence "unable to access information".

Table 13. *Regression Analysis Results regarding the Effect of Social Network Use on Total Scores of “Nomophobia Scale”*

Dependent Variable	Independent Variable	β	t	p	F	Model (p)	R	R^2
Nomophobia Total	Starting Communication	0.018	2.198	0.029*	3.324	0.009	0.164	0.021
	Sharing Content	-0.002	-0.156	0.848				
	Entertainment	0.011	9.875	0.198				
	UPSS Total	0.001	0.382	0.534				

In Table 13, it was determined that there was a statistically significant (R=0.164; p<0.05) relationship between "starting communication" and "total Nomophobia". This relationship is significant and positive (β=0.018; p<0.05). Nomophobia was explained by starting communication at the total rate of 2.1% (R2=0.21). Accordingly, it can be interpreted that the increase in social studies teachers' efforts to start communication causes an increase in the total number of nomophobia cases.

DISCUSSION AND CONCLUSION

In the research, there was no relationship found between the social networking usage status and nomophobic levels of social studies teachers based on gender. However, a relationship was found between the social networking usage status and nomophobic levels of social studies teachers based on unrestricted internet usage, education level, seniority, age, and internet usage duration. This difference could be interpreted as stemming from the greater use of social networks among younger individuals. Nagpal and

Kaur (2016) arrived at a significant correlation between nomophobia and age in their study. Similar results have been obtained in studies on the subject (Burucuoğlu, 2017; Gezgin & Çakır, 2016; Sezer & Atılgan, 2018). There are also studies focusing on the relationship between social networking usage and gender. In their study, Acar and Yenmiş (2014) concluded that there was no significant relationship between age and the use of social networks. In contrast to the findings of this research, studies (Hwang, Yoo, & Cho, 2012; Karasu & Arıkan, 2016; Ruiz-Palmero, Sánchez-Rodríguez, & Trujillo-Torres, 2016; Van Deursen, Bolle, Hegner, & Kommers, 2015; Yıldız & Demir, 2016) have reported a significant relationship between social networking usage and gender. However, there are also studies in the literature that differ from the findings of the research. Yıldırım and Correira (2015) and Çağan, Ünsal, and Çelik (2014) did not find a relationship between age, gender, income level, social networking usage, and nomophobic levels in their studies. Argumosa-Villar et al. (2017) concluded in their study that there was no relationship between nomophobia and gender. Similar results were reached in other studies (Dixit et al., 2010; Sezer & Atılgan, 2018; Kocabaş & Korucu, 2018).

In the research, the average mobile phone usage duration of social studies teachers is 3.98 hours. In addition, it was concluded that most of social studies teachers do not use internet unlimitedly. It was found that nomophobia perceptions of social studies teachers who stated that they used internet unlimitedly and stated that their internet usage time was above 0-2 hours were higher than social studies teachers who did not use internet unlimitedly and used internet for 0-2 hours. In the study of Erdem et al., (2017) it was concluded that as the duration of internet use increases, nomophobia perceptions increase. In other studies, Choi, Kim, Choi, Ahn, Choi, Song and Youn, (2015), Sırakaya (2018) and Yıldırım et al. (2016) concluded that as individuals' internet usage time increases, their nomophobia tendencies increase as well.

In the study, it was concluded that total mean score of "UPSS Scale" of social studies teachers who stated that they used internet unlimitedly and that they used internet for more than 2 hours was higher. In the study of Aydın (2016) it is stated that as internet usage duration increases, the rate of social network usage increases as well. It was concluded that there is a significant relationship between the frequency of internet use and the use of social networks. In the studies of Darvishi, Noori, Nazer, Sheikholeslami, and Karimi (2019), Nikhita, Jadhav, and Ajinkya, (2015), and Bivin, Mathew, Thulasi, and Philip (2013), it is stated that there is a significant relationship between internet addiction and nomophobia levels.

The research has found a low-level relationship between the usage status of social networks and nomophobic levels in terms of "initiating communication," "sharing content," and "entertainment." Gezgin (2017) determined a statistically significant low-level relationship between nomophobic levels and the sub-dimensions of "initiating communication," "sharing content," and "entertainment" within the scope of social network usage. The obtained results are parallel to the literature. Anshari et al. (2019) identified a low-level significant relationship between the sub-dimension of losing communication due to nomophobia and the total score of Social Networking Addiction (SAKA), as well as the sub-dimensions of initiating communication, sharing content, and entertainment. Similar studies to these results can be encountered in the literature (Aguilera-Manrique, Márquez-Hernández Alcaraz-Córdoba, Granados-Gámez, Gutiérrez-Puertas, Gutiérrez-Puertas, 2018; Ayar et al., 2018; Park, Hyun, & Ha, 2014; Sırakaya, 2018; Sharma, Sharma, Sharma, & Wavare, 2015; Tavolacci et al., 2015; Yıldız Durak, 2019).

A weak correlation was found between social media usage patterns and nomophobic levels in terms of "initiating communication." There was a weak relationship between "inability to be online" and "initiating communication" and "content sharing." From a nomophobia perspective, a low-level relationship was identified between "losing communication" and social media usage patterns in terms of "research," "initiating communication," "content sharing," and "entertainment." In terms of nomophobia, a low-level relationship was determined between "unavailability of communication" and social media usage patterns for "research," "collaboration," "establishing communication," "sustaining communication," "content sharing," and "entertainment." The social media habits of social studies teachers were found to have no impact on their nomophobic levels. It was concluded that "initiating communication" as a social media usage pattern had a significant positive effect on "device deprivation" and "inability to be online" as nomophobic factors. Dasgupta, Bhattacherjee, Dasgupta, Mukherjee, and Biswas (2017), Taşhan and Ünver (2021), and Diker and

Uçar (2016) found that social media platforms were mainly used for tasks such as homework, research and information acquisition, finding subject-related materials, collaboration, sharing, and chatting. This suggests a link between the purposes of social media usage and aspects of the "Nomophobia Scale" such as "inability to access information," "inability to be online," and "fear of losing communication." The primary goals of individuals in using social media are to "access information," "be online," and establish "communication." If these goals cannot be achieved, individuals tend to develop nomophobic perceptions.

With the developments in technology, the use of social networks has started to be made via smartphones in general. This has led to an increase in smartphone use (Gentina, Li-Ping and Dancoine, 2018; Gutiérrez-Puertas, Márquez-Hernández, São-Romão-Preto, Granados-Gámez, Gutiérrez-Puertas, Aguilera-Manrique, 2019; Griffiths and Kuss, 2017). Via social networks individuals can share and see other people's posts, which disconnects individuals from social life by adjusting them to the digital environment. However, establishing a strong connection with smartphones, individuals experience some psychological problems such as anxiety and stress when they cannot access the digital environment (Gezgin et al., 2017; Singh, Gupta, & Garg, 2013). This situation revealed the relationship of smartphone addiction and nomophobia (Yıldız Durak, 2017). Studies indicate that excessive use of social networks increases nomophobia perceptions. Nomophobia symptoms are anxiety, academic failure, distress, emotional instability, sleep disorder, stress, aggression, difficulty in concentrating, and conflict with immediate environment (Aguilera-Manrique et al., 2018; Spitzer, 2015; Tams, Legoux, & Leger 2018; Zheng and Lee, 2016).

Suggestions

In this context, following recommendations can be made according to the results of the research, which aims to investigate the relationship between social studies teachers' purposes of using social networks and nomophobia: Teachers have great responsibilities since the use of social networks has increased rapidly. Teachers must both act consciously about using social networks and educate students consciously regarding this issue. Trainings on social networking and nomophobia can be provided for teachers in order to create awareness for maintaining balance in both virtual and the real world. Excessive use of social networks by teachers will affect their job performance. This situation will create a risk in their profession and cause irreversible mistakes. In order to avoid such situations, teachers can be informed by authorities about the problems that social media can cause and creating awareness for solutions.

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